

Curriculum vitae: Ms Tanja Bekker

Name : Bekker, Tanja
Date of Birth : 23 June 1980
Profession/Specialisation : Environmental Project Manager / Cert. Environmental Assessment Practitioner
Nationality : South African
Years' Experience : 19 Years

Key qualifications

Ms Tanja Bekker has more than 19 years' working experience in the Environmental Consultancy Industry. Her key focus is environmental management and compliance with extensive experience in the mining industry. Project Management and Coordination form a critical component of her duties, which include environmental gap analysis, project planning, initiation of projects, client, authority and stakeholder consultation, specialist coordination, budget control, process control, quality control and timeframe management.

Her interest lies in a client advisory capacity, being involved during due diligence investigations, pre-project development and assisting the client and engineering team in adding value to develop a project in and environmental sustainable manner, considering client costs and liabilities, as well as the implication of environmental regulatory requirements and conditions on project deliverables.

Her involvement in projects has spanned over the project life cycle from Due Diligence Investigations, Pre-Feasibility Investigation's, Prospecting Right Applications, Mining Right Applications, Environmental Impact Assessments, Environmental Management Plans and implementation and auditing of Environmental Management Plans and Authorisations.

Ms Bekker has significant experience in integrated environmental management processes, such as Environmental Scoping Assessment, Environmental Impact Assessments (EIAs) and Basic Assessment Reports (BARs), and the development of Environmental Management Plans (EMP). Her experience further spans into the formulation and management of Water Use License Applications and Integrated Water and Waste Management Plans. Her experience and professional registrations have resulted in her capabilities to act as a Project Manager and Peer Reviewer for Environmental Authorisation Projects ensuring the independence of such projects, as well as Project undertaken in terms of IFC/World Bank Requirements.


She has comprehensive experience and thorough understanding of the National Environmental Act, 1998 and subsequent Regulations; National Environmental Management: Waste Act, 2008; National Environmental Management: Air Quality Act, 2004; National Water Act, 1998 and the Mineral and Petroleum Resources Development Act, 2002. She is a certified ISO 14001 Lead Auditor and has been involved in conducting environmental audits and site assessments, implementing of EMPs, as well as assessing environmental compliance. She has acted as the Large Account Manager for various mining companies including Total Coal South Africa (involved for 7 year), as well as for Assmang's Ferrous Division (involved for 12 years).


Ms. Bekker acts as a Guest Lecturer at the University of Johannesburg at the Department of Geography and Environmental Management, where she lectures 3rd and 4th year students on matters regarding Environmental Management and the implementation of knowledge into the Environmental Consulting Field.

Ms Bekker is a registered Professional Natural Scientist with the South African Council of Natural Science Professional Board and is also a Certified Environmental Assessment Practitioner with the Board of Environmental Practitioner Association of South Africa (EPASA) a legal requirement of the National Environmental Management Act, 1998.

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Employment Record

02/2015 to current:	EnviroGistics – Owner
01/2007 to 04/2014:	GCS (Pty) Ltd – Project Manager; Environmental Unit Manager
06/2006 to 12/2006:	WSP Environmental (Pty) Ltd – Environmental Scientist
09/2003 to 05/2006:	GCS (Pty) Ltd – Environmental Scientist
08/2002 to 08/2003:	Digby Wells and Associates – Junior Environmental Scientist
04/2001 to 07/2002 (Part time):	UWP Engineers – Part Time Digitizer – GIS (Arc View)

Education

B.Sc. Earth Sciences (Geography & Geology) – RAU (University of Johannesburg)
 B.Sc. Geography Honours - RAU (University of Johannesburg)
 M.Sc. Environmental Management - RAU (University of Johannesburg)

Career Enhancing Courses

ISO 14000 Lead Auditors Course (WTH Management)
 Certificate in Project Management (Pretoria University)
 Management Advance Programme (MAP 81) (Wits Business School)
 Certificate in Customer Service Excellence (Pretoria University Enterprises)
 IWRM, the NWA and Water Use Authorisations (Carin Bosman Sustainable Solutions)

Professional Affiliations

Registered Environmental Assessment Practitioner of South Africa (EAPASA)
 Certified ISO 14001 Environmental Management System Auditor
 Registered as a Professional Natural Scientist (SACNASP),
 Member of the South African affiliate of the International Association for Impact Assessment
 Member of the Environmental Law Association of South Africa (ELA).

Languages

	Reading	Writing	Speaking
English	Excellent	Excellent	Excellent
Afrikaans	Excellent	Excellent	Excellent

Experience Record

1. National Water Act, 1998

- ☞ Water Use License Application in terms of the National Water Act, 1998 – Compilation of the Water Use License Application for Eden Districts Municipality (2004)
- ☞ Senior Review of the Total Coal South Africa, DCM East Water Use License Application (2011)
- ☞ Assmang Ltd, Khumani Iron Ore Mine, Senior Project Manager in the application for a holistic Water Use License for the Khumani Iron Ore Mine (2012)
- ☞ Assmang Ltd, Beeshoek Iron Ore Mine, Senior Project Management in the application for a holistic Water Use License for the Beeshoek Iron Ore Mine (2013)
- ☞ Assmang Ltd, Khumani Iron Ore Mine, Senior Project Manager in the amendment of approved Water Use License with the inclusion of strategic water uses to streamline the application process (2013)
- ☞ Senior Consultant in the addressing the appeal of the Total Coal South Africa, DCM East Water Use License Application (2013)
- ☞ Water Use License Application for Dwarsrivier Chrome Mine (2016);
- ☞ Water Use License Application for Beeshoek Iron Ore Mine (2018);
- ☞ Water Use License Application for NWK Liquid Fertiliser (2018);
- ☞ Water Use Licence Application for emergency water abstraction for Khumani Iron Ore Mine (2016-current).
- ☞ Formulation of Integrated Water and Waste Management Plan for Beeshoek Iron Ore Mine (2016)
- ☞ Formulation of Integrated Water and Waste Management Plan for Dwarsrivier Chrome Mine (2016)

- ☞ Management of Risk Assessment for a General Authorisation of River Crossings in the Steelpoort area (2017)
- ☞ Water Use License Application for Dwarsrivier Chrome Mine (2018 – current)
- ☞ Water Use License Application Amendment for DCM Mine, Burgersfort (2018 – current)
- ☞ Water Use License Application Amendment for Samancor, TAS Smelter (2018 – current)
- ☞ Water Use License Application Amendment for Dwarsrivier Chrome Mine (2019 – current)
- ☞ Water Use License Application Amendment for Khumani Iron Ore Mine (2019 – current)
- ☞ Integrated Water and Waste Management Plan for Dwarsrivier Chrome Mine (2016)
- ☞ Integrated Water and Waste Management Plan for Dwarsrivier Chrome Mine (2017)
- ☞ Integrated Water and Waste Management Plan for Beeshoek Iron Ore Mine (2016)
- ☞ Integrated Water and Waste Management Plan for Beeshoek Iron Ore Mine (2017)
- ☞ Integrated Water and Waste Management Plan for Wonderkop Smelter (2017)
- ☞ Integrated Water and Waste Management Plan for DRD Ergo Mine (2018-current)
- ☞ Integrated Water and Waste Management Plan for Khumani Iron Ore Mine (2018-current)

2. Mineral and Petroleum Resources Development Act, 2002

- ☞ Prospecting Right Application and Environmental Management Plan – Project manager and coordination of the environmental authorisation process on the farm McCarthy for Assmang Ltd for the prospecting of iron ore in the Northern Cape Province. Responsibilities included the overall management of the project with the compilation of the application and subsequent Environmental Management Plan (2004)
- ☞ Prospecting Right Application and Environmental Management Plan – Project manager and coordination of the environmental authorisation process on the farm Doornfontein for Assmang Ltd for the prospecting of iron ore in the Northern Cape Province. Responsibilities included the overall management of the project with the compilation of the application and subsequent Environmental Management Plan (2004)
- ☞ Prospecting Right Application – Main responsibility involved the compilation and submission of a Prospecting Right Application and associated Environmental Management Plan for Rovic (Pty) Ltd on the farm Rietkuil (2005)
- ☞ Prospecting Right Application – Main responsibility involved the compilation and submission of a Prospecting Right Application and associated Environmental Management Plan for Rovic (Pty) Ltd on the farms Ou Damplaats, Mineside, Redhills, Woolcott and Prospect (2005)
- ☞ Prospecting Right Application – Project manager for the environmental authorisation process for a Prospecting Right Application for Khusela Womens Investments (Pty) Ltd on the farm Loopspruit in the Mpumalanga Province. Main responsibility involved the coordination of the public participation process and associated Environmental Management Plan (2005)
- ☞ Prospecting Right Application – Project manager for the environmental authorisation process for a Prospecting Right Application for Khusela Womens Investments (Pty) Ltd on the farm Van Kolderskop in the Mpumalanga Province. Main responsibility involved the coordination of the public participation process and associated Environmental Management Plan (2005)
- ☞ Mining Right Application, Environmental Authorisation and Rehabilitation Fund - Project manager and co-ordination of the environmental authorisation process for the green fields Khumani Iron Ore Mine for Assmang Ltd. Main responsibilities involved the application for the Mining Right Application and subsequent liaison with the relevant authorities; coordination and management of sub consultants; liaison with the relevant stakeholders, which included the consultation in terms of purchasing of land and utilisation of bulk services; coordination and management of the public participation process; overview of the Water Use License Application; Environmental Feasibility Reporting; Site Selection process for the location of a paste disposal facility; Scoping Reporting, interpreting of specialist investigations and results and Environmental Impact Assessment and Management Reporting and the compilation of the rehabilitation fund (2006)
- ☞ Environmental Programme Addendum – Project manager and coordination of the addendum of the Harmony Randfontein Operation's approved Environmental Management Programme to align the report with the requirements of the Mineral and Petroleum Resources Development Act, 2002, as well as the undertaking of the relevant public participation process
- ☞ Environmental Programme Addendum – Project manager and coordination of the addendum of the Harmony Randfontein Operation's approved Environmental Management Programme to align the report with the requirements of the Mineral and Petroleum Resources Development Act, 2002, as well as the undertaking of the relevant public participation process (2006)



- ☛ Environmental Programme Amendment - Project manager and coordination of the Merensky Environmental Management Programme Amendment for Anglo Platinum in Amandelbult. Main responsibilities involved the coordination of sub consultants, interpreting of specialist investigations and results, quality control, coordination of the public participation process and client liaison (2006)
- ☛ Environmental Programme Amendment - Project manager and coordination of the UG2 Environmental Management Programme Amendment for Anglo Platinum in Amandelbult. Main responsibilities involved the coordination of sub consultants, interpreting of specialist investigations and results, quality control, coordination of the public participation process and client liaison (2006)
- ☛ Environmental Programme Amendment - Project manager and coordination of the Khumani Iron Ore Mine Amendment for the inclusion of the mining of the barrier pillar between the mine and Sishen Iron Ore Mine for Assmang Limited. Main responsibilities involved the coordination and management of the project, interpreting of specialist investigations and results, quality control, coordination of the public participation process and client liaison, as well as the formulation of the financial closure cost (2007)
- ☛ Mining Right Application and Environmental Management Programme - Project manager and coordination for a mega tailings dam extension for Mine Waste Solutions, First Uranium South Africa in the Northwest Province. Main responsibilities involved the coordination and management of the project, quality control, coordination of the public participation process and client liaison, as well as the formulation of the financial closure cost (2007)
- ☛ Environmental Management Programme - Project manager and coordination of the green fields East Mine Expansion Project for Total Coal South Africa for the establishment of new opencast and underground operations with the associated plant and ancillary infrastructure, including a railway line link to the Richard Bay Coal Terminal. Main responsibilities involved the coordination and management of the project, compilation of the environmental feasibility report, interpreting of specialist investigations and results, site selection for a co-disposal facility and new railway line, quality control, coordination of the public participation process and client liaison, as well as the formulation of the financial closure cost (2008)
- ☛ Environmental Programme Amendment – Project manager and coordination of the amendment of the Harmony Kalgold Operation’s approved Environmental Management Programme to align the report with the requirements of the Mineral and Petroleum Resources Development Act, 2002. Main responsibilities involved the coordination and management of the project, quality control, coordination of the public participation process and client liaison, as well as the formulation of the financial closure cost, as well as the undertaking of the relevant public participation process (2008)
- ☛ Environmental Management Programme Amendment - Project manager and coordination of the East Mine Option 1 Project for Total Coal South Africa for the establishment of conveyor line link to the Richard Bay Coal Terminal. Main responsibilities involved the coordination and management of the project, interpreting of specialist investigations and results, quality control, and client liaison, as well as the formulation of the financial closure cost (2009)
- ☛ Environmental Management Programme Amendment - Project manager and coordination of the West Mine Project for Total Coal South Africa for the establishment of new opencast and underground operations with the associated plant and ancillary infrastructure. Main responsibilities involved the coordination and management of the project, interpreting of specialist investigations and results, quality control and client liaison (2009)
- ☛ Environmental Management Programme Amendment – Project manager and coordination of the Black Rock Manganese Mines for Assmang Ltd to align the report with the requirements of the Mineral and Petroleum Resources Development Act, 2002 and to include activities such as a new plant, water treatment facility, footprint increases, etc. Main responsibilities involved the coordination and management of the project, quality control, coordination of the public participation process and client liaison, as well as the formulation of the financial closure cost (2009)
- ☛ Total Coal Service Level Agreement – Responsible for the coordination of the environmental projects and legal requirements for the Total Coal operations (2010 to current)
- ☛ Environmental Management Programme Amendment - Project manager and coordination of the Khumani Iron Ore Amendment project (2012)
- ☛ Environmental Management Programme Amendment (Low Grade Stockpile) – Project Management and coordination for the Khumani Iron Ore Mine (2016)



- 🔗 Environmental Management Programme Amendment – Project Management and coordination for Beeshoek Iron Ore Mine (2018)
- 🔗 Mukulu PFS Planning Project with Hatch - Project Management and coordination (2013)
- 🔗 DRA Project Planning and Client Advisory Role – Ad Hoc Appointment (2013)
- 🔗 Sable Metal and Minerals, Sandbult Prospecting Right Application Environmental Management Plan (2014)
- 🔗 Sable Metal and Minerals, Bierkraal Prospecting Right Application Environmental Management Plan (2014)
- 🔗 Sable Metal and Minerals, Doornpoort Prospecting Right Application Environmental Management Plan (2014)
- 🔗 Assore Wonderstone EMP Amendment Gap Analysis (2017);
- 🔗 Assore Zeerust EMP Amendment Gap Analysis (2018);
- 🔗 Assore RDCM EMP Amendment Gap Analysis (2018).

3. Closure Assessments and Financial Provision in terms of the Mineral and Petroleum Resources

Development Act, 2002

- 🔗 Glossam Closure Assessment - Project manager of the historic Glossam Mine operations for Assmang Ltd to obtain closure in terms of the requirements of the Mineral and Petroleum Resources Development Act, 2002 Main responsibilities involve the coordination and management of the project, quality control, client liaison, as well as the formulation of the financial closure cost (2009)
- 🔗 Japiesrus Closure Assessment - Project manager of the historic Glossam Mine operations for Assmang Ltd to obtain closure in terms of the requirements of the Mineral and Petroleum Resources Development Act, 2002 Main responsibilities involve the coordination and management of the project, quality control, client liaison, as well as the formulation of the financial closure cost (2011)
- 🔗 Financial Provision Assessment – Responsible for the assessment of and reporting on the financial closure cost for Assmang Ltd for the Beeshoek Iron Ore Mine, Northern Cape (2007)
- 🔗 Financial Provision Assessment – Responsible for the assessment of and reporting on the financial closure cost for Simmer and Jack Ltd for the Buffelsfontein Gold Mine, Northwest Province (2007)
- 🔗 Financial Provision Assessment – Responsible for the assessment of and reporting on the financial closure cost for Simmer and Jack Ltd for the Buffelsfontein Gold Mine, Northwest Province (2008)
- 🔗 Financial Provision Assessment – Responsible for the assessment of and reporting on the financial closure cost for Assmang Ltd for the Beeshoek Iron Ore Mine, Northern Cape (2009)
- 🔗 Financial Provision Assessment – Responsible for the assessment of and reporting on the financial closure cost for Assmang Ltd for the Khumani Iron Ore Mine, Northern Cape (2009)
- 🔗 Financial Provision Assessment – Responsible for the assessment of and reporting on the financial closure cost for Assmang Ltd for the Black Rock Manganese Mine, Northern Cape (2009)
- 🔗 Financial Provision Assessment – Responsible for the assessment of and reporting on the financial closure cost for Simmer and Jack Ltd for the Buffelsfontein Gold Mine, Northwest Province (2009)
- 🔗 Financial Provision Assessment - Responsible for the assessment of and reporting on the financial closure cost for Total Coal South Africa for the Dorstfontein East Project, Mpumalanga (2009)
- 🔗 Financial Provision Assessment - Responsible for the assessment of and reporting on the financial closure cost for Total Coal South Africa for the Forzando West Project, Mpumalanga (2011)
- 🔗 Financial Provision Assessment - Responsible for the assessment of and reporting on the financial closure cost for Khumani Iron Ore Mine (2014)
- 🔗 Financial Provision Assessment - Responsible for the assessment of and reporting on the financial closure cost for Sable Metals and Minerals, Bierkraal Prospecting Area (2014)
- 🔗 Financial Provision Assessment - Responsible for the assessment of and reporting on the financial closure cost for Sable Metals and Minerals, Sandbult Prospecting Area (2014)
- 🔗 Financial Provision Assessment - Responsible for the assessment of and reporting on the financial closure cost for Sable Metals and Minerals, Doornpoort Prospecting Area (2014)
- 🔗 Financial Provision Assessment for Beeshoek Iron Ore Mine 2015;
- 🔗 Financial Provision Assessment for Khumani Iron Ore Mine, 2015;
- 🔗 Financial Provision Assessment for Petra Diamonds Prospecting Right, 2016;
- 🔗 Financial Provision Assessment for Beeshoek Iron Ore Mine, 2016;
- 🔗 Financial Provision Assessment for Khumani Iron Ore Mine, 2016;

- ☞ Financial Provision Assessment in terms of the NEMA Regulations for the ARM Ferrous Operations, Northern Cape, 2016;
- ☞ Financial Provision Assessment in terms of the NEMA Regulations for the ARM Ferrous Operations, Northern Cape, 2017;
- ☞ Sebilo Resources Closure Plan Development, 2017
- ☞ Financial Provision Assessment for Beeshoek Iron Ore Mine, 2016;
- ☞ Financial Provision Assessment for Khumani Iron Ore Mine, 2016;
- ☞ Financial Provision Assessment for Beeshoek Iron Ore Mine, 2017;
- ☞ Financial Provision Assessment for Khumani Iron Ore Mine, 2017;
- ☞ Financial Provision Assessment for Black Rock Manganese Mine, 2017
- ☞ Financial Provision Assessment for Beeshoek Iron Ore Mine, 2018;
- ☞ Financial Provision Assessment for Khumani Iron Ore Mine, 2018;
- ☞ Financial Provision Assessment for Black Rock Manganese Mine, 201;
- ☞ Financial Provision Assessment for Beeshoek Iron Ore Mine, 2019;
- ☞ Financial Provision Assessment for Khumani Iron Ore Mine, 2019;
- ☞ Financial Provision Assessment for Beeshoek Iron Ore Mine, 2020;
- ☞ Financial Provision Assessment for Khumani Iron Ore Mine, 2020;
- ☞ Financial Provision Assessment for Beeshoek Iron Ore Mine, 2021;
- ☞ Financial Provision Assessment for Khumani Iron Ore Mine, 2021.

4. Environmental Conservation Act, 1989

- ☞ Environmental Authorisation - Project manager and co-ordination of the environmental authorization process for the green fields Khumani Iron Ore Mine for Assmang Ltd to obtain approval for listed activities (2005)
- ☞ Environmental Authorisation – Compilation of the Environmental Impact Assessment Report for the Gerus-Murani Power line in Namibia for NamPower (2006)
- ☞ Environmental Authorisation – Project manager and co-ordination of the environmental authorization for Blue Horizons Investments for the Paarl eco-estate development in Lephalale, Limpopo Province. Main responsibilities involved the coordination of sub consultants, quality control, coordination of the public participation process and client liaison (2006)
- ☞ Environmental Authorisation – Project manager and co-ordination of the environmental authorization for Blue Horizons Investments for the Madulakgogo eco-estate development in Burgersford, Mpumalanga Province. Main responsibilities involved the coordination of sub consultants, quality control, coordination of the public participation process and client liaison (2006)

5. National Environmental Management Act, 1998 and National Environment Management: Waste Act, 2008

- ☞ Environmental Authorisation for listed activities - Project manager and coordination for a mega tailings dam extension and associated listed activities (linear, plant, areas greater than 20ha, etc.) for Mine Waste Solutions, First Uranium South Africa in the Northwest Province. Main responsibilities involved the coordination and management of the project, interpreting of specialist investigations and results, quality control, coordination of the public participation process and client liaison, as well as the formulation of the financial closure cost (2007)
- ☞ Environmental Authorisation for listed activities - Project manager and coordination of the green fields East Mine Expansion Project for Total Coal South Africa for the authorisation of listed activities that included areas greater than 20ha, railway lines, conveyors, mining within wetland and watercourse areas, etc. Main responsibilities involved the coordination and management of the project, interpreting of specialist investigations and results, site selection for a co-disposal facility and new railway line, quality control, coordination of the public participation process and client liaison, as well as the formulation of the financial closure cost (2008)
- ☞ Basic Assessment for listed activities - Project manager and coordination for Assmang Ltd for the Khumani Iron Ore Mine for the temporary storage of diesel along the railway line. Main responsibilities involved the coordination and management of the project, site selection for a co-disposal facility and new railway line, interpreting of specialist investigations and results, quality



- control, coordination of the public participation process and client liaison, as well as the formulation of the financial closure cost (2008)
- ☞ Basic Assessment for listed activities - Project manager and coordination for Harmony Gold Mines Limited for the Evander Operations for the closure of a domestic waste disposal site. Main responsibilities involved the coordination and management of the project, interpreting of specialist investigations and results, coordination of specialists, closure alternatives, quality control, coordination of the public participation process and client liaison (2008)
 - ☞ Environmental Authorisation for listed activities - Project manager and coordination of the West Mine Expansion Project for Total Coal South Africa for the authorisation of listed activities that included areas greater than 20ha, conveyors, mining within wetland and watercourse areas, etc. Main responsibilities involved the coordination and management of the project, interpreting of specialist investigations and results, quality control, coordination of the public participation process and client liaison (2009)
 - ☞ Environmental Authorisation for listed activities - Project manager and coordination of the of the East Mine Option 1 Project for Total Coal South Africa for the authorisation of listed activities that involve conveyors, activities within wetland and watercourse areas, etc. Main responsibilities involved the coordination and management of the project, interpreting of specialist investigations and results, quality control, and client liaison, as well as the formulation of the financial closure cost (2009)
 - ☞ Environmental Authorisation for listed activities - Project manager and coordination of the Black Rock Manganese Mines for Assmang Ltd for the authorisation of listed activities that included diesel storage and generation etc. Main responsibilities involved the coordination and management of the project, quality control, coordination of the public participation process and client liaison (2009)
 - ☞ Environmental Authorisation for listed activities - Project manager and coordination of the Black Rock Manganese Mines for Assmang Ltd for the authorisation of listed activities, which include a new Eskom power line. Main responsibilities involve the coordination and management of the project, quality control, coordination of the public participation process and client liaison (2009)
 - ☞ Environmental Management Programme Amendment - Project manager and coordination of the Khumani Iron Ore Amendment project (2011)
 - ☞ Risk Assessments for current Total Coal Operations
 - ☞ Khumani Low Grade Stockpile Environmental Authorisation – Peer Review and Overall Advisory Capacity (2014-2015)
 - ☞ Nederburg (Distell Ltd) Mixed Land Use Environmental Authorisation – Principal Environmental Practitioner (2014 -2015)
 - ☞ Basic Assessment Application for the upgrade of a Storm Water Dam for Beeshoek Iron Ore Mine, 2016;
 - ☞ Basic Assessment Application for a Prospecting Right Application for Barkley West, Petra Diamonds, 2015;
 - ☞ Basic Assessment Application for a Prospecting Right Application for Carter Block, Petra Diamonds, 2015;
 - ☞ Basic Assessment Application for a Prospecting Right Application for Farm 87&88, Petra Diamonds, 2015;
 - ☞ Environmental Impact Assessment for the storage of dangerous goods for NWK Liquid Fertiliser, 2016.
 - ☞ Basic Assessment Application for an upgrade to a Storm Water Dam on an Iron Ore Mine, 2016.
 - ☞ Basic Assessment Application for the expansion of mining activities and infrastructure at the Khumani Iron Ore Mine, 2017-current.
 - ☞ Basic Assessment Application for a Prospecting Application near Loeriesfontein, 2017.
 - ☞ Environmental Gap Analysis for industrial development near Steelpoort, 2017;
 - ☞ Environmental Gap Analysis and Environmental Management Programme Development for Assore Wonderstone Operations (2017);
 - ☞ Environmental Gap Analysis and Environmental Management Programme Development for Assore Zeerust Operations (2017);
 - ☞ Integrated Basic Assessment Application for a Waste Rock Dump Extension, Dwarsrivier Chrome Mine (2017)
 - ☞ Integrated Environmental Impact Assessment for Dwarsrivier Chrome Mine for new Exploration Activities and the extension of Capital Projects (2018-current);



- ☛ Integrated Environmental Impact Assessment for Dwarsrivier Chrome Mine for a new Tailings Storage Facility (2019-current);
- ☛ Environmental Impact Assessment for Khumani Iron Ore Mine for a new Return Water Dam, Pipelines and amendments to the Water Use Licence (2018-current);
- ☛ Environmental Gap Analysis for expansion projects at Beeshoek Iron Ore Mine (2019).
- ☛ Environmental Impact Assessment for Assmang Chrome, Machadodorp Smelter (2020);
- ☛ Assore, Wonderstone Mine Environmental Authorisation Process (2020).
- ☛ Beeshoek Iron Ore Mine Optimisation Environmental Authorisation Process (2021-current);
- ☛ Assore, Driekuil Mine Environmental Authorisation Process (2021)-current.

6. Crack Surveys

- ☛ Mining Related Crack Survey – Responsible for the establishment of the potential impact on surrounding farm houses for Assmang Ltd for the Khumani Iron Ore Mine with relation to blasting activities. Main responsibility was the establishment of methodology and associated consultation with relevant specialists in the field and the associated reporting (2005)
- ☛ Residential Crack Survey – Responsible for determining the current status of houses in an area earmarked for business expansion in Hyde Park For Impafa Technologies (2006)

7. Air Emission Licenses

- ☛ Khumani Iron Ore Mine, Diesel Tank Atmospheric Emission License (2014)
- ☛ Coordination of LDAR Monitoring at the Khumani Iron Ore Mine (2017)
- ☛ Assistance in NAIES Reporting for the Assmang Chrome Khumani Mine (2019-2021)
- ☛ Assistance in NAIES Reporting for the Assmang Chrome Machadodorp Operations (2018-2021)

8. Audits, Gap Analysis and Due Diligence

- ☛ Due Diligence - Formed part of the audit team to assess the environmental liabilities as part of two Phase 1 Environmental Site Assessments for both the manufacturing site, as well as the warehouse. Main responsibility was the assessment of the environmental legal compliance in terms of the national, provincial and municipal legislation (2004)
- ☛ Participated as part of the audit team. The audit involved an ISO 14000 assessment in terms of the environmental, health and safety. Main areas of responsibility were to provide guidance in terms of the environmental statutes of the South African Legislation (2005)
- ☛ Expert Summary on Environmental Legal Issues - The Total vs. Tavistock Arbitration assessment involved the environmental legal assessment of the two companies in question's legal status in terms of environmental compliance with specific reference to legal administration and water management. Main responsibility was the provision of an expert summary regarding the environmental legal compliance in terms of the South African Legislation (2006)
- ☛ Environmental Audits as part of the requirements of the Environmental Conservation Act, 1989 and the Mineral and Petroleum Resources Development Act, 2002 - Responsible for the formulation of the audit protocols and feedback procedures for the implementation of the environmental management programme for the Khumani Iron Ore Mine, Northern Cape. The assessment involved six month audit programme during the start of the operational phase of the mine. As part of the assessment the responsibilities involve the provision of action plans to address areas of definite and potential non-compliance. The performance assessments were later extended into the operational phase (2007)
- ☛ Environmental, Health and Safety Audit - Participated as the lead auditor for eight mining operations within South Africa for African Rainbow Minerals. The audit addressed all aspects of environmental, safety and financial closure cost within the South African Legislation. The assessment involved the formulation of the audit protocols and audit papers (2007)
- ☛ Performance Assessment as part of the requirements of the Mineral and Petroleum Resources Development Act, 2002 - Participated as part of the audit team for Assmang Ltd, the Black Rock Manganese Mine, Northern Cape. Responsible for assessing the compliance to environmental aspects in terms of the broader South African Legislation, as well as the assessment of the financial rehabilitation fund (2007)



- ☛ Performance Assessment as part of the requirements of the Mineral and Petroleum Resources Development Act, 2002 - Participated as part of the audit team for Total Coal South Africa for the Forzando North and South Mine Operations. Main responsibility was the assessment of the financial rehabilitation fund (2008).
- ☛ Performance Assessment as part of the requirements of the Mineral and Petroleum Resources Development Act, 2002 - Annual environmental audit for Assmang Ltd, the Khumani Iron Ore Mine, Northern Cape. Responsible for assessing the compliance to environmental aspects on site (2008)
- ☛ Performance Assessment as part of the requirements of the Environmental Conservation Act, 1989 – Annual environmental audits for Assmang Ltd, the Khumani Iron Ore Mine, Northern Cape. Responsible for assessing the compliance to environmental aspects on site (2008)
- ☛ Environmental Implementation for the Assmang Khumani Iron Ore Operations (2010 and contract to 2014)
- ☛ Performance Assessments for the Total Coal South Africa Operations (2009 to current – part of Service Level Agreement)
- ☛ Mooihoek Due Diligence (2013) for RSV Enco;
- ☛ Gap Analysis in terms of IFC and World Bank Operational Policies for Greenfield Madagascar Graphite Mine (2013/2014)
- ☛ Khumani Iron Ore Mine Environmental Performance (NEMA, NEM:WA, NWA and MPRDA) Assessments (2014)
- ☛ Northam Platinum: Zondereinde Division Environmental Performance (NEMA, MPRDA and NWA) Assessments (2014)
- ☛ Northam Platinum: Zondereinde Division Environmental Performance (NEM:WA) Assessments (2014)
- ☛ Dwarsrivier Platinum Mine: Water Management Gap Analysis (2014-2016)
- ☛ Khumani Iron Ore Mine Dust Monitoring Gap Analysis (2014)
- ☛ DRA Global (2014): Molo Greenfields Mine IFC and World Bank Gap Analysis and project scope formalisation;
- ☛ GEM Diamonds Botswana: Ghaghoo Diamond Mine (2015): Waste Management Gap Analysis and Action Plan formalisation
- ☛ ASA Metals WUL Performance Assessment, 2015;
- ☛ Khumani Iron Ore Mine Environmental Performance (NEMA, NEM:WA, NWA and MPRDA) Assessments (2015);
- ☛ Beeshoek Iron Ore Mine Environmental Performance (NEMA, NEM:WA, NWA and MPRDA) Assessments (2015)
- ☛ GEM Diamonds Botswana: Ghaghoo Diamond Mine (2015): SEIA Performance Assessment;
- ☛ Petra Diamonds Prospecting Right Application Annual Performance Assessment, 2016;
- ☛ Glencore WUL Audit, 2016;
- ☛ Sustain (Pty) Ltd, 2016 Pascua Lama Gap Assessment;
- ☛ Beeshoek Iron Ore Mine Environmental Performance (NEMA, NEM:WA, NWA and MPRDA) Assessments (2016);
- ☛ Khumani Iron Ore Mine Environmental Performance (NEMA, NWA and MPRDA) Assessments (2016);
- ☛ GEM Diamonds Botswana: Ghaghoo Diamond Mine (2017): SEIA Performance Assessment;
- ☛ Beeshoek Iron Ore Mine Environmental Performance (NEMA, NWA and MPRDA) Assessments (2016);
- ☛ Dwarsrivier Chrome Mine Environmental Performance (NEMA, NWA and MPRDA) Assessments (2016);
- ☛ Sable Metals (2016) Waste Management Gap Analysis and project scope formalisation.
- ☛ Glencore Magareng, Thorncliffe and Helena Performance Assessments (NEMA, NEM:WA, NWA) (2016);
- ☛ Glencore Wonderkop Performance Assessment (NWA) (2016)
- ☛ Transvaal Gold Mining Enterprises Performance Assessment (NEMA and NWA) (2017);
- ☛ Dwarsrivier Chrome Mine Environmental Performance (NEMA, NWA and MPRDA) Assessments (2017);
- ☛ Glencore Magareng, Thorncliffe and Helena Biannual Performance Assessments (NEMA, NEM:WA, 2017);
- ☛ Pascua Lama: Argentina Environmental Gap Analysis (2017);
- ☛ Yzermyn WUL Audit, 2017;
- ☛ De;[jo, 2017: HellermannTyton (Pty) Ltd Environmental Audit as part of overall HSE Audit;

- ☞ Beeshoek Iron Ore Mine Environmental Performance (NEMA, NEM:WA, NWA and MPRDA) Assessments (2017);
- ☞ Khumani Iron Ore Mine Environmental Performance (NEMA, NWA and MPRDA) Assessments (2017);
- ☞ Yzermyn WUL Audit, 2018.
- ☞ Beeshoek Iron Ore Mine Environmental Performance (NEMA, NEM:WA, NWA and MPRDA) Assessments (2018);
- ☞ Khumani Iron Ore Mine Environmental Performance (NEMA, NWA and MPRDA) Assessments (2018);
- ☞ Dwarsrivier Chrome Mine Environmental Performance (NEMA, NWA and MPRDA) Assessments (2018);
- ☞ Glencore Magareng, Thorncliffe and Helena Biannual Performance Assessments (NEMA, NEM:WA, 2018);
- ☞ Anglo Mototolo Mine Performance (NEMA, MPRDA, NEM:WA) Assessments (2018)
- ☞ Dwarsrivier Chrome Mine Environmental Performance (NEMA, NWA and MPRDA) Assessments (2019 –renewed);
- ☞ Anglo Mototolo Mine Performance (NEMA, MPRDA, NEM:WA) Assessments (2019 – 2020);
- ☞ ARM: Marula Due Diligence, 2020;
- ☞ Glencore Magareng, Thorncliffe and Helena Biannual Performance Assessments (NEMA, NEM:WA, 201-2021) (three year contract);
- ☞ Dwarsrivier Chrome Mine Environmental Performance (NEMA, NWA and MPRDA) Assessments (three year contract 2019-2021);
- ☞ Beeshoek Iron Ore Mine Environmental Performance (NEMA, NEM:WA, NWA and MPRDA) Assessments (2019 renewed);
- ☞ Assore Wonderstone EMP Compliance Audit (2019, 2020 and 2021).

9. GN704 Applications

- ☞ Beeshoek Iron Ore Mine, 2018
- ☞ Khumani Iron Ore Mine (2018-current)
- ☞ Dwarsrivier Chrome Mine (2021)

10. Guest Lecture

- ☞ University of Johannesburg: August 2015 to August 2017: Environmental Impact Assessment Practices and Principles

11. Environmental Coordination and Management

- ☞ Environmental Coordination for Assmang Chrome Machadodorp Works Operation to ensure the effective implementation of environmental compliance 2015-2017 & renewed for 2017-2018 & renewed for 2018-2019 & renewed for 2019-2020 & renewed 2020-2021.