



PRECAST CONCRETE SUDS SOLUTIONS

Factsheet 1: Stormwater Collection SuDS

The new sewers adoption code Design & Construction Guide (DCG), enforced in April 2020, allows water authorities for the first time to adopt sustainable drainage systems (SuDS). This factsheet familiarises specifiers, contractors and asset owners with a range of precast SuDS which can be used to intercept and collect stormwater runoff.

Precast SuDS collection systems have been in use for long decades and already have a proven track record of performance and durability. Within a SuDS scheme, such components are usually employed within an integrated approach where a combination of natural and engineered solutions are used to control and deal with stormwater runoff at source. A successful implementation of a SuDS development is likely to depend on such integrated approach.

Why precast?

Unlike natural or lightweight engineered solutions, precast SuDS collection components come with a variety of advantages that make them a preferable option from a whole life point of view:

Precast collection systems are significantly more durable and resistant to natural elements compared to other alternative options and can last for decades without any major maintenance requirements. They are easy to service and can regularly take 4,000 psi water pressure during cleaning.

Precast SuDS stormwater collection systems can also resist fire damage, FOG build-up and attacks from rodents attracted by litter and natural features within SuDS. Another advantage is sustainability as all precast collection SuDS carbon footprints, embodied energy, water footprints have been improving over the last 12 years and would continue to improve annually up to 2050. Precast SuDS collection systems are also very flexible and can be employed in different applications within a SuDS solution, whether in light or heavy traffic roads, car parks or footpaths.



Durable



Strong



Resists fire



Easy to maintain



Resists rodents



Sustainable

SuDS collection components

A variety of surface water precast collection components are available for use in SuDS schemes:

Gullies

Receives stormwater runoff from paved surfaces such as roads, footpaths and other hard standing surfaces. Stormwater runoff is collected through an open grating above the gully unit. Gullies include outlet connections above the unit base to allow silt and debris to separate out from the flow using gravity and collect in the sump below the outlet. Gullies help prevent blockages and excessive sedimentation downstream and act as a first line of treatment to remove some pollutants attached to silt.



Filter gullies

These are basically gullies fitted with filters to enable the removal of FOG. They can be used in areas where an increased level of pollution and run-off from vehicles is expected. Filter gullies also have all the advantages of normal road gullies and would require regular cleaning and possible maintenance and replacement for the fitted filters.



High capacity slot drains

High-capacity slot drains are linear drainage systems comprising of a channel with integrated gasket, cast-in rodding access points and catchpit sumps.

The large diameter smooth internal bore allows for excellent flow characteristics even with flat or shallow gradients and used mainly alongside roads and paved areas susceptible to flooding.



High capacity gullies

Developed in conjunction with council engineers, the high-capacity gully is a modular, effective, low maintenance solution for low lying areas prone to flooding.



For product information, please contact BPDA members

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