

**Linda Munro**  
Senior Environmental Scientist



Curriculum Vitae

## Qualifications

|            |                         |   |
|------------|-------------------------|---|
| PrSci.Nat. | Environmental Scientist | South African Council for Natural Scientific Professions              |
| GDE        | 2007                    | Environmental Engineering (University of Witwatersrand, Johannesburg) |
| M.Sc.      | 2003                    | Environmental Management (Rand Afrikaans University)                  |
| Honours    | 1999                    | Zoology (Rand Afrikaans University)                                   |
| B.Sc.      | 1998                    | Zoology and Botany (Rand Afrikaans University)                        |

## Professional affiliations and registration

| Registration | Year            | Description   |
|--------------|-----------------|---|
|              | <b>Obtained</b> |   |
| PrSci.Nat.   | 2011            | South African council for Natural Scientific Professional |

## Summary of Key Areas of Expertise

|  |   |
|--|---|
| Project management   | Project management and co-ordination including proposal writing, budget control, time management, internal coordination of project teams, management of specialist sub-consultants and report writing.  |
| Application and process management for environmental authorisations and licenses | Application and process management for environmental authorisations and licenses in Southern Africa. This includes Environmental Impact Assessments, Environmental Management Programmes/Plans, Integrated Water Use Applications and registration of water uses. |
| Feasibility studies  | Environmental feasibility studies for mining projects in South Africa.  |
| Auditing   | Environmental Management Programmes/Plans performance assessments, Water Use Licence compliance audits, internal Equator principle compliance audits.   |

## Summary of Experience and Capability

Linda is a Senior Environmental Scientist with SLR and has over 15 years' experience in the environmental and water sector as an experienced consultant.

Linda has managed a wide range of Environmental Impact Assessment projects and associated environmental authorisation processes for various projects within the mining, water and energy industries in Southern Africa.

At the start of her career, Linda held a position at the South African Department of Water Affairs and was responsible for managing water quality, enforcing the National Water Act and relevant Regulations, licenses and permits in the Leeu/Taaiboschspruit and Vaal Barrage Catchments. This regulatory perspective was useful when Linda started consulting in 2003 at a South African based global environmental consulting company as an Environmental Scientist. Linda joined Metago SLR in 2009 as a Senior Environmental Scientist.

Linda's key areas of expertise are project management and co-ordination including proposal writing, budget control, time management, internal coordination of project teams, management of specialist sub-consultants and report writing, application and process management for environmental authorisations and licenses in Southern Africa which includes Environmental Impact Assessments, Environmental Management Programmes/Plans, Integrated Water Use Applications and registration of water uses, environmental feasibility studies for mining projects in Southern Africa, Environmental Management Programmes/Plans performance assessments, Water Use Licence compliance audits, and internal Equator principle compliance audits.

## Project Experience

Key aspects of Linda's recent project experience are summarised below.

| Project  | Date      | Linda's Role  |
|--|-----------|---|
| <b>Coal</b>  |           |   |
| Vanggatfontein Coal Mine<br>IWULA<br>(South Africa)                                | 2010/2011 | Project Manager and responsible for the compilation of the application and authority liaison.   |
| <b>Copper</b>  |           |   |
| Kinsenda Copper Mine EMP<br>(Democratic Republic of Congo)                         | 2011      | Compiled EMP as part of the broader EIA team.   |
| Palabora Mining Company<br>IWULA<br>(South Africa)                                 | 2004      | Project Manager and responsible for the compilation of the application, authority and public liaison.                                     |
| <b>Ferro-alloys</b>  |           |   |
| Hernic Bakone and Marula EMP<br>performance assessment                             | 2015      | Supervisory and reviewer role.  |
| Bateman Minerals World Bank<br>audit of environmental<br>documentation<br>(Russia) | 2005      | Part of a team reviewing environmental documentation for the reprocessing of a slag dump, to determine compliance to World Bank standards |
| <b>Gold</b>  |           |   |
| Manica Gold Project<br>(Mozambique)  | Current   | Project Manager and responsible for the compilation of the application, authority and public liaison.                                     |
| Damang Gold Mine baseline<br>study peer review<br>(Ghana)                          | 2012      | Reviewed specialist reports on behalf of Abooso Gold Fields Limited.  |
| South Deep Doornpoort Tailings<br>Dam WULA<br>(South Africa)                       | 2009/2011 | Project Manager and responsible for the compilation of the application, authority and public liaison.                                     |

| <b>Project</b>   | <b>Date</b> | <b>Linda's Role</b>   |
|--|-------------|---|
| Burnstone Gold Mine<br>Baseline studies, pre-feasibility<br>and feasibility studies, Area 1<br>EIA and EMP, IWULA.<br>(South Africa) | 2005/2006   | Project Manager and responsible for the<br>compilation of the applications, authority and<br>public liaison.                                  |
| <b>Nickel</b>  |             |   |
| Dynatec EIA World Bank Audit<br>(Madagascar)   | 2006        | Part of a team reviewing the EIA for proposed<br>copper nickel mine to determine compliance to<br>World Bank standards                        |
| <b>Magnetite</b>   |             |   |
| Ngwenya Mining and<br>Exploration EIA and EMP<br>(South Africa)  | 2015        | Project Manager and responsible for the<br>compilation of the scoping application reports,<br>authority and public liaison for scoping phase. |
| <b>Platinum Group Metals and Chrome</b>  |             |   |
| Impala Shaft 18 and 19 EIA,<br>EMP, IWULA and feasibility<br>study<br>(South Africa)   | 2012/2013   | Project Manager and responsible for all project<br>deliverables, authority and public liaison.  |
| Inkosi Platinum Prospecting<br>EMP Amendment for the<br>Greater Inkosi Area, North West  | 2012        | Supervisory and reviewer role.  |
| Kalkfontein Platinum Mine<br>EIA, EMP and feasibility study<br>(South Africa)  | 2009/2011   | Project Manager and responsible for all project<br>deliverables, authority and public liaison.  |
| Leeuwkop Platinum Mine EMP<br>Performance Assessment<br>(South Africa)   | 2009        | Project Manager and responsible for the<br>compilation of the audit report.   |
| Zondernaam Seismic Survey<br>Prospecting EMP<br>(South Africa)   | 2010        | Project Manager and responsible for all project<br>deliverables, authority and public liaison.  |
| Aquarius Platinum Everest<br>IWULA<br>(South Africa)   | 2010        | Project Manager and responsible for all project<br>deliverables and authority liaison.  |
| Sedibelo Platinum Mine<br>EIA, EMP and feasibility study<br>(South Africa)   | 2006/2007   | Project Manager and responsible for all project<br>deliverables, authority and public liaison.  |
| Madikwe Platinum Mine EMP<br>Performance Assessment<br>(South Africa)  | 2005        | Part of a team to determine compliance to the<br>approved EMP   |
| Drenthe Platinum Mine pre-<br>feasibility study<br>(South Africa)  | 2004        | Compiled the pre-feasibility report.  |
| Leeuwkop Platinum Mine pre-<br>feasibility study<br>(South Africa)   | 2004        | Compiled the pre-feasibility report.  |
| <b>Phosphate</b>   |             |   |

| <b>Project</b>  | <b>Date</b> | <b>Linda's Role</b>  |
|---|-------------|--|
| Foskor Scoping Phase EIA and IWULA for the Van Ryssen Dam (South Africa)                                | 2003/2004   | Compiled the scoping report and IWULA, responsible for authority and public liaison. Also drafted the actual water licence on behalf of Department of Water Affairs. |
| <b>Energy</b>   |             |  |
| Sishen Iron Ore powerline WULA project (South Africa)   | 2015        | Reviewer role  |
| Arandis Thermal Power Station EMP (Namibia)   | 2012        | Compiled EMP as part of the broader EIA process.   |
| Banro Ulindi 1 and 2 Magembe Hydropower Project pre-feasibility study (Democratic Republic of Congo)    | 2008        | Project Manager and responsible for all project deliverables.  |
| Kusile Power Station IWULA (South Africa)   | 2008        | Part of a team to authorise water uses, compiled application documents, liaised with public and authorities.   |
| Anvil Mining Scoping Study for transmission line and upgrading of a road (Democratic Republic of Congo) | 2007        | Part of a team to produce the scoping report.  |
| Braamhoek Pumped Storage Scheme IWULA (South Africa)  | 2006        | Responsible for IWULA compilation, authority and public liaison.   |
| <b>Uranium</b>  |             |  |
| A-Cap Uranium Mine EIA and EMP (Botswana)   | Current     | Part of a team to compile EIA and EMP.   |
| Husab Uranium Mine EMP (Namibia)  | 2010/2011   | Compiled EMP as part of the broader EIA process. Provided support to the owners team.  |
| Lumwana Mining Company EIA for Uranium Project (Zambia)   | 2007/2008   | Compiled part of the EIA within EIA team.  |
| <b>Flourspar</b>  |             |  |
| SA Fluorite Fluorspar Bulk Sampling EMP Amendment (South Africa)  | 2012        | Supervisory and reviewer role.   |
| <b>Roads</b>  |             |  |
| SANRAL Basic Assessments for Gauteng Improvements Project (South Africa)                                | 2008        | Supervisory role.  |
| Mpumalanga Province EIA and EMP for upgrade of Bethal-Morgenzon Road (South Africa)                     | 2006        | Compiled applications.   |
| <b>Other</b>  |             |  |

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| <b>Project</b>   | <b>Date</b> | <b>Linda's Role</b>   |
|--|-------------|---|
| Kathu supplier park WULA<br>(South Africa)   | 2015        | Reviewer role   |
| <b>Environmental Management Systems</b>  |             |   |
| Merlon Petroleum EMS<br>(Egypt)  | 2005        | Compilation of EMS procedures as part of a team.                  |
| <b>Water Resource Management</b>   |             |   |
| Streamflow analysis for the<br>Komati Ecological Water<br>Requirement for the Komati<br>comprehensive reserve<br>determination for DWA<br>(South Africa) | 2006        | Worked under supervision to conduct streamflow<br>analysis.       |
| Development of Reconciliation<br>Strategies for Large Bulk Water<br>Supply Systems for the Amatole<br>Catchment for DWA<br>(South Africa)                | 2005        | Worked under supervision to develop<br>reconciliation strategies. |
| Updating of the Water<br>Resources 2005 Study and<br>WR90 Database for the Water<br>Research Commission<br>(South Africa)                                | 2005        | Worked under supervision to patch water quality<br>data.          |

**Alessandra (Alex) Pheiffer**  
Senior Environmental Consultant



## Curriculum Vitae

### Qualifications

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|------------|------|--------------------------|
| BSc        | 1998 | Biological Sciences      |
| BSc (Hons) | 1999 | Zoology                  |
| MSc        | 2004 | Environmental Management |

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### Professional affiliations and registrations

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Registered with the South African Council for Natural Scientific Professions as a Professional Natural Scientist (PrSciNat) in Environmental Science (Reg. No. 400183/05)

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Registered with the Environmental Assessment Professionals of Namibia (EAPAN) as a Lead Practitioner (Membership No. 121)

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Member of the International Association for Impact Assessments (IAIA), South African Affiliate

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### Summary of Key Areas of Expertise

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Management and facilitation of permitting and licensing processes

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Management of stakeholder engagement processes

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Overall Project Management

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Due Diligence, Reviews

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### Summary of Experience and Capability

Alex is a Senior Environmental Consultant at SLR Africa with 16 years' experience in the field of Environmental Management.

Alex has managed a wide range of permitting and licensing projects including environmental assessments, water use license applications and waste management license applications, mainly in the exploration, mining and industrial sectors. These included project management and co-ordination; specialist and engineering team management; co-ordination, facilitation and undertaking of stakeholder engagement processes including for contentious projects, and environmental assessment. She has experience in addressing both in-country legislation and Equator Principles and International Finance Corporation (IFC) requirements.

Alex has provided environmental specialist input on a number of pre-feasibility studies linked to the exploration/development/expansion of mining operations. She has also been involved in environmental due diligence processes and environmental reviews for financing institutions (in the mining, industrial and alternative energy sectors).

In her early career years, Alex held a position within Anglo Platinum's Waterval Smelter as Assistant to the Chief Environmental Officer. In 2002, she joined Metago Environmental Engineers (Pty) Ltd (Metago). Metago was acquired by SLR Consulting (UK) in March 2011. During the period March 2015 to October 2016, Alex held the position of Operations Manager: Environmental Management, Planning and Approvals (EMPA) within SLR Africa and was responsible for co-ordinating SLR's environmental management team.

## Project Experience

Key aspects of Alex's project experience are summarised below.

| Project  | Date      | Alex's Role       |
|--|-----------|-------------------|
| <b>Chrome</b>  |           |                   |
| EMPs (including an EIA) for prospecting on the farms Beestekraal 290 JQ, Boschpoort 284JQ, Nooitgedacht 289JQ and Noointgedacht 287JQ near Rustenburg in the North West Province: Bakgatla Ba Kgafela Tribal Authority | 2007      | Project Manager   |
| EMPs (including EIA) for two prospecting projects on the town and town lands of Rustenburg 272JQ in Rustenburg Magisterial District, North West Province: Xstrata South Africa (Pty) Ltd                               | 2005      | Project Manager   |
| EIA/EMP for a chrome mine and concentrator in the Rustenburg / Boshhoek region: SA Ferrochrome and Mining (Pty) Ltd  | 2003-2004 | Project Assistant |
| <b>Coal</b>  |           |                   |
| EIA/EMP for a greenfields coal mine in northern Kwa-Zulu Natal: Commissiekraal Coal (Pty) Ltd  | Current   | Project Manager   |
| <b>Copper</b>  |           |                   |
| EIA-EMP amendment for the Kinsenda operations in the DRC   | 2014      | Project Reviewer  |
| EIA for a greenfields copper oxide project (Omitiomire project) (Namibia): Craton Mining and Exploration (Pty) Ltd   | 2013      | Project Reviewer  |
| <b>Ferrochrome</b>   |           |                   |
| EIA/EMP amendment for the exclusion of smelter activities at Bokfontein Chrome Mine: Heric Ferrochrome   | 2013      | Project Manager   |
| EIA/EMP amendment for a concentrator and smelter complex at Bokfontein Chrome Mine: Heric Ferrochrome  | 2012      | Project Manager   |
| EIA for Project Lion, a new smelter complex near Steelpoort: Xstrata South Africa (Pty) Ltd  | 2003-2004 | Project Assistant |
| EIA/EMP for Transvaal Ferrochrome Project (a ferrochrome smelter complex in the Rustenburg/Brits region):  | 2002-2003 | Project Assistant |
| EIA/EMP amendment for a pelletizing plant at Xstrata Wonderkop: Xstrata South Africa (Pty) Ltd   | 2002-2003 | Project Manager   |
| <b>Gold</b>  |           |                   |
| EIA for a filtration plant at Navachab Gold Mine (Namibia): AngloGold Ashanti Namibia (Pty) Ltd  | 2012      | Project Manager   |
| Basic Assessment for Diesel storage facilities at its South Deep Mine Operations: God Fields (South Africa) (Pty) Ltd  | 2011      | Project Reviewer  |

| <b>Project</b>  | <b>Date</b>   | <b>Alex's Role</b>                                  |
|---|---------------|---|
| Participation in an integrated environmental management review – technical workshop for new projects at Gold Fields: Gold Fields (South Africa) (Pty) Ltd   | 2009          | Part of a peer review delegation for an ongoing EIA |
| Consolidating South Deep Min's various EMPR documents into one document and in turn bringing the mine's EMPR in line with the requirements of the Mineral and Petroleum Resources Development Act and supporting regulations : Placer Dome Westonaria Joint Venture – South Deep Mine | 2005-2007     | Project Manager                                     |
| EIA and EMP amendment for a new tailings dam development: Placer Dome Westonaria Joint Venture – South Deep Mine  | 2005-2007     | Project Manager                                     |
| <b>Iron</b>   |               |   |
| EIA and EMP for the Jenkins and Driehoekspan greenfields mining operations in the Northern Cape: Coza Iron Ore  | 2016          | Project Reviewer                                    |
| EIA/EMP for greenfield iron ore mine development near Lephalale (Ellisras) (Moonlight iron ore project) in the Limpopo Province: Turquoise Moon Trading (Pty) Ltd   | 2012          | Project Manager                                     |
| Amendment to existing prospecting EMP to cater for changes in prospecting operations: Nelesco 684 (Pty) Ltd   | 2010          | Project Manager and Reviewer                        |
| Amendments to existing prospecting EMPs (Cascade 442IT and Delft 22HU) to cater for changes in prospecting operations: Mkhombi Mining (Pty) Ltd   | 2010          | Project Manager and Reviewer                        |
| Management of the consultation process for a prospecting EMP on the farms Sterkfontein 419IT and Wolvernkop 427IT, near Piet Retief in Mpumalanga Province: Mkhombi Mining (Pty) Ltd  | 2009          | Project Manager and Reviewer                        |
| EMP (including EIA) for prospecting on the farms Moabsveld 248IR and Rietkuil 249IR, near Delmas in Mpumalanga Province: Spirapix Mining (Pty) Ltd  | 2009          | Project Manager                                     |
| <b>Manganese</b>  |               |   |
| EMP amendment and rectification processes for Tshipi é Ntle Manganese Mining operations in the Northern Cape  | Current       | Project Reviewer                                    |
| EMP amendment process for UMK Manganese Mine in the Northern Cape   | Current       | Project Reviewer                                    |
| EIA and EMP for a greenfields mining right application in the Northern Cape: Ntsimbintle Mining (Pty) Ltd   | Current       | Project Reviewer                                    |
| EMP performance assessment and financial provision re-assessment for prospecting right in the Northern Cape: Ntsimbintle Mining (Pty) Ltd   | 2008 and 2016 | Project Reviewer                                    |
| <b>Platinum</b>   |               |   |
| Various EMP performance assessments and financial provision re-assessments for prospecting rights held by Impala in the North West, Mpumalanga and Limpopo Province: Impala Platinum Limited (Impala)   | Ongoing       | Project Manager and Reviewer                        |



| <b>Project</b>  | <b>Date</b> | <b>Alex's Role</b>           |
|---|-------------|------------------------------|
| Various EMP performance assessments and financial provision re-assessments for prospecting rights held by Afplats in the North West Province: Afplats (Pty) Ltd   | Ongoing     | Project Manager and Reviewer |
| Various amendments to existing prospecting EMPs to cater for the changes in prospecting operations: Impala Platinum Limited (Impala)  | Ongoing     | Project Manager              |
| Various EMP performance assessments and financial provision re-assessments for prospecting rights held by Inkosi and Imbasa in the North West Province  | Ongoing     | Project Manager and Reviewer |
| EIA and EMP amendment including WML for changes to surface infrastructure and operations at Bakubung Platinum Mine, North West Province   | 2015 - 2016 | Project Reviewer             |
| EIA and EMP amendment for changes to surface infrastructure and operations at Tharisa Mine, North West Province   | 2012 - 2015 | Project Reviewer             |
| EMP Compliance Audit for Leeuwkop Mine  | 2014        | Project Reviewer             |
| EIA/EMP amendment for changes to surface infrastructure at Marula Platinum Mine: Marula Platinum (Pty) Ltd  | 2013        | Project Manager and Reviewer |
| EIA/EMP for the extension of underground mining activities at Everest Platinum Mine (Fairway project): Aquarius Platinum (South Africa) (Pty) Ltd   | 2013        | Project Reviewer             |
| EIA/EMP for the extension of mining activities at Everest Platinum Mine (Hoogland project): Aquarius Platinum (South Africa) (Pty) Ltd  | 2013        | Project Manager              |
| Supply and co-ordination of interim on-site environmental manager to assist with general management of environmental aspects at Everest Platinum Mine: Aquarius Platinum (SA) (Pty) Ltd   | 2011        | Project Co-ordinator         |
| Compilation of environmental documents (including a public consultation process) in support of a closure application for the Turffontein 263JQ and Kookfontein 265JQ prospecting right and Reinkoyalskraal 278JQ and Elandsheuwel prospecting right: Impala Platinum Limited (Impala) | 2010        | Project Reviewer             |
| 2010 Annual Re-Assessments of Everest Platinum Mine's closure cost estimate: Aquarius Platinum (SA) (Pty) Ltd   | 2010        | Project Reviewer & Auditing  |
| EMP (including EIA) for prospecting on the farm Rooikraal 118JS in the Limpopo Province: Braggite Resource (Pty) Ltd  | 2010        | Project Reviewer             |
| 2009 Annual Re-Assessments of Everest Platinum Mine's closure cost estimate: Aquarius Platinum (SA) (Pty) Ltd   | 2009        | Project Manager              |
| EIA/EMP amendment for the north and south boxcuts at Everest Platinum Mine: Aquarius Platinum (SA) (Pty) Ltd  | 2009        | Project Manager & closure    |
| EIA/EMP amendment for the production expansion of Eland Platinum Mine: Xstrata South Africa (Pty) Ltd   | 2009        | Project Reviewer             |
| Assistance with the consultation with landowners to input into closure of a prospecting right: Impala Platinum Limited (Impala)   | 2008-2009   | Project Manager              |

| <b>Project</b>  | <b>Date</b> | <b>Alex's Role</b>         |
|---|-------------|----------------------------|
| Compilation of environmental posters linked to the seismic EMP for the use in environmental awareness training: Impala Platinum Limited (Impala)  | 2008        | Project Manager            |
| EMP performance assessment of Marula Platinum Mine's EMP report: Marula Platinum (Pty) Ltd  | 2008        | Project Manager & Reviewer |
| EIA/EMP for a new platinum mine and concentrator Plant (Mphahlele Project) in the Limpopo Province: Tameng Mining and Exploration (Pty) Ltd   | 2007-2008   | Project Manager            |
| EIA/EMP amendment for additional infrastructure at Everest Platinum Mine: Aquarius Platinum (SA) (Pty) Ltd  | 2006-2009   | Project Manager            |
| EIA/EMP for seismic survey activities near Impala's Rustenburg operations: Impala Platinum Limited (Impala)   | 2006-2008   | Project Manager            |
| EIA/EMP amendment for a new shaft and associated facilities and Marula Platinum Mine. This project also included the consolidation and updating of the mine's EMP to cater for the changes in mining legislation: Marula Platinum (Pty) Ltd | 2006-2008   | Project Manager            |
| EMP (including an EIA) for prospecting on the farms Turffontein 263JQ, near Impala's Rustenburg Operations: Impala Platinum Limited (Impala)  | 2005        | Project Manager            |
| EMP (including an EIA) for prospecting on the farm Reinkoyalskraal 278JQ, near Impala's Rustenburg Operations: Impala Platinum Limited (Impala)   | 2005        | Project Manager            |
| EMP (including and EIA) for prospecting on the farms Klipgatkop 115JQ, near Impala's Rustenburg Operations: Impala Platinum Limited (Impala)  | 2005        | Project Manager            |
| EMP (including and EIA) for prospecting on the farms, Doornspruit 84JQ and Roodekraalspruit 113JQ near Impala's Rustenburg Operations: Impala Platinum Limited (Impala)   | 2005        | Project Manager            |
| EIA/EMP for a mining right application (The Fingers Project) at Marikana Platinum Mine: Aquarius Platinum (SA) (Pty) Ltd  | 2005        | Project Manager            |
| Assisted in the facilitation of the public involvement process for the Shaft 20 EMP amendment: Impala Platinum Limited (Impala)   | 2004        | Project Assistant          |
| EMP amendment for the Maandagshoek Winze Project (re-establishment of an underground shaft): Modikwa Platinum Mine  | 2003-2004   | Project Manager            |
| EIA/EMP amendment for the Opencast Mining Project at the Rustenburg operations: Impala Platinum Limited (Impala)  | 2002-2005   | Project Manager            |
| EMP amendment for The Hills Project (establishment of additional infrastructure for mining purposes): Modikwa Platinum Mine   | 2002-2003   | Project Manager            |
| EIA and EMP for a greenfields mine – Everest South Platinum Mine: Aquarius Platinum (SA) (Pty) Ltd  | 2002-2003   | Project Assistant          |
| Drilling and bulk sampling EMPs for the Everest South Project: Aquarius Platinum (SA) (Pty) Ltd   | 2002        | Platinum                   |

| <b>Project</b>   | <b>Date</b>    | <b>Alex's Role</b>       |
|--|----------------|--------------------------|
| Revised bulk sampling EMP for the Everest South Project: Aquarius Platinum (SA) (Pty) Ltd  | 2002           | Project Assistant        |
| EMP amendments for re-positioning of infrastructure for Marikana Platinum Mine: Aquarius Platinum (SA)   | 2001           | Project Manager          |
| <b>Residential</b>   |                |                          |
| Provision of environmental management support to Kumba Iron Ore for the relocation of Dingleton town   | 2016           | Project Manager          |
| Basic Environmental process for the Pilanesburg Platinum Mine Housing Development, in the North West Province  | 2015           | Project Reviewer         |
| EIA for a village and cemetery for non-landowners to be relocated from the site of Marikana Platinum Mine: Aquarius Platinum (SA) (Pty) Ltd                    | 2001-2002      | Project Assistant        |
| <b>Silica</b>  |                |                          |
| EIA/EMP for mining right application at Rietvly Silica Mine: Xstrata South Africa (Pty) Ltd  | 2005-2006      | Project Manager          |
| <b>Uranium</b>   |                |                          |
| ESIA for a greenfields Uranium and Coal Mine in Botswana (Letlhakane Project): A-Cap Resources Limited   | Current        | Project Manager          |
| <b>Alternative energy</b>  |                |                          |
| EIA/EMP amendment for the use of alternative fuels at its Lichtenburg Cement Plant: Lafarge Industries SA (Pty) Ltd  | 2012           | Project Manager          |
| EIA for cogeneration power plants at Xstrata's operations in the North West and Mpumalanga Provinces: Power Tech IST/ Xstrata South Africa (Pty) Ltd           | 2008 – on hold | Project Manager          |
| <b>Bioremediation</b>  |                |                          |
| EIA for a waste management license for the bioremediation operation at TransHex Baken Diamond mine in the Northern Cape  | 2013 - 2015    | Project Manager          |
| <b>Other: Expert Consultant, due diligence, reviews, risk assessment</b>   |                |                          |
| Environmental and Social Due Diligence Review of two wind farm assets located in South Africa  | 2016           | Environmental specialist |
| Environmental management services in fulfilment of the environmental legal obligations for the Dingleton Resettlement Project, near Kathu in the Northern Cape | 2016           | Environmental specialist |
| Environmental input into various pre-feasibility studies linked to the exploration/development/expansion of mining operations.                                 | Ongoing        | Environmental specialist |
| Legal compliance review of Everest Platinum Mine (Mpumalanga) in support of re-commencing operations   | 2015           | Environmental specialist |

| <b>Project</b>   | <b>Date</b> | <b>Alex's Role</b>       |
|--|-------------|--------------------------|
| Update to Tharisa Mine's Competent Persons Report  | 2015        | Environmental specialist |
| Alfred Knight Lab Due Diligence  | 2015        | Project Manager          |
| Due diligence on compliance, water, waste and air related aspects as part of an investment investigation at Silicon Technology (Pty) Ltd   | 2012 & 2013 | Environmental specialist |
| A number of due diligences of gold exploration projects in Tanzania: New African Mining Fund   | 2013        | Environmental specialist |
| Input to a legal environmental register for African Barrick Gold's operations in Tanzania  | 2012        | Environmental specialist |
| Peer Review of baseline specialist studies for Gold Fields Damang Gold Mine  | 2012        | Environmental specialist |
| Afplats Shaft Risk Assessment Update for Inkosi - Imbasa   | 2011        | Environmental specialist |
| Review of Barrick Tulawaka Tailings EIA  | 2011        | Environmental specialist |
| Environmental input into the ESIA for the expansion of the Morupule Colliery in Botswana: Ecosurv Environmental Consultants  | 2010        | Expert Consultant        |
| <b>Policy drafting</b>   |             |                          |
| Assistance with drafting a policy, guideline document and procedure for stakeholder participation during explorations operations for the Implats Group: Impala Platinum Limited (Impala)   | 2008        | Project Manager          |
| <b>Water</b>   |             |                          |
| Assistance in compilation of water use license application (WULA) and integrated water and waste management plan (IWWMP) for a new platinum mine and concentrator plant (Mphahlele Project) in the Limpopo Province: Tameng Mining and Exploration (Pty) Ltd | 2013        | Project Manager          |
| Co-ordination of integrated water and waste at Everest Platinum Mine: Aquarius Platinum (South Africa) (Pty) Ltd   | 2012        | Project Reviewer         |
| Water Supply Study for the Moonlight Iron Ore Project: Turquoise Moon Trading (Pty) Ltd  | 2011        | Project Manager          |
| ESIA for a greenfields wellfield development in Botswana (to supply the Letlhakane Project): A-Cap Resources Limited   | 2011        | Project Manager          |
| Re-registration of waste-related water uses at Everest Platinum Mine: Aquarius Platinum (South Africa) (Pty) Ltd   | 2010        | Project Reviewer         |
| Assistance with addressing water use license related issues: Marula Platinum (Pty) Ltd   | 2010        | Project Reviewer         |
| Water use license application (WULA) for the South Deep Doornpoort tailings dam  | 2010        | Project Manager          |
| Compilation of water use license application (WULA) and integrated water and waste management plan (IWWMP) for South Deep Mine:  | 2006        | Project Manager          |

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| <b>Project</b>  | <b>Date</b> | <b>Alex's Role</b> |
|---|-------------|--------------------|
| Basic assessment for a water supply project to the Pilanesberg Platinum Mine Operations: Pilanesberg Platinum Mines (Pty) Ltd | Cancelled   | Project Reviewer   |

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### **Publications**

Onderstepoort Journal of Veterinary Science, 2005. "Aspects of the ecology of the Asian tapeworm *Bothriocephalus acheilognathi* Yamaguti, 1934 in yellow fish in the Vaal dam, South Africa"

**Natasha Smyth**  
Environmental Practitioner



## Curriculum Vitae

### Qualifications

|             |      |  |
|-------------|------|--|
| BSc<br>Hons | 2008 | Geography and Environmental Management |
| BSc         | 2007 | Environmental and Biological Sciences  |

### Key Areas of Expertise

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Management and facilitation of permitting and licensing processes

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Management of stakeholder engagement processes

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Overall Project Management

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### Summary of Experience and Capability

Natasha is an environmental practitioner with SLR's South Africa office and is responsible for various environmental assessment projects. Natasha has seven years of experience within the Minerals sector, both as a project manager and assistant to various projects in South Africa and Africa.

Natasha has managed and assisted in a wide range of Environmental Impact Assessment projects for major and small scale minerals developments throughout South Africa as well as in Namibia for many of the major operators within the minerals industry.

Since 2009 Natasha has been involved in over 20 projects of which she has project managed 6 major and numerous small scale Environmental Impact Assessments for minerals extraction operations.

## Recent Project Experience

Key aspects of Natasha's recent project experience are summarised below.

| Project   | Date      | Natasha's Role  |
|---|-----------|---|
| Environmental assessment process and air emissions license process for the establishment of the new Jeanette Mine.  | 2015-2016 | Project Manager. Compilation of scoping and environmental impact assessment and environmental management programme reports. Compilation of the technical supporting information required for a waste management license application and an air emissions license application. The management of the stakeholder engagement process and specialists.   |
| Water Use License Compliance Audit for the UMK Mine in the Northern Cape.   | 2015      | Project Manager. Assess compliance with the commitments included in the water use licenses issued and make recommendations for rectifying non-compliances and partial compliances identified during the audit.  |
| Environmental assessment process, waste management license process and water use license process for the establishment of a new Mokala Manganese Mine.                                      | 2014-2016 | Project Manager. Compilation of scoping and environmental impact assessment and environmental management programme reports. Compilation of the technical supporting information required for a water use license application process and submission of the waste management license application. The management of the stakeholder engagement process and specialists.  |
| Environmental assessment process for the proposed construction of dewatering infrastructure and the development of a decant water pipeline in support of the proposed Evander Shaft 6 Gold. | 2014      | Project Manager. Compilation of a basic assessment report, the management of the stakeholder engagement process and the management of specialists.  |
| Environmental legal gap analysis  | 2014      | Project Manager. Compilation of an environmental legal gap analysis report to identify any inadequacies in existing approvals and to identify outstanding approvals in terms of the National Environmental Management Act 107 of 1998, the National Environmental Management: Waste Act 59 of 2008, the National Environmental Management: Air Quality Act 39 of 2004, and the National Water Act 36 of 1998 (NWA).     |
| Environmental assessment process to cater for changes to the approved infrastructure layout at the Tshipi Borwa Mine.   | 2012-2016 | Project Manager. Compilation of scoping and environmental impact assessment and environmental management programme reports. The management of the stakeholder engagement process and specialists.   |
| Environmental support work to meet the requirements of the approved environmental management programme and updating the water use license application.                                      | 2009-2014 | Project Manager. Environmental support with regards to assistance to the UMK Mine in implementing its environmental management programme commitments. This also includes quarterly stakeholder engagement processes, EMP performance assessments and quarterly audits. Updating the water use license and supporting documentation including a new integrated water and waste management plan and specialist management |

| <b>Project</b>   | <b>Date</b> | <b>Natasha's Role</b>   |
|--|-------------|---|
| Environmental Management Programme amendment for the Nooitgedacht Sand Quarry Mine.  | 2013        | Project Manager. Compilation environmental impact assessment and environmental management programme amendment report.   |
| Proposed Kinsenda project amendment: underground mine and surface infrastructure<br>Client: Meterox, Kinsenda Copper mine.   | 2013        | Project assistant. Assistance with the compilation of the environmental impact assessment and environmental management programme report.  |
| The environmental assessment process to amend the existing environmental impact assessment report and environmental management programme report to cater for infrastructure changes as the Leeuwkop Platinum Mine. | 2012-2013   | Project Manager. Compilation of scoping and environmental impact assessment and environmental management programme amendment reports. Submission of the waste management license application. The management of the stakeholder engagement process and specialists.               |
| Environmental and social impact overview of the proposed development of a new training centre at the Impala Platinum Rustenburg Operation.   | 2013        | Project Manager. Compilation of a report to provide an overview of the potential environment and social impacts associated with the development of the proposed training centre.  |
| Environmental Management Programme performance assessment of the Impala Rustenburg Operation.  | 2012        | Project assistant. Assistance with the on-site auditing and report writing required for the environmental management programme performance assessment.  |
| Prospecting environmental management plan renewal and amendment (Afplats (Pty) Ltd).   | 2012        | Project Manager. Compilation of the reports required for the renewal of a prospecting right, the amendment of an approved prospecting environmental management plan including the update of the financial provision and the management of the stakeholder engagement process.     |
| Prospecting environmental management plan renewal and amendment (Impala Platinum Limited on behalf of Inkosi Platinum (Pty) Ltd).  | 2012        | Project Manager. Compilation of the reports required for the renewal of a prospecting right, the amendment of an approved prospecting environmental management plan including the update of the financial provision and the management of the stakeholder engagement process.     |
| Prospecting environmental management plan amendment (Ntsimbintle Mining (Pty) Ltd).  | 2012        | Project Manager. Compilation of the prospecting environmental management plan amendment report and specialist management.   |
| Prospecting environmental management plan amendment (Ntsimbintle Mining (Pty) Ltd).  | 2012        | Project Manager. Compilation of the prospecting environmental management plan amendment report and specialist management.   |
| The consolidation of Impala's fourteen existing approved environmental management programme reports into one consolidated report.  | 2012        | Project Manager. Compilation of a consolidated environmental impact assessment and environmental management programme report include the management of the stakeholder engagement process.  |
| Environmental evaluation of Pit8C at Impala Platinum.  | 2012        | Project Manager. Compilation of a report to evaluate if the approved EIA and EMP amendment report adequately caters for the proposed Pit8C conventional opencast mining area, in terms of the baseline environment, the impact assessment and the mitigation/management measures. |



| <b>Project</b>   | <b>Date</b> | <b>Natasha's Role</b>   |
|--|-------------|---|
| Environmental assessment process for the environmental impact assessment and environmental management programme amendment for a proposed new tailings dam, re-processing of a old tailings dam, rehabilitation of the old tailings and waste disposal site, and open pit expansion.<br>Client: Impala Platinum Limited (Rustenburg Operation). | 2011-2012   | Project Manager. Compilation of scoping and environmental impact assessment and environmental management programme reports. Compilation of the technical supporting information required for a water use license application process. The management of the stakeholder engagement process and specialists. |
| EIA and EMP for the establishment of the Swakop Uranium Mine.  | 2011        | Project assistant. Project assistant with stakeholder engagement and managing specialists.  |
| EIA and EMP for the linear infrastructure associated with the Swakop Uranium Mine.   | 2010-2011   | Project assistant. Project assistant with stakeholder engagement and managing specialists.  |
| Environmental assessment process for the establishment of a new iron ore mine.   | 2010-2011   | Project assistant. Assistance with the stakeholder engagement process.  |
| Environmental assessment process.  | 2010        | Project assistant. Assistance with the compilation of the environmental impact assessment and environmental management programme report.  |
| Environmental assessment process for the establishment of the new Kalkfontein Platinum Mine.   | 2010        | Project assistant. Assistance with the stakeholder engagement process.  |
| Prospecting EMP for platinum group metals.   | 2010        | Project manager. Compilation of a prospecting EMP and stakeholder management process.   |
| Licensing of various water uses at the South Deep Mine.  | 2009        | Project assistant. Assistant with water use licensing application.  |
| EMP amendment for the extension of mining activities.  | 2009        | Project assistant. Assistance with the stakeholder engagement process.  |
| The EMP amendment for the changes to surface infrastructure.   | 2009        | Project assistant. Assistance with the stakeholder engagement process.  |
| EIA and EMP for a new manganese mine.  | 2009        | Project assistant. Assistance with the stakeholder engagement process.  |

## **Publications**

None