

Sustainable Urban Drainage Systems (SuDS)

The balancing pond at St Mary's Chase will be subject to the following maintenance regime:

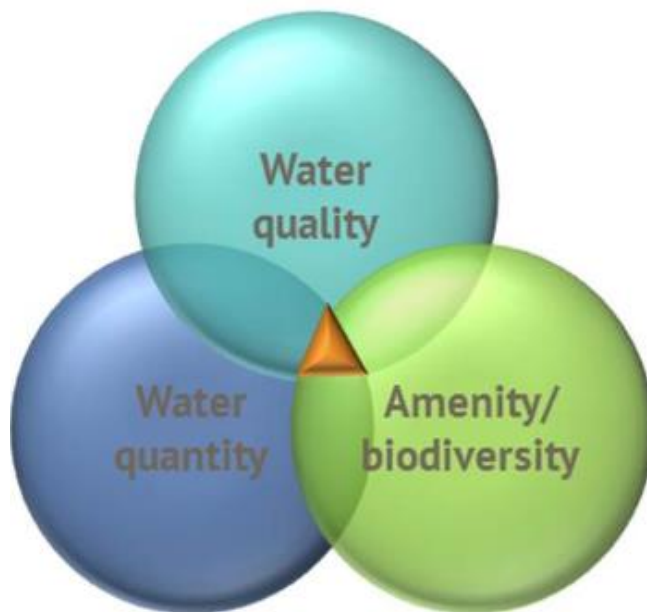
Maintenance Schedule	Required Action	Recommended Frequency
Regular maintenance	Litter and debris removal.	Monthly
	Grass cutting – for spillways and access routes.	Monthly (during growing season) or as required
	Grass cutting – meadow grass in and around basin	Half yearly (spring – before nesting season, and autumn)
	Manage other vegetation and remove nuisance plants.	Monthly (at start then as required)
	Tidy all dead growth before start of growing season	Annually
	Remove sediments from inlets, outlet and forebay.	Annually. (or as required)
	Manage wetlands plants in outlet pool – where provided	Annually
Occasional maintenance	Re-seed area of poor vegetation growth.	Annually. (or as required)
	Prune and trim trees and remove cuttings.	2 years, (or as required)
	Remove sediments from forebay, when 50% full and from micropools if volume is reduced by >25%	3-10 years, (or as required)
Remedial actions	Repair of erosion or other damage by re-seeding or re-turfing.	As required
	Realignment of rip-rap.	As required
	Repair/rehabilitation of inlets, outlets and overflows.	As required
	Re-level uneven surfaces and reinstate design levels.	As required
Monitoring	Inspect inlets, outlets and overflows for blockages, and clear if required.	Monthly/after large storms.
	Inspect banksides, structures and pipework, etc for evidence of physical damage.	Monthly/after large storms.
	Inspect inlets and facility surface for silt accumulation. Establish appropriate silt removal frequencies.	Half yearly
	Check penstocks and other mechanical devices.	Half yearly

Pictures below show our grounds maintenance teams clearing a balancing pond which was congested with bulrushes:



Pollution Prevention

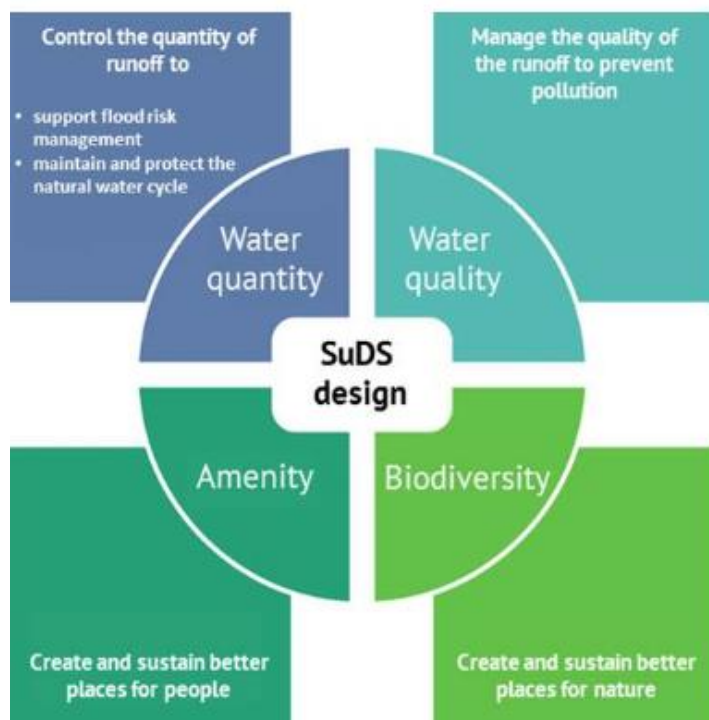
One of the four pillars of SuDS design is to manage the quality of the surface water runoff to prevent pollution. They are drainage systems that are considered to be environmentally beneficial, causing minimal or no long-term detrimental damage. They are often regarded as a sequence of management practices, control structures and strategies designed to efficiently and sustainably drain surface water, while minimising pollution and managing the impact on water quality of local water bodies.



The SuDS triangle

The SuDS philosophy is to replicate, as closely as possible the natural drainage from a site before development.

SuDS is designed within the opportunities and constraints of a site to deliver the most benefits for water quantity, quality and amenity/biodiversity. Where these objectives overlap this is called the SuDS triangle.



The four pillars of SuDS design

The overarching principles of SuDS design is that *surface water runoff should be managed for maximum benefit*.

The benefits that can be achieved by SuDS will be influenced by the site, but they fit broadly into four categories; water quantity, water quality, amenity and biodiversity. They all have their own design objective.

We can help to reduce the number of pollutants entering the system by educating residents as much as possible. Informing and educating users of the site about the way the site is drained can help prevent contaminants from entering the drainage system. Typical pollutants may include:

- car oil and antifreeze
- detergents (from car washing)
- household chemicals
- garden chemicals.

These should be used carefully and disposed of properly, not poured down surface water drains. Fertilisers, herbicides and pesticides should be used sparingly, in accordance with the manufacturers' instructions, and not used where they can be washed directly to a watercourse.

Litter and animal faeces can be kept out of drainage systems by education and provision of bins.

In the unlikely event of pollution getting into the system, a Pollution Incident Response Plan (PIRP) will be created. This will pull all key information together including:

- Site address and emergency contact information
- Site layout and drainage plan
- Details of emergency response contractors
- Details of emergency procedures
- Details of how to report emergencies

Emergency contact details will include:

- any sources of specialist advice
- emergency services
- specialist clean-up contractors
- the local water supply company
- the local sewerage undertaker
- local authorities
- the Environmental Health service
- the Health and Safety Executive
- the Environment Agency incident hotline number (0800 807060)
- the local Environment Agency office