

CURRICULUM VITAE OF PATRICIA DA CRUZ

Director | Civil Engineer, PDC Engineering Solutions (Pty) Ltd

E patricia@pdc-solutions.co.za

C 079 210 6660

**PROFESSIONAL AND ACADEMIC QUALIFICATIONS:**

PrEng (No. 202403022, 17 June 2024)
Masters in Geotech, UCT (2022)
BSc (Civil Engineering), UCT (2016)
BTech (Construction management), CPUT (2011)
ND (Civil Engineering), CPUT (2010)

PDC ENGINEERING SOLUTIONS CAREER HISTORY:

2026 - Present : Director | Project Manager | Civil Engineer | Project Manager

BERGSTAN SOUTH AFRICA CAREER HISTORY:

2025 - 2026 : Project Manager | Professional Civil Engineer

AURECON / ZUTARI CAREER HISTORY:

2021 - 2025 : Project Leader | Project Manager
2016 - 2021 : Civil Engineer
2014 - 2016 : Civil Technologist | Student Civil Engineer
2012 - 2014 : Civil Technologist

CAREER SUMMARY:

Patricia is a Professional Civil Engineer and Project Leader with more than 10 years of experience in the design of civil engineering services, inclusive of sewer, stormwater management, water systems and earthworks. She is proficient in the preparation of schedule of quantities, project delivery and has been involved in projects not only in South Africa but also in Angola, Namibia, New Zealand, Nigeria, Mozambique and the United Arab Emirates.

Patricia holds a Bachelor of Science in Civil Engineering from the University of Cape Town (UCT) as well as a Bachelor of Technology in Construction Management and a National Diploma in Engineering from the Cape Peninsula University of Technology (CPUT) in South Africa. She has also completed her Masters in Geotechnical Engineering at the University of Cape Town (UCT), South Africa.

Her skills include the use of sophisticated design software such as AutoCAD Civil 3D and infraWorks to design and produce civil engineering services drawings and PCSWMM and SSA software to assist in the production of stormwater management plans. Besides being proficient in Microsoft Word, Excel, PowerPoint and MS Project, Patricia also has experience working with geotechnical software packages such as Rocscience and SNAIL Plus and can coordinate deliverables using Bim360, Navisworks and ACC Docs.

She is particularly adept at integrating multidisciplinary inputs into cohesive project deliverables, ensuring that designs meet both technical and regulatory requirements. Her expertise extends to conducting feasibility studies, developing innovative solutions for complex engineering challenges, and optimizing workflows to improve efficiency. Patricia is also skilled in stakeholder engagement, working to align project expectations with client objectives and regulatory standards.

AREAS OF PROFESSIONAL CAPABILITY:

Design experience encompasses the following facets of engineering projects:

- Management of various work packages within a project or framework
- Management of multi-disciplinary engineering teams and sub-consultants
- Stakeholder management
- Deliverables management
- Contract management and site supervision
- Concept designs for feasibility studies
- Stormwater management planning, modelling and reporting
- Bulk earthworks design and modelling
- Design of sewer and water reticulation systems
- Road design
- Preparation of drawing and detailed documentation packages

PROJECT EXPERIENCE:

- **Contract no. 33C/2021/2022 City of Cape Town framework tender: 2025-present**
Project Manager. This 7-year framework tender consists of provision of professional services for concept, design, construction administration and monitoring of various informal settlements within the City of Cape Town.
Responsible for overseeing, planning, coordinating, ensuring compliance, engaging with stakeholders, managing finances, mitigating risks, and reporting to ensure the successful delivery of informal settlement upgrade projects in accordance with City of Cape Town regulations.

CONTRACT 370C/2021/22: City of Cape Town framework tender: 2025-present

Project Manager/Deliverables Manager. This framework tender consists of provision of professional services, technical support and implementation in respect of design and construction of treated effluent and other alternative water sources infrastructure within the City of Cape Town.

Responsible for overseeing, planning, coordinating, ensuring compliance, engaging with stakeholders, managing finances, mitigating risks, and reporting to ensure the successful delivery of informal settlement upgrade projects in accordance with City of Cape Town regulations.

- **Ardagh 38 000m² Warehouse: 2023/2025**
Project Leader/Site Engineer/Lead Designer. Stormwater management plan lead and assisted with preparing PCSWMM model and report documentation.
Responsible for liaising with client and various other consultants during client and site meetings, coordinating tender drawings, measurement and scheduling of quantities for tender purposes, managing and coordinating civil and roads deliverables between team members from tender to construction stage, providing design reviews and mentoring to Junior engineers. Also responsible for liaising with the civil contractor, addressing site queries, conducting quality control inspections, compiling contract instructions and approving material specifications.

- **UCT Water Management Programme: 2021 / 2025: R80M**

Project Manager. This project consists of the implementation of various initiatives to reduce, re-use and augment water from the University of Cape Town with the objective to become net zero by 2050.

The project responsibilities include client liaison, preparation of monthly budget reports, monthly progress meeting presentations, management of internal budgets, preparing sub-consultancy agreements, invoicing, vendor management, engagement with various UCT stakeholders. Part of the design team on the re-use sub-project.

- **UCT Green Precinct Project: 2024 / 2025: R25M**

Lead Engineer. The Green Precinct formed part of the UCT Water Management Programme and consisted of locating various water sustainability interventions to leverage efficiency through economies of scale and include the following interventions: wastewater treatment plant (WWTP), borehole augmentation and stormwater harvesting to supply non-potable water to the residences within a specific precinct to reduce their reliance on municipal water.

- **Paarl WasteWater Treatment: 2024 / 2025: R1.4b**

Project Leader/Site Engineer/Lead Designer. This R1.4bn phased project consists of upgrading the existing Paarl WasteWater treatment facility. The upgrade includes, amongst other activities, demolishing unused infrastructure, reconstruction of the raw sewage lifting station and inlet works, addition of a new administrative building and complete upgrade of the civils works such as bulk earthworks, roads, sewer and stormwater infrastructure.

- **R300 Salvino Del Bene Industrial Warehouse: 2023/2024**

Lead designer. Bulk earthworks, roads and stormwater management plan lead. This industrial warehouse project is located in Bellville, Cape Town.

- **Rapid Build Schools Programme: New Schools: 2023 /2025**

Civil lead/Site Engineer for new schools' facilities. Design of building elements, parking areas, earthworks levels and underground support services.

- Perseverance Junior High School
- Fisherhaven Junior High School
- Blueberry Junior High School
- Kilimanjaro Junior High School

- **The Rubik: New Building: 2022 / 2024: R500M**

Project Leader/Site Engineer/Lead Designer. The Rubik is a high-rise, mixed-use building comprising of corporate office spaces and luxury residential apartment located in the heart of the CBD.

Responsible for liaising with client and various other consultants during client and site meetings, managing and coordinating civil deliverables between team members from tender to construction stage, providing design reviews and mentoring to Junior engineers. Also responsible for liaising with the civil contractor, addressing site queries, conducting quality control inspections, compiling contract instructions and approving material specifications.

- **Harbour Arch: New building: Tower 1 of 6. 2018 / 2023: R15b**

Project Leader/Site Engineer/Lead Designer. The Harbour Arch is a phased development consisting of 6 Towers located on the Cape Town foreshore. This mixed used development includes retail, restaurants, hotels, offices, health clubs and a wide range of luxury residential apartments.

Responsible for liaising with client and various other consultants during client and site meetings, managing and coordinating civil (water, sewer, stormwater and roads) deliverables

between team members tender to construction stage, providing design reviews and mentoring to Junior engineers. Also responsible for liaising with the civil contractor, addressing site queries, conducting quality control inspections, compiling contract instructions and approving material specifications.

- **Lulutho Lwesizwe Multi-Purpose Centre: 2021**

Lead Designer. The scope of the assignment was to prepare a conceptual design and draughting of civil works for feasibility purposes of multi-purpose community-based centre in Khayelitsha. Responsible for preparing the bulk service report, calculate proposed water and sewer demands, and the conceptual design all civil services for feasibility purposes.

- **Old Match Factory: 2020**

Lead Designer. Responsible for the design and site supervision during construction of a temporary parking area to accommodate tenants from an adjacent building.

- **Golden Grove Residential Development (11ha): 2019 / 2020**

Lead Designer. Responsible for compiling stormwater management plan and preparing the PCSWMM model, civil engineering services design, coordinating tender drawings, measurement and scheduling of quantities for tender purposes, liaising with client and other members of the design team for services coordination.

- **Faure Water Treatment Plant: 2020**

Project Leader/Designer. Responsible for the bulk earthworks, roads and overseeing the civil engineering services design, managing project deliverables, liaising with client and other members of the design team. (City of Cape Town).

- **Redevelopment of Newlands Cricket Ground: 2018 / 2021: R800M**

Lead Designer. The project consists of a 17,684 m² Newlands Cricket Ground (NCG) mixed-use development consisting of three buildings. Responsible for compiling stormwater management ad preparing the PCWMM model, civil engineering services design, preparing the bulk service report, calculate proposed water and sewer demands, subsoil drainage design and sump and pump sizing, coordinating construction drawings, site monitoring, liaising with client and other members of the design team for services coordination.

- **Proclaimed small fishing harbours in the Western Cape, Package 3: 2019 - 2020**

Designer. The scope of the project was to rehabilitate and provide full engineering services for three ports, St Helena Bay, Laaiplek and Lamberts Bay. Responsible for the bulk earthworks design and drawing production on AutoCad Civil 3D.

- **ASB Tennis Arena (North-Island, New Zealand): 2018 / 2019**

Lead Designer. The project involves the phased demolition and redevelopment of the ASB Tennis Arena in Auckland, New Zealand. Responsible for the bulk earthworks and civil engineering services (including sewer, stormwater and water) design, coordinating construction drawings, managing project deliverables from tender to construction stage.

- **Relocation of hockey fields (North Island, New Zealand): 2018 / 2019**

Designer. The project entailed the upgrade to part of the existing motorway, including the relocation of hockey fields. Responsible for the bulk earthworks and civil engineering services (sewer, stormwater and water) design and drawing production of the new hockey fields.

- **Metro city development: 2018**

Lead Designer. The scope of the assignment was to prepare a conceptual design and draughting of civil works for feasibility purposes of 24ha multi-use development. Responsible for preparing the bulk service report, calculating proposed water and sewer demands, and the conceptual design of bulk earthworks and all civil services for costing purposes.

- **Famous Brands warehouse: 2018**

Designer. The project included the design and draughting of civil works for the Famous Brands warehouse, including bulk earthworks and civil services for the factory. Responsible for preliminary design of earthworks, and civil services for costing purposes.

- **TFG Design Centre: 2018**

Designer. The scope of the project was to prepare a conceptual design and draughting of civil works for feasibility purposes of a parking area and the TFG Design centre. Responsible for conceptual of bulk earthworks, design of civil services and quantity measurement for costing purposes.

- **Atlantic Hills Business Park (45ha): 2016 / 2018**

Designer. Part of the civils design team responsible for the bulk earthworks, roads, civil engineering services design of the site. Also responsible for the overall coordination of the design of a retaining wall.

- **R300 Bottelary Road Interchange stormwater design: 2016**

Assistant Designer. The project involved the design of stormwater ponds for the R300 Bottelary Road Interchange. Responsible for preparing setting out data, channel and headwall drawings.

- **Banana Island (Lagos, Nigeria): 2015 / 2016**

Designer. Responsible for the bulk earthworks and all civil engineering services drawings for construction of a luxury home located in Nigeria.

- **Brakwater bulk sewers and wastewater treatment plant (Namibia): 2015 / 2016**

Designer. Responsible for node / pipe connections design of the water network, sewer catchment determination and network analysis using Autodesk SSA.

- **Dubai Parks and Resorts development (Dubai, United Arab Emirates): 2014 / 2017**

Designer. Part of the civils design team responsible for the bulk earthworks, civil engineering services (sewer, stormwater and water) design and roads and drawing production.

- **Engineering services for Ondangwa Airport terminal building (Namibia): 2014**

Assistant Designer. Zutari was appointed to undertake structural and civil engineering for the new terminal building. Responsible for the stormwater network design on AutoCad Civil 3D and stormwater drawing production of a new Ondangwa Airport terminal building.

- **Rio Tinto M'Pardue urban expansion master plan (Tete Province, Mozambique): 2014**

Designer. To support the coordinated development of the City of Tete, a master plan study for the implementation of municipal services infrastructure (water, power, roads and sanitation) for the urban expansion area known as M'Padue was conducted. Responsible for assisting on the inception report and conceptual master planning.

- **Ondjiva housing development (Cunene Province, Angola): 2012 / 2013**

Designer. The project involved the design of social housing units, with urban design and the design of all associated infrastructure consisting of 835 units for the local population whose

houses were destroyed by seasonal flooding and were living in tents. Responsible for the bulk earthworks, and stormwater design. Auto CAD drafting of project drawings, measurement of quantities and preparation of engineering report.

- **Hazardous waste and tyre storage area at Grootegeeluk Mine: 2013**

Assistant Designer. Grootegeeluk Mine consisted of two temporary hazardous waste storage areas where different types of hazardous waste are stored prior to being removed from site for safe disposal at a licensed facility. Assisted on the design of a consolidated hazardous waste storage area for temporary storage until disposed to a licensed hazardous waste facility.

- **Upgrading of Prieska solid waste site: 2013**

Assistant Designer. The project was to undertake the design and supervision for the upgrading of the solid waste site in Prieska. Responsible for the rehabilitation and volume calculations, conceptual modelling of staged lifts, draughting of drains, stormwater and leachate ponds.

- **Valkenberg Hospital Revitalization (VHR): 2013**

Assistant Designer. The project entailed the redevelopment of the hospital precinct and most of the buildings into a best practice healing environment and facility for mental illness patients and its staff. Assisted in the measurement of quantities and cost estimates for civil services on the project.

- **Ndlambe bulk water supply: 2012**

Assistant Designer. Responsible for site layout draughting and bulk earthworks modelling of water infrastructures along the bulk water supply scheme route.

COURSES / SEMINARS ATTENDED

2025	Training workshop on Hec-Ras river modelling
2018	Ascend leadership program for women, Zutari
2018	Training workshop on PCSWMM and EPA SWMM5 modelling, Computational Hydraulics International (CHI)
2012	AutoCad Civil 3D Essentials course, Autodesk Authorised Training Centre (ATC)