



British Precast Drainage Association

Publications from the British Precast Drainage Association (BPDA):

BPDA was formed in 2017 from the integration of the Concrete Pipeline Systems Association (CPSA) and the Box Culvert Association (BCA).

Information published by both CPSA and BCA will be rebranded and replaced as BPDA in due course. New material will be branded BPDA.

All CPSA and BCA web traffic will be redirected to the new BPDA web site at www.precastdrainage.co.uk





Sustainable Drainage: Why, What and how?

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Why:

In the past year extreme weather events have led to devastating flash floods and the occurrence of current global climate change has caused previously rare environmental issues in the UK.

Progressive urban development and changing climatic patterns have resulted in a major increase in surface run-off to water courses. This is partly due to the increase in flooding events.

Achieving a sustainable way of managing water resources is one way of dealing with hazard and risk. The ability to provide sustainable drainage is the key to the long- term stability of water resources.

What:

What is a sustainable drainage system? A sustainable drainage system is an achievable feat if a broad approach to the issue of drainage is adopted. Implementation of sustainable design techniques will ensure that a drainage system is a long-term viable option.

Surface water drainage systems which consider quantity, quality and amenity issues are referred to as Sustainable Urban Drainage Systems (SuDS). These drainage systems are more sustainable than traditional systems for many reasons. Firstly they control the flow rate of surface run-off, reducing the impact of urbanisation. They also give consideration to the natural environment and community needs creating new wildlife habitats among the watercourses. SuDS also protect and / or enhance water quality and promote natural groundwater recharge.

The success of this sustainable approach to urban drainage is due to the system aspiring to deal with surface run-off at the point of which it occurs and to manage potential pollution at its source. The introduction of SuDS into an area means that future development can take place in areas where the capacity of the traditional drainage system is full.

SuDS are designed using the same principles as traditional drainage systems, but using different methods of application. Equal consideration must be given to the issues of quality, quantity and amenity resulting in a multi-disciplinary approach to drainage. It is essential that planners, designers, installers and operators of SuDS drainage systems take into account the importance of whole life maintenance and the use of suitable components that deliver authentic sustainable drainage performance and longevity.

How:

In regards to how a sustainable drainage system is structured, this is underpinned by the water Surface Water Management Train. The Management Train can be divided into the following processes: Collection, Treatment, Re-use, Infiltration, Attenuation and Conveyance. There are various components that deal with these processes from pipes to culverts. The management train recommends using a variety of techniques to deal with the issue of drainage. Drainage systems are part of a wider cycle of water and consideration of this is a must in terms of the development process.

The Concrete Pipeline Systems Association offers information and advice about all aspects of concrete drainage design and implementation. Their members offer a wide variety of proprietary SuDS components and systems suitable for use within a sustainable drainage system.

To find out more about sustainable drainage please [click here](#)