

Sustainable Drainage Systems Design and Management Training Course

1 – 5 August 2027
Johannesburg

AGILE LEADERS
Training Center

Sustainable Drainage Systems Design and Management Training Course

Ref: 2209_261618 **Date:** 1 – 5 August 2027 **Location:** Johannesburg **Fees:** 4500 Euro

Overview

Sustainable Drainage Systems Design and Management Training Course is a one-week intermediate course for engineering, planning, landscape, and asset teams, who leave with a SuDS Design and Management Plan. The course connects runoff assessment, treatment trains, infiltration, storage, water quality, biodiversity, climate resilience, construction control, inspection, and maintenance. It turns site constraints and rainfall risks into coordinated design and lifecycle decisions. Agile Leaders Training Center develops sustainable drainage systems practice.

Who Should Attend

- Teams responsible for surface-water and drainage design
- Functions responsible for municipal infrastructure planning and approvals
- People responsible for landscape integration and public-realm performance
- Teams responsible for construction quality and site delivery
- Functions responsible for drainage assets, inspection, and maintenance

The course assumes participants can interpret site plans, drainage calculations, specifications, or inspection records; it leaves out introductory hydrology and specialist hydraulic software modeling.

Departments and Industries

The course supports sustainable drainage decisions across property development, transport, utilities, municipalities, industrial sites, and public infrastructure.

- Civil engineering and drainage design functions
- Urban planning and development control teams
- Landscape architecture and environmental functions
- Construction, quality, and site management teams
- Utilities, facilities, and infrastructure asset teams

Learning Objectives

By the end of this course, participants will be able to:

- Analyze catchment, runoff, and receiving-system constraints.
- Compare source, conveyance, storage, and infiltration controls.
- Build a SuDS treatment train for water quantity and quality.
- Evaluate climate, biodiversity, safety, and maintainability requirements.
- Apply construction, inspection, and adoption controls.
- Prioritize maintenance and performance-monitoring actions.

Course Agenda

Day 1: Diagnose Site and Runoff Conditions

- SuDS Runoff Destination Hierarchy
- Catchment Boundary and Flow-Path Map
- Baseline Runoff Rate and Volume Assessment
- Ground Investigation and Infiltration Suitability Screen
- Receiving-System Capacity and Constraint Register

Day 2: Select Sustainable Drainage Controls

- Source-Control Selection Matrix
- Permeable Surface and Rain Garden Design Criteria
- Swale and Conveyance Route Method
- Detention Basin and Storage Sizing Logic
- SuDS Treatment Train Configuration

Day 3: Integrate Performance Requirements

- Everyday Rainfall Interception Check
- Extreme Rainfall and Climate Allowance Scenario
- Water Quality Risk and Treatment Assessment
- Amenity and Biodiversity Design Review
- Exceedance Route and Public Safety Plan

Day 4: Govern Delivery and Asset Performance

- SuDS Construction Quality Control Checklist
- Commissioning and Handover Evidence Schedule
- Adoption Responsibility and Access Map
- Risk-Based Inspection Regime
- Lifecycle Maintenance and Performance Dashboard

Day 5: Practice SuDS Decision Making

- Exercise: Diagnose a Constrained Development Site
- Exercise: Configure a Multi-Stage Treatment Train
- Exercise: Review Climate and Water Quality Performance
- Exercise: Build an Inspection and Maintenance Schedule
- Capstone Exercise: Complete the SuDS Design and Management Plan

Practical Exercises

The course uses suggested activities based on property, transport, utility, and public-infrastructure drainage decisions.

- Suggested activity: map runoff pathways, constraints, receptors, and feasible discharge destinations.
- Suggested activity: compare infiltration, conveyance, storage, treatment, amenity, and biodiversity options.
- Suggested activity: review construction evidence, failure modes, inspection frequencies, and maintenance access.
- Suggested activity: assemble design assumptions, controls, responsibilities, records, and performance indicators.

FAQs

Who suits sustainable drainage systems training and what does it assume?

Sustainable drainage systems training suits engineering, planning, landscape, construction, and asset teams able to interpret site plans, calculations, specifications, or inspection records.

How does sustainable drainage systems training differ from general urban planning training?

Sustainable drainage systems training focuses on runoff pathways, hydraulic controls, water quality, treatment trains, construction assurance, inspection, and maintenance rather than broad land-use and city-development policy.

What is a SuDS treatment train?

A SuDS treatment train links multiple controls so runoff is managed progressively for flow, volume, sediment, pollutants, amenity, and biodiversity instead of relying on one downstream feature.

Why must sustainable drainage systems be designed for maintenance?

Maintenance-led design preserves access, sediment removal, vegetation care, blockage control, structural condition, and long-term hydraulic and water-quality performance.

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How does climate resilience affect sustainable drainage systems design?

Climate resilience requires designers to test more severe rainfall, safe exceedance routes, storage performance, component failure, downstream impacts, and recovery arrangements.

Conclusion

Participants take back a SuDS Design and Management Plan linking site evidence, runoff controls, treatment, construction assurance, inspection, maintenance, and responsibilities. It changes fragmented drainage choices into a traceable lifecycle approach. The plan supports coordinated decisions among designers, planners, landscape teams, contractors, utilities, and asset owners.