



**cooperative
governance**

Department:
Cooperative Governance
REPUBLIC OF SOUTH AFRICA

**MUNICIPAL INFRASTRUCTURE
SUPPORT AGENT (MISA)**



CPD 2 credits (ECSA)

Getting Acquainted with Sewer Design

The Municipal Infrastructure Support Agent (MISA) in partnership with SAICE Professional Development & Projects (SAICE-PDP) invites you to attend this 2-day course which aims to explain the fundamentals of sewerage systems, with emphasis on designing sewer collection systems in townships.



Attend this course and learn about:

- The composition of complete sewerage systems, including the conveyance network, treatment works and associated infrastructure
- The selection of appropriate sanitation systems and the challenges associated with operations and maintenance
- The design of sewerage networks, including the selection of pipes and fittings and the parameters to be considered when laying pipes
- Policies, guidelines, health, hygiene and community requirements which must be considered when designing sewerage systems and associated community education

Benefits include:

- Participation in an interactive workshop
- Various practical activities to equip attendees to handle projects when back in the workplace
- A comprehensive course document that will serve as a reference manual
- 2 CPD credits (ECSA)

Presenter:

Andrew Brodie Pr Eng

<p>COURSE SCHEDULE</p> <p>Venue: Dates: Time:</p> <p>REGISTRATION</p> <p>To register, visit www.saicepdp.org For more details contact Nompumelelo Nyaba: Email nompumelelo@saicepdp.org / Tel: 011 476 4100</p>	<p>WHO SHOULD ATTEND</p> <p>The course helps municipal attendees to apply their theoretical training in practice. It is therefore recommended for:</p> <ul style="list-style-type: none"> ▪ Staff involved in the design of waste water conveyance networks ▪ Staff involved in the planning, design, operations and maintenance of conveyance networks or about to become involved in the field ▪ Engineers, technologists and technicians ▪ Experienced staff in need of a refresher in sewer design
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COURSE OUTLINE

INTRODUCTION AND SEWERAGE OPTIONS

- Policies and guidelines
- Assessment of sanitation options
- Types of sanitation systems
- Appropriate sanitation

WATER BORNE SEWERAGE

- Wastewater treatment
- Tariffs
- Operations and maintenance
- Spill management

SEWER CONSIDERATIONS

- Laying of sewers
- Loads on buried pipes
- Minimum cover
- Sewer manholes
- Surveys and testing

SEWER DESIGN

- Design requirements
- Hydraulic design
- Partial flow
- Velocity, grade and quantity

SEWER LAYOUT

- Depth of connection
- Layout options
- Mid-block and sidewalk sewers

SEWERAGE SYSTEM

- Minimum night flows
- Stormwater ingress
- Pipe material and fittings
- Inverted syphons
- Outfall/collector sewers
- Small pump stations

WHAT TO BRING TO THE COURSE

- Scientific calculator
- Pencil and eraser
- Scale ruler

For online courses, it is recommended to have the following installed on your computer:

- MS Excel
- The Zoom app

ABOUT YOUR FACILITATOR

Andrew Brodie graduated with a National Higher Diploma in Civil Engineering in 1993 and a Bachelor of Science Degree in Civil Engineering in 1998. He has over 20 years of experience in design, project management and supervision of civil, structural and geotechnical projects.

Andrew has worked in both the municipal and private engineering sectors and has significant experience in the design and implementation of urban and rural engineering services. He is a registered Professional Engineer and a member of SAICE.



SAICE-PDP's Municipal Academy was established to support practitioners employed in local government with applying theoretical knowledge and relevant legislation in practice.

**municipal
academy**
the road to service delivery



MISA's mandate is to provide technical support and advice to municipalities, whilst strengthening their capacity, for effective infrastructure planning, delivery, operations and maintenance.