

CURRICULUM VITAE of AMANDA FRITZ-WHYTE

ENVIRONMENTAL SCIENTIST & GEOLOGIST

1. PERSONAL DETAILS

Born: 17th July 1974
Nationality: South African
Drivers License: Code EB
Languages: Proficient in English and Afrikaans

2. KEY COMPETENCIES

After completing a BSc Honors degree in geology and two years of mining geology experience, I was nominated onto the AngloGold Ltd Young Highflyer Program. Whilst on the program I was exposed to environmental management and was provided the opportunity to develop myself in that field of interest. I now hold a Master of Science degree in Water Resource Management and more than 23 years of environmental management experience.

During my career to date, I have accumulated experience in the following key areas:

Competencies	Key Experience
1. Water Management	<ul style="list-style-type: none">• MSc in Water Resource Management (distinctions in two subjects)• Environmental Coordinator: Water (AngloGold Ashanti)• Water Use License Applications, General Authorizations and Existing Lawful Use verifications and registrations• Compilation of water management strategies/ plans for both the KOSH & West Wits areas• Management of wastewater treatment plant at Toyota SA Manufacturing• Wastewater management and pollution prevention (industrial)• Inter-basin pumping schemes (flood prevention) in mining (KOSH & West Wits area).• Industrial pollution control (planning, design & implementation)• Water management plan for OR Tambo airport• WSI and brine disposal authorisations

	<ul style="list-style-type: none"> • Water Tribunal Appeals • Existing Lawful Use determinations and V&V for various landowners (Western Cape)
2. Environmental Monitoring Programs	<ul style="list-style-type: none"> • Groundwater monitoring program for Toyota SA • EMP's for Coastal Disaster Rehabilitation projects and various construction projects • Maintenance Management plans (dams in Western Cape)
3. Environmental Management Systems	<ul style="list-style-type: none"> • Assistant in implementation of electronic EMS at AngloGold Ashanti operations • Implementation & Management of EMS for various plants at Toyota SA Manufacturing (Durban)
4. Environmental Assessments	<ul style="list-style-type: none"> • Risk Assessments conducted for large scale capital projects at AngloGold Ashanti • Basic Assessments for Coastal Disaster Rehabilitation projects (KZN) and construction projects (Western Cape and KZN) including Public Participation per project • S21(c) and (i) risk matrix assessments for determining impacts under the NWA • EIA for Mining Right expansion (Steyn's Quarry, Botrivier) • Risk assessment as part of Water Use License applications (Shoprite, PEPKOR, Caledon Mixed use development, Ackermans, Transnet)
5. Environmental Auditing	<ul style="list-style-type: none"> • Lead Auditor Toyota SA • NEMA compliance audits for mining • ECO for various construction projects • Water Use License audits (Shoprite Checkers (Pty) Ltd, Elgin Free Range Chickens & PEPKOR)
6. Geology	<ul style="list-style-type: none"> • BSc Honors degree (Geology, Biochemistry) • Two years underground mining geology experience • 4 years diamond evaluation and certification experience
7. Energy & Emissions	<ul style="list-style-type: none"> • Compilation of CO₂ inventory for Toyota SA

8. Capital Project Management	<ul style="list-style-type: none"> • Wastewater plant upgrade for Toyota SA
9. Training	<ul style="list-style-type: none"> • Training to middle management at Toyota SA Manufacturing on HSE course • Mentorship to Archaeology student Anja Huisamen (2017-2018) • Guest lecturer on Water Management Course (hosted by DWS) • Mentorship Candidate EAP

3. TERTIARY EDUCATION

3.1 Master of Science in Water Resource Management

Year/s of study: 2005 - 2006

Institution: University of Pretoria

Course Modules: Strategic Environmental Management
Water, Sanitation and Treatment
Water Quality Management
Water Conservation & Demand Management
Environmental Analysis, Assessment & Modeling
Environmental Paradigms
Environmental Governance

Thesis: ***Towards finding a solution to the KOSH inter-mine water management problems.*** (Refer to Section 4.5 for details).

3.2 Bachelor of Science Honours in Geology

Year/s of study: 1997 - 1998

Institution: University of Port Elizabeth

Subjects: Igneous petrology, Sedimentology, Structural Geology, Oceanography

Thesis: Structural geology formations on a farm near Steytlerville (Cape Fold Belt)

3.3 Bachelor of Science

Year/s of study: 1993 - 1996

Institution: University of Port Elizabeth

Major subjects: Geology, Biochemistry

Other subjects: Mathematics 1, Botany 1 & 2, Chemistry 1 & 2, Physics 1

4. EMPLOYMENT RECORD

4.1 Current

Designation: Environmental Assessment Practitioner

Period: May 2016 to current

Key responsibilities: Conduct EIA's, Basic Assessments, Setback Line applications, Water Use Authorizations, General Authorizations, S24G applications, Water Services Intermediary and Brine disposal authorizations, Mining Permit and License applications, S102 applications (including public participation requirements for all the listed processes as needed according to stipulations in NEMA). NEMA compliance audits, water audits, ECO work, social and labour plan compilations. S21(c) and (i) risk matrix assessments for determining impacts under the NWA, environmental awareness plans, EMP's, Alien invasive management plans, mining plans and Maintenance Management Plans. Public Participation is conducted as part of BAR, EIA and WULA processes. ELU and V&V determinations, Water Tribunal appeals.

4.2 Freelance/ Self-employed

Designation: Geologist/ Environmental consultant

Period: July 2011 to April 2016

Key responsibilities: Conducted all environmental work (comment on EMP's, comment on new legislation, submission to NWRMS parliamentary sub-committee, submissions to legal advisors and other NGO's) for TKAG.

Lobby Minister Anton Bredell for the establishment of the CoCT sludge to land application monitoring committee for Melkbosstrand / Philidelphia area.

Oversee BAR for Melkbosstrand High School Sports Fields and completed ECO work.

Geological work: Gemological work (evaluation and certification) of diamonds for clients. Registration process

for Diamond Regulator and Mining Right Conversion from Old Order Mining Right.

Prospecting work on site for diamond bearing gravels.

Reason for leaving: Moved back into full time formal employment sector

4.3 Enspire Environmental

Designation: Director

Period: June 2010 to July 2011

Key responsibilities: Manage all aspects of business for the KZN South Coast region: BAR's; EIA's; WULA's; S30 applications; S24G applications; waste management; auditing; ECO work, water management, preparation and submission of tender documents for large local government projects. Public Participation is conducted as part of BAR, EIA and WULA processes.

Reason for leaving: Relocated from KZN to Cape Town and resigned as Director of company

4.4 SSI Environmental

Designation: Associate

Period: March 2008 to May 2010

Key responsibilities: Develop client relations and deliver service to clients on the Kwa-Zulu Natal South Coast in the following areas:

BAR's; EIA's; WULA's; S30 applications; S24G applications; waste management; auditing; ECO work, water management, preparation and submission of tender documents for large local government projects in KZN and Nelson Mandela Metro. Green city competition coordinator on behalf of NMM.

Office manager: Business development, management of staff, budget reporting.

Compilation of water management plan and strategy for OR Tambo Airport.

Public Participation is conducted as part of BAR, EIA and WULA processes.

Reason for leaving: Had to downscale on amount of travelling due to the birth of my son.

4.5 Toyota South Africa Manufacturing (Durban)

Designation: Environmental Manager

Period: January 2006 to February 2008

Key responsibilities: Implement, maintain and audit EMS for various plants making up the Toyota SA manufacturing operations. Responsible for water management on site – effluent treatment plants, resource measurement, recycling opportunities and reduction in usage.

Implementation of anti-pollution measures on site (moving pipelines overhead, interception trenches and containment pits).

Reporting environmental performance to top management.

Budget compilation and tracking.

HSE advisor to new Warehouse Project. CMA representation on behalf of TSAM.

Reason for leaving: Head hunted by consulting firm

4.1 AngloGold Ashanti: Environmental Management Department

Designation: Environmental Coordinator: Water

Period: November 2001 to December 2005

Throughout this period, I was involved in the following key projects:

Project / Technical Area	Personal Involvement
Water management strategy addressing mine dewatering in the KOSH area This project involved developing a water management strategy to address the risk of deep-level gold mines in the Klerksdorp, Orkney, Stilfontein, Hartebeesfontein (KOSH) area flooding should neighbouring mines cease dewatering operations	<ul style="list-style-type: none">• Compiled and interpreted historical data relating to fissure water quality, volumes and water balances;• Interpreted the 3D geological mining model for inter-basin water transfer;• Developed flow models;• Generated options for re-use of the fissure water;• Compiled a regional water management strategy for AGA mining area;

	<ul style="list-style-type: none"> • Facilitated KOSH Inter-Mine Forum meetings; • Created awareness with DWAF and DME at national and regional levels in regards the strategy and obtained their process requirements.
<p>Water management strategy to allow for closure of the West Wits area</p> <p>This project involved developing a water management strategy to allow for closure of deep-level gold mines in the West Wits Area.</p>	<ul style="list-style-type: none"> • Investigated pillar stabilities, fissure water sources and water balances; • Identified major environmental liabilities for AngloGold Ashanti and for the area; • Compiled a water management strategy linked to closure plans and the re-watering of underground compartments.
<p>Water Management</p>	<ul style="list-style-type: none"> • Conducted a financial evaluation on the proposed Waste Discharge Charge System (WDCS) and the local council takeover as water services provider; • Facilitated the compilation of catchment models for the Vaal River Area; • Managed the compilation of clean/dirty water assessments on all 25 AngloGold Ashanti SA business units; • Managed the compilation of a groundwater liability report covering AngloGold Ashanti SA Region; • Participated in workshops for Integrated Water Management policy for the Mining Sector on behalf of AGA; • Contributed to water management assessments for closure of Savuka Mine and Domain 3 area. • Represented the company at various fora, including Randwater; FWRDWA Licensing Sub-Committee, Kromdraai Licensing Forum; KOSH Inter-Mine Forum and WISA Mine Water Division. • Compiled water discharge licence application for West Wits Area; • Coordinated studies and funding agreement for Yellowfish genetic research projects; • Compiled the "Water management" section of the Global reporting Initiative for AngloGold Ashanti

	SA; <ul style="list-style-type: none"> Compiled environmental performance assessment reports for WUDL boreholes and extent of compliance reports for three business units.
Environmental Impacts Assessments (EIAs) EIAs were compiled for these two projects in the Vaal River Area: <ul style="list-style-type: none"> Reworking of Rock Dumps (R150M) Re-commissioning of West Pay Dam Tailings Storage Facility (R20M) 	<ul style="list-style-type: none"> Compiling background information for the EIAs; Coordinating consultation meetings with key government departments; Internal review of the draft EIA reports; Ensuring project deadlines and budgets were met.
Emergency Preparedness Planning	<ul style="list-style-type: none"> Assisted with emergency preparedness planning for tailings storage facilities in the West Wits Area.

Reason for leaving: To expand my career experience beyond the mining sector

4.2 AngloGold Limited: Corporate Office

Designation: Executive Assistant to Executive Officer SA Region
(Appointed on AngloGold Ashanti's Highflyer Program)

Period: August 2000 – October 2001

Key responsibilities: I was responsible for the following:

- Sourcing and compiling required information for the Executive of SA Region
- Coordinating and recording SA Exco, Management and Strategic Meetings for Executive
- Compiling the weekly Gold and Safety Report
- Compiling the Business Plan: 2002 for SA Region operations.

Reason for leaving: Completed the Highflyer Program

4.3 AngloGold Limited: Tau Lekoa Mine

Designation: Geologist (Manager in Training)

Period: June 1999 – August 2000

Key responsibilities: I was responsible for the following:

- Assisting the Senior Geologist with structural mapping underground, interpretation and providing an advisory service to the Mining Department.
- Managing own section in regards scheduling of work which included mapping, interpretation and advice;
- Logging of drilling core and interpretation thereof.

Reason for leaving: Selected for Highflyer Program (see above)

4.4 AngloGold Limited: Great Noligwa Mine

Designation: Geologist (Manager in Training)

Period: May 1998 – June 1999

Key responsibilities: I was responsible for the following:

- Assisting the Senior Geologist with structural mapping underground, interpretation and providing an advisory service to the Mining Department.
- Logging of drilling core and interpretation thereof.

Reason for leaving: Career development opportunity within the company.

5. COURSE / CONFERENCE PARTICIPATION

5.1 Short courses completed

Technical skills

- Waste management for Environmental Managers (PUCHO, 2002)
- Water Quality Management (Technikon Pretoria, 2002)
- Water Quality Management for Environmental Managers (PUCHO, 2002)
- Water Quality Monitoring (PUCHO, 2003)
- Introduction to GIS (PUCHO, 2001)
- MS Word, Excel, Access, PowerPoint, Projects, ArcGIS, ArcView, ArcInfo
- Air Quality Modeling (PU, 2007)
- Pump Course (SAIME, 2007)
- Windeed (2008)
- Internal Project Management SSI (Modules: General business principles; General contract principles; Risk Awareness; OHS; Service Quality) (2008)
- Biodiversity Offset training workshop (SANBI, 2018)
- Water Governance (2019)

Environmental processes

- Environmental Risk Assessment (PUCHO, 2001)
- Environmental Impact Assessment (PUCHO, 2001)
- Environmental Law (PUCHO, 2001)
- Environmental Auditing (PUCHO, 2001)
- Issue-based Risk Assessment (ATDS Learning Centre, 2000)
- New EIA Regulations (2006)

Project-management and leadership

- Business Presentation Skills (Maccauvlei Training Centre, 1999)
- Industrial Relations (Maccauvlei Training Centre, 2000)
- Finance for Non-Financial Managers (Maccauvlei Training Centre, 1999)
- Leadership for Middle Managers (Maccauvlei Training Centre, 1999)
- Middle Management (Maccauvlei Training Centre, 1999)
- Emotional Intelligence Course (AngloGold Ashanti, 2004)

Geological

- Diamond Drilling Techniques (ATDS Learning Centre, 1999)
- Rough Diamond Evaluation Course (Harry Oppenheimer Training School, 2011)

6. LIST OF PROJECTS TO DATE

Project Name	Year	Role of EAP
Proposed Riverbank Stabilization Measures to Address Flood Damage at Riverside Park, Umzinto	2009	Review of BAR, EMP, PPP for all aspects of application
KZ 212 MAL 16: Basic Assessment for the Umdoni Storm Damage remediation in Malangeni, Umdoni Local Municipality.	2009	Review of BAR, EMP, PPP for all aspects of application
KZ212Mal17&18: Malangeni Road reconstruction, stormwater controls and gabion protection at stream crossings.	2009	Review of BAR, EMP, PPP for all aspects of application
KZ 212 PR6: Storm damage repairs and upgrades at Park Rynie, Umdoni Municipality	2009	Review of BAR, EMP, PPP for all aspects of application
KZ 212 UMZ 11 and 9: Consolidated Basic Assessment for the Umdoni Storm Damage remediation in Umzinto Main Road & Alexandra Crescent, Umdoni Local Municipality.	2009	Review of BAR, EMP, PPP for all aspects of application
KZ 212PR1& KZ212PR13: Consolidated Basic	2009	Review of BAR, EMP, PPP for all aspects of application

Assessment for Stormwater control and damage repairs in Park Rynie Beachfront Parking and Lotus Park		
Basic Assessment for the 2008 Flood Disaster Project, KZ212 UMZ6 (Esperanza)	2010	Review of BAR, EMP, PPP for all aspects of application
Tidal Surge Rehabilitation work for Northern and Southern Beaches (Hibberdene Main Beach, Umzumbe Main Beach, Pumula, Banana Beach, Sunwich Port Main Beach, South Port Main beach, Umtentweni, Silver Beach, Shelley Beach, Peter Pan Beach, Glenmore and Munster, Palm Beach, Southbroom)	2008	Compilation of application, PPP, all aspects of applications
Hibiscus Coast Tidal Surge port Shepstone: Elizabeth drive Rehabilitation project	2008	Compilation of application, PPP, all aspects of applications
Tidal Surge Rehabilitation of Central Beaches located at St Michael's on Sea, Uvongo, Manaba, Margate and Ramsgate	2008	Compilation of application, PPP, all aspects of applications
Proposed residential Grieg house in Kelso	2008	Compilation of application, PPP, all aspects of application
Basic assessment for the re-development of Marlicht Holiday Resort in Margate,	2010	Compilation of application, PPP, all aspects of application

KwaZulu Natal		
Mbango Sewer Line	2008	Compilation of application, PPP, all aspects of application
Proposed Rehabilitation of Rural Roads within Hibiscus Coast Local Municipality.	2010	Review of BAR, EMP, PPP for all aspects of applications
Ugu District Municipality – Scottburgh Sewage Works Tidal Surge Repairs	2008	Review of BAR, EMP, PPP for all aspects of application
Proposed Removal of Tidal Pool in Southbroom, Hibiscus Coast Local Municipality	2010	Review of BAR, EMP, PPP for all aspects of application
Umdoni Beach Rehabilitation – Phase 2	2008	Compilation of application, PPP, all aspects of application
Agulhas Erf 854 Setback Line Application	2016	Compilation of application, PPP, all aspects of application
Basic Assessment P90 of Farm 587, Hemel en Aarde	2016-2017	Compilation of application, collation of specialist input, PPP, EMPs, all aspects of application
S102 amendment (Scoping and EIA) Steyns Quarry, Botrivier	2016-2019	Verification of S102 process with DMR; Compilation of scoping and EIA reports, collation of all specialist input, PPP, all aspects of application process (both NEMA and MPRDA processes)
Basic Assessment for On The Earth Tented Camp, Elgin	2018	Compilation of application, PPP, EMPs, all aspects of application

Basic Assessment P1 of Farm 627 Phillipskop, Stanford	2016-2017	Compilation of application, collation of specialist input, PPP, EMPs, all aspects of application
Basic Assessment P58 of Farm 406, Slanghoek	2016-2017	Compilation of application, collation of specialist input, PPP, EMPs, all aspects of application
Basic Assessment P18 of Farm 238, Stormsvlei	2018-2019	Compilation of application, collation of specialist input, PPP, EMPs, all aspects of application
Keurboomen Mine Permit application RE of P6 of Farm 191, Swellendam (Basic Assessment)	2016-2017	Compilation of application, collation of specialist input, PPP, EMPs, all aspects of application (both NEMA and MPRDA processes)
S24G authorization for Avontuur Chicken Farm, Stormsvlei	2018 to 2021	Compilation of S24G application, collation of specialist input, PPP, EMPs, all aspects of application and administration fine.
WULA/ GA/ ELU for: <ul style="list-style-type: none"> a) Cilmor distribution centre Shoprite b) Shoprite Constantia centre c) Shoprite GB Mall d) Shoprite Vergelegen Mall e) Shoprite Delft Mall f) Shoprite Boschenmeer Mall g) George quarry h) Botrivier sandmine 	2016 to 2021	Compilation of all information for DWS; project management of specialists; justification of ELU using historical photography and water use rights; Public Participation for WULA

<ul style="list-style-type: none"> i) Lomond Wine Estate j) Plattekloof Farm Riversdale k) De Berg Farm Riversdale l) Groote Fontein Farm, Stilbaai m) Brown dog Farm, Franskraal n) Ocean Mushrooms Botrivier o) Elgin Free Range Farm Karwyderskraal p) Shoprite Noordhoek q) Slanghoek Mountain Resort r) PEPKOR main site Parow s) PEPKOR DC Cape Town 		
WSI and Brine authorizations for Shoprite GB Mall and Constantia Mall	2018 to 2021	All aspects of project- compilation of WSI and brine disposal applications.
Water Tribunal appeals for two Shoprite sites (GB Mall and & Delft Mall)	2019 – 2021	Representing client during hearings and compilation and submission of appeal documentation.
GA for Curro Delft site	2020- 2021	Compilation and submission of all documentation to DWS.
Basic Assessment for dam expansion Dasbosch farm, Porterville	2019 to 2021	Compilation of application, collation of specialist input, PPP, EMPs, all aspects of application

Basic Assessment for dam expansion Montdry, Barrydale	2019 to 2021	Compilation of application, collation of specialist input, PPP, EMPs, all aspects of application
Setback Line Application Erf 954, L'Agulhas	2022	Compilation of application, PPP and impact assessment
Riverstone Farm Franschoek Water Due Diligence	2022	Assessment of existing lawful uses and development of water management and authorization strategy
Diepgat Farm Hemel-en Aarde Valley Water Due Diligence	2022	Assessment of existing lawful uses and development of water management and authorization strategy
Caledon Mixed use Development WULA	2022	Compilation of technical report, application process on e-wulaa
Keurboomen Mine Closure Plan	2022	Compilation of closure plan associated with identified risks and PPP – management of all aspects of closure process
Registration of General Authorizations for Baleia Wines	2022	Registration of 3 General Authorizations for various water uses on site – management of registration process on e-wulaa
Delft Mall WULA audit	2023	Audit of site against Water Use Licence and submission of findings and recommendations to DWS
GB Mall WULA audit	2023	Audit of site against Water Use Licence and submission of findings and recommendations to DWS
Riverstone ELU verification	2023	Verification and Validation of ELU water uses on site and submission to DWS
Greenacres Shoprite WULA	2023	Compilation of technical report, PPP, application process on e-wulaa
Cape Winelands Airport	2022 - 2024	Environmental Impact Assessment for

		Cape Winelands Airport project (includes compilation of application, collation of specialist input, PPP, WULA, MMP)
Water Tribunal Appeals for Dasbosch and Driebos Farms, Porterville	2023-2024	Representing client during hearings and compilation and submission of appeal documentation.
Rooiels Basic Assessment	2023-2024	Compilation of application, collation of specialist input, PPP, EMP, all aspects of application
Ackermans DC WULA	2024	Compilation of technical report, PPP, application process on e-wulaa
Belcon Transnet WULA	2024	Compilation of technical report, PPP, application process on e-wulaa
Erin de Vigne WULA	2024	Compilation of technical report, PPP, application process on e-wulaa
De Draay WULA	2024	Compilation of technical report, PPP, application process on e-wulaa
Melkhoutrivier WULA	2024	Compilation of technical report, PPP, application process on e-wulaa

NOTE: PPP in text refers to Public Participation Process (inclusive of stakeholder meetings, advertising, compilation of IAP register and Comments and Response)

7. AFFILIATIONS AND MEMBERSHIPS:

Fellow Member WISA (Lead Climate Change Sector)

Member IAIA

Registered Environmental Assessment Practitioner: Number 2019/367 (EAPASA)

SACNASP Registration - Pri.Sci.Nat (118385)