

# CURRICULUM VITAE

## DEBRA JANE FORDHAM

### PERSONAL

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**Profession:** Freshwater Ecologist, Sharples Environmental Services cc, George

**Nationality:** South African

**Date of Birth:** 26 August 1987

**Languages:** English & Afrikaans

**Drivers License:** Code B

**Health:** Excellent

### KEY SKILLS

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- Delineation of wetlands and riparian areas.
- Spatial Mapping and analysis using GIS software
- Assessment of Present Ecological State (PES) of wetlands.
- Assessing goods and services provided by wetland systems.
- Evaluating impacts to wetlands from proposed developments.
- Identifying mitigation measures to limit impacts.
- Determining Resource Quality Objectives
- Defining buffer zones for wetland and biodiversity protection.
- Developing detailed rehabilitation plans for wetlands.
- Water Use License Applications and Risk Matrix

### WORK EXPERIENCE

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**2016 – Present:** Sharples Environmental Services cc, George  
*Freshwater Ecologist*

I fulfil the specific requirements of each project with regards to the relevant aquatic legislation, such as conducting aquatic habitat impact reports and Water Use Licence Applications (WULAs). This mostly requires that I undertake ground-truthing, classification, infield identification, delineation, impact assessment and mapping of aquatic ecosystems. SES conduct Present Ecological State (PES), functional importance assessments and Ecological Importance and Sensitivity (EIS) assessments of aquatic ecosystems. I conduct environmental impact and environmental sensitivity (constraints) assessments on aquatic habitats to determine if they are at risk of being impacted upon by proposed development areas during construction and operational phases of development. Including identifying direct, indirect, and cumulative impacts that proposed developments will have on aquatic habitats and the significance of these impacts and recommend actions that should be taken to prevent impacts on aquatic habitats. I also determine and map No-Go and buffer zones utilising professional knowledge and buffer zone guidelines for rivers, wetlands and estuaries.

**2015 – 2016:** KSEMS Environmental Consulting, Durban  
*Freshwater Ecologist*

**2014 – 2015:** AGES EC (Pty) Ltd, East London  
*Junior Assistant*

Water Use License Applications (WULAs)

**2014 :** Environmental Impact Management Services, East London  
*Junior Assistant*

Public Participation

**2011:** Education and Sustainability Research Centre, Grahamstown  
*Wetland consultant*

**2009- 2011 :** Environmental Graduate Assistant, Rhodes University  
*Graduate Assistant*

**2010:** Rhodes University Alumni Relations, Grahamstown  
*Junior Assistant*

**2009:** Coastal Environmental Services (CES), Grahamstown  
*Junior Assistant*

**2008:** Featherbed Nature Reserve, Knysna  
*Eco-tour Guide*

## **TERTIARY EDUCATION**

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**2017** M. Sc degree, Environmental Science

■ *Rhodes University*

Master of Science degree, by thesis, entitled: The geomorphic origin, evolution and collapse of a peatland dominated by *Prionium serratum*: a case study of the Tierkloof Wetland, Western Cape.

Supervised by Prof. Fred Ellery.

**2009** BA Honours degree, Environmental Science

■ *Rhodes University*

Honours Dissertation entitled: The status and use of *Aloe ferox*. Mill in the Grahamstown commonage, South Africa.

Honours Subjects:

- Wetland Ecology
- Environmental Water Quality /Toxicology
- Environmental Impact Assessment (EIA)
- Biodiversity, Non-Timber Forest Products (NTFPs) and Rural Livelihoods
- Statistics

**2008** BA degree, Rhodes University

*Environmental Science and Geography*

## PROJECTS

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*Selected projects successfully completed by Debbie Fordham*

### **BIODIVERSITY SPATIAL PLANNING**

The proposed Aalwyndal Precinct Plan Development: Biodiversity Component	Mossel Bay Municipality	2019
Freshwater specialist input to the George Spatial Development Plan (SDF)	George Municipality	2018
The Theewaterskloof Municipal Spatial Development Framework: Biodiversity Report	Western Cape Govt.: Department of Environmental Affairs and Development Planning (DEA&DP)	2018
Land use assessment for future wetland protection in the upper Cata River catchment, Keiskammahoek, Eastern Cape	Sustainable Research and Education Centre	2011

### **AQUATIC SPECIALIST ASSESSMENTS (RIVERS, WETLANDS & ESTUARIES)**

Seven Oaks Residential Development, Witterdrift, Plettenberg Bay	MetroPlan	2019
Gran Sasso Quarry water abstraction and road crossing a watercourse, Tygervalley, Cape Town	Inkokeli Trading (PTY) Ltd	2019
Maintenance of Trunk Road 33/4 and Trunk Road 34/2, though Meiringspoort, Western Cape Province	Western Cape Govt.: Department of Transport and Public Works	2019
Proposed Waste Water Treatment Works, Irrigation Activities & Effluent Discharge by Parmalat SA (Pty) Ltd, Bonnievale	Parmalat SA	2019
Construction of A 22kv Overhead Powerline, near Humansdorp, Eastern Cape	Clinkscapes Maughan-Brown Consulting	2019
Development of Herold's Bay Country Estate on A Portion of Portion 7 Of Farm Buffelsfontein No. 204, Herold's Bay	Private	2019

Groot Witpan and Konga Pan salt mining, Northern Cape	Industrial Salt	2019
Gemsbok Horn salt pan mine prospecting	SunSalt	2019
Hartenbos Estuary Habitat Integrity Assessment with Fish Survey and water quality analysis	Mossel Bay Municipality	2019
The proposed Aalwyndal Precinct Plan Development: Freshwater Specialist Component	Mossel Bay Municipality	2019
Tweekuilen Estuary Habitat Integrity Assessment with Fish Survey	Mossel Bay Municipality	2019
Residential Development on Portion 3 of Kraaibosch 195, George	Groenkloof Developments	2019
The Replacement of Bridge and Culvert Structures on Dr1218, Dr1252 and Op4032, near Stanford	Western Cape Govt.: Department of Transport and Public Works	2019
Development of the remainder of Erf 464, adjacent to the Garden Route Dam, George	George Municipality	2019
Divisional Road 1843 causeway upgrades	Eden Municipality: Road Services	2018
Rehabilitation Plan watercourses impacted by clearance of vegetation on Portion 1 of Farm 94, Waboomskraal	Private	2018
Residential Development on Portion 88 of Kraaibosch 195, George	EARP Construction	2018
Wetland and River delineation and health assessment for the George Spatial Development Plan (SDF)	George Municipality	2018
Activities for Flood and Stormwater Management Upgrades in the Suburb of Poortjies, Plettenberg Bay	Bitou Municipality	2018
Widening of The Maalgate River Bridge (No. 2221 at Km 15.1 on Trunk Road 2 Section 9), near the George Airport	Western Cape Govt.: Department of Transport and Public Works	2018
Heidevallei Subsidised Housing Development (status quo), Knysna	Knysna Municipality	2019

ACSA Port Elizabeth Airport Photovoltaic (Pv) Plant, Eastern Cape	ACSA	2018
The expansion of the Commissioner's Pan salt mine, Northern Cape	Dwaggas Pan Salt Works	2018
The proposed pedestrian bridge over a tributary of the Groot Brak River	Mossel Bay Municipality	2018
The Theewaterskloof Municipal Spatial Development Framework: Botrivier Freshwater Assessment (Site 1)	Western Cape Govt.: Department of Environmental Affairs and Development Planning (DEA&DP)	2018
The Theewaterskloof Municipal Spatial Development Framework: Villiersdorp freshwater Assessment (Sites 2 & 3)		2017
The Theewaterskloof Municipal Spatial Development Framework: Grabouw Freshwater Assessment (Site 4 – 8)		2017
The Theewaterskloof Municipal Spatial Development Framework: Caledon Freshwater Assessment(Sites 9 - 11)		2017
Installation of sewer and water pipelines along the N2 National Road, Cape Town	City of Cape Town: Dept of Sanitation	2017
The expansion of the Yzerfontein Salt Pan gypsum mine	Afmine cc	2017
Freshwater habitat assessment for the construction of the Beaufort West water pipeline	Beaufort West Municipality	2017
The construction of Green Valley residential subsidised housing development	Bitou Municipality	2017
The proposed Gouritz Sand Mine, Gouritzmond	Site Plan Consulting	2017
The George Water Treatment Works new rising main bulk water pipeline	George Municipality	2016
The Nature's Valley Bulk Water Pipeline Supply System	Bitou Municipality	2016
The Kranshoek Bulk Water Supply Scheme, near Plettenberg Bay	Bitou Municipality	2016

The Ogle Farm Housing Development	Ubuhlebezwe Municipality	Local	2016
The proposed P96 Road Upgrade	eThekwini Municipality		2016
The proposed Frischgewaagd Water Treatment Works, Pongola River	Zululand Municipality		2016
Upgrading of the New Barker's and Meshlyn Bridges	uMgungundlovu Municipality		2016
The P77 Provincial Road Upgrade, Vulamehlo Local Municipality	Ugu District Municipality		2016
The Ecovate Waste to Energy Project, eThekwini Metropolitan Municipality	eThekwini Municipality		2016
The D1252 Road Upgrade, Imbabazane Local Municipality	Imbabazane Municipality		2016
The P73 Provincial Road Upgrade	Ubuhlebezwe and Umzumbe Municipalities		2015
The Mpambanyoni River Vehicle Bridge	Vulamehlo Municipality		2015
Freshwater habitat assessment for the Dambuza Road Upgrade, Edendale.	Msunduzi Municipality	Local	2015
Health and ecosystem services assessment of wetlands in the upper Cata River catchment, Keiskammahoek, Eastern Cape	Sustainable Research and Education Centre		2011
<b><i>WATER USE LICENCE APPLICATIONS (WULAs), RISK MATRIX &amp; GENERAL AUTHORISATIONS</i></b>			
Maintenance of Trunk Road 33/4 and Trunk Road 34/2, though Meiringspoort, Western Cape Province	Western Cape Department of Transport and Public Works	Govt.:	2019
Construction of 22kv Overhead Powerline, near Humansdorp, Eastern Cape	Clinkscales Maughan-Brown Consulting		2019
Development of Herold's Bay Country Estate on A Portion of Portion 7 Of Farm Buffelsfontein No. 204, Herold's Bay	Private		2019
Gemsbok Horn salt pan mine prospecting	SunSalt		2019

The Replacement of Bridge Structures on Dr1218, Dr1252 and Op4032, near Stanford	Bergstan	2019
Development of the remainder of Erf 464, adjacent to the Garden Route Dam, George	George Municipality	2019
Residential Development on Portion 88 of Kraaibosch 195, George	Private	2019
Widening of The Maalgate River Bridge, near the George	SNA Civil and Structural Engineers (Pty) Ltd	2019
The expansion of the Commissioner's Pan salt mine, Northern Cape	Dwaggas Pan Salt Works	2018

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## ADDITIONAL

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- Member of IAIA SA
- Member of the Southern Cape Wetland Society (SCWS)
- Member of the South African Wetlands Society (SAWS)
- Member of the Freshwater Ecosystem Network (FEN)
- DWAF accredited wetland delineation
- Member of the Catchment Research Group at Rhodes University