

HOUSEPLANSDIRECT TECHNICAL GUIDES

DRAINAGE & SOAKAWAYS EXPLAINED

A complete guide to foul drainage, surface water and infiltration for domestic construction



A coordinated system keeps foul water separate, manages rainfall near its source and provides safe access, maintenance and exceedance routes.

NINE-PART PUBLICATION EDITION

Principles · Hierarchy · Pipework · Soakaways · Testing · Construction · Compliance · Defects · Inspection

Version 3.0 | 4 August 2026 | England

Contents

Part	Subject
Part 1	Introduction: What Are Drainage and Soakaways?
Part 2	Drainage Types and the Surface-Water Hierarchy
Part 3	How Foul and Surface-Water Systems Work
Part 4	Anatomy of Below-Ground Drainage and a Soakaway
Part 5	Site Investigation, Infiltration Testing and Design
Part 6	Construction, Testing and SuDS Integration
Part 7	Building Regulations, Approvals and Site Safety
Part 8	Common Design, Installation and Maintenance Defects
Part 9	Inspection Checklist, FAQs, Glossary and Further Reading

About this guide

This guide explains below-ground foul and surface-water drainage, soakaways and related sustainable drainage for low-rise housing in England. It is intended for homeowners, self-builders, designers and site teams. Drainage is site-specific: approved drawings, ground investigation, infiltration testing, drainage design, sewer undertaker requirements, environmental controls and Building Control instructions always take precedence.

SCOPE Drainage and infiltration design is site-specific. Destinations, calculations, testing, separations, approvals and maintenance must suit the development and receiving environment. Figures are explanatory and must not be scaled.

Part 1 – Introduction: What Are Drainage and Soakaways?

Moving wastewater safely and managing rainfall close to where it lands

Domestic drainage performs two distinct jobs. Foul drainage conveys wastewater from sanitary appliances to an appropriate sewer or private treatment system. Surface-water drainage manages rain from roofs and hard surfaces, preferably through source control and infiltration where conditions allow. A soakaway stores runoff temporarily and releases it into suitable surrounding ground; it is not a hole for disposing of foul effluent.



Figure 1 – A coordinated plot separates foul and surface water while combining infiltration, storage and safe overflow routes.

1.1 Principal elements

Component	Primary role
Collection	Gutters, outlets, gullies and channels capture water.
Conveyance	Pipes and channels move flow at controlled falls.
Access	Chambers and rodding points permit inspection and clearance.
Treatment	Silt traps, filters and vegetation reduce pollutants.
Storage and discharge	SuDS stores, infiltrates, reuses or releases water safely.

1.2 Benefits and limitations

- Correct separation protects treatment systems, sewers, watercourses and groundwater.
- Source control can reduce runoff rate, volume and downstream flood pressure.
- Infiltration depends on verified soil, groundwater, contamination and stability conditions.
- Every system needs accessible inspection, silt control, maintenance and a safe response when capacity is exceeded.

KEY PRINCIPLE Keep foul and surface water separate, confirm a lawful destination, and use verified site evidence before selecting infiltration.