

Sustainable Urban Drainage Systems (SuDS) Best Management Practice (BMP)

The utilisation of these tools defines the concrete, physical system of stormwater management.

Why: The principles of *Sustainable Urban Drainage Systems (SuDS)* came from the UK in the 1990s'. SuDS consist of a range of stormwater management technologies based on the philosophy of replicating the natural, pre-development drainage of the site. These techniques are typically aimed more at water quantity than quality control, but in the end the design of the structure defines its potential functions.

In the North American context, *Best Management Practice (BMP)* has been originally used to describe pollution prevention activities. However, in everyday practice both quality and quantity control are being targeted.

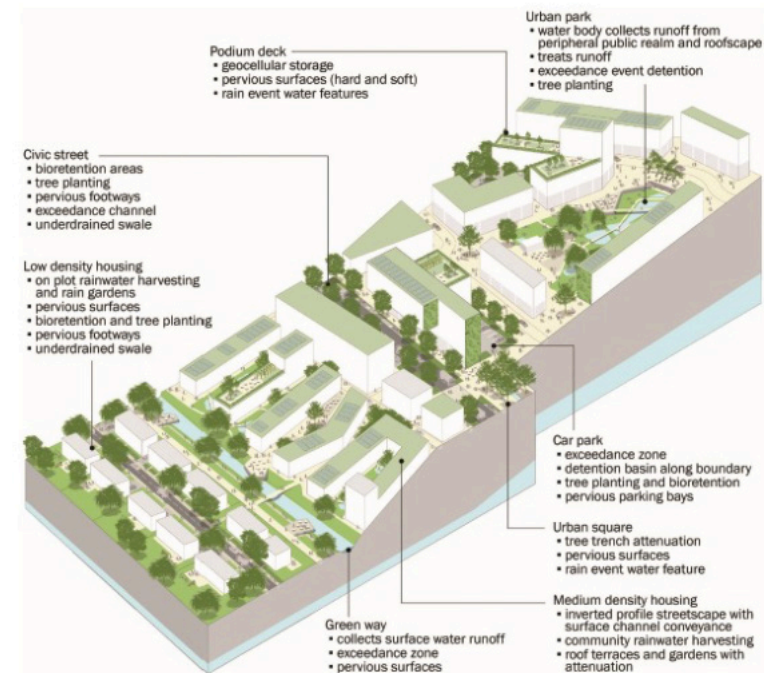
How: Both concepts are based on a variety of structures capable of managing and controlling surface run-off through techniques, such as infiltration, detention, conveyance and/or rain harvesting. In general, they employ physical, chemical, and/or biodegradation processes to improve the quality of surface run-off by minimising the amount of stormwater-based pollutants washed into nearby watercourses. The structures help to reduce flood impacts by temporarily storing water, often filtering the pollutants at source, and encouraging infiltration of stormwater into the ground. The design of structures can often be geared towards reducing impacts across the flood pathways and at distant impact sites further down a catchment.

Good to know: Instructions in SuDS manuals are always created for local conditions. They often cannot be applied directly to the Baltic Sea Region, but demand some adjusting. Unfortunately, an extensive library of suitable techniques for Nordic conditions does not yet exist. However, useful information on ways to implement different sustainable solutions as well as a good handbook is provided, for example, on the Baltic Sea Challenge webpage: www.waterprotectiontools.net

POINT 1
URBAN
RESILIENCE

POINT 2
TECHNICAL
OPTIMI-
ZATION

POINT 3
DAY-TO-DAY
VALUES



Different commonly used types of SuDS for different development areas (SuDS Manual by CIRIA).

More information:

An useful manual on different kind of techniques:

www.ciria.org/Resources/Free_publications/SuDS_manual_C753.aspx

The manual includes not only the list of different techniques, but instructions are also given to various techniques such as hydraulic and treatment design, safeguarding biodiversity and landscape values, as well as material selection.

Some good examples from Sweden: <http://godaexempel.dagvattenguiden.se>