

2 CPD Credits: ECSA

CPD Number: CESA-2065-06/2025

CPD  
Validated

# Getting acquainted with Sewer Design

A two-day course to help candidates understand 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 effectively when back in the workplace
- A comprehensive document that will serve as a reference manual
- CPD credits

## Presenter:

Andrew Brodie, Pr Eng

## COURSE DATES & VENUES

Scheduled courses are offered online and face-to-face around the country based on demand.

Please contact Lizéle du Preez for more information on upcoming courses: [Lizelle@saicepdp.org](mailto:Lizelle@saicepdp.org) / 011 476 4100

TIMES: 08:00 for 08:30 to 16:30

## REGISTRATION

To register, visit [www.candidateacademy.co.za](http://www.candidateacademy.co.za)  
OR email [Academy@saicepdp.org](mailto:Academy@saicepdp.org)

## WHO SHOULD ATTEND

The course helps graduates to apply for their theoretical training in practice. It is therefore recommended for:

- Staff involved in the design of waste water conveyance networks
- Staff employed in local government and involved in the planning, design, operations and maintenance of conveyance networks or about to become involved in the field
- Candidate engineers, technologists and technicians
- Experienced personnel looking for a refresher in sewer design

## COURSE CONTENT

### 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

## 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. He 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.

In-house courses are available.

Contact Lizelle at [lizelle@saicepdp.org](mailto:lizelle@saicepdp.org) for further information.

### WHAT TO BRING TO THE COURSE

- Pencil and eraser
- Ruler
- Engineering calculator



The Candidate Academy's philosophy is to support candidates on their road to registration with ECSA, by helping them through the transition from theoretical training to the 'how' of engineering projects and processes. The Academy offers practical, hands-on training relevant to experiences in the workplace.

**candidate  
academy**  
the road to registration – tower above the rest