

What we can offer

Atkins In-House Capabilities

Atkins has a wealth of in-house design experience and have been involved in writing best practice guidance on SUDS and Integrated Water Management facilities. The Atkins Group has undertaken a wide range of research, feasibility and detailed design projects in relation to SUDS.

In Ireland, our clients include Private Developers, Consulting Engineers, Contractor's and Local Authorities and in addition in The Highways Agency and DEFRA in the UK.

Importantly, Atkins has been central to developing a framework for the long term maintenance of SUDS, an important step towards their wider implementation. This work resulted in the production of "CIRIA C625 – Model Agreements for Sustainable Water Management Systems", published in June 2004.



As part of an overall stormwater management plan, SUDS systems can be incorporated into a development to provide an impetus to implementing flood management, pollution control and "grey-water" reuse.

This sustainable approach to the design of stormwater drainage and management systems requires a multi-disciplinary team of Engineers, Scientists and Hydraulic Modellers to provide innovative and sustainable solutions. This challenge requires close liaison with Architects, Environmental Scientists, Landscape Architects, Structural Engineers and other Design Professionals to provide holistic and economic solutions for our clients.

Atkins Ireland has extensive experience in:

- SUDS Design
- Water cycle strategies
- Strategic flood risk assessments
- Surface water management plans
- Run-off control systems
- Flow attenuation facilities
- Vegetative treatment systems
- Retrofit SUDS programmes

Key contacts

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ATKINS

Sustainable
Drainage Systems
(SUDS)



Plan Design Enable

SUDS: The Benefits

The main objective of Sustainable Drainage Systems (SUDS) is to minimise the impacts of stormwater runoff from development with respect to quantity and quality of runoff, maximise amenity areas and provide biodiversity opportunities. The main philosophy of SUDS is to mimic, as closely as possible, the natural runoff characteristics of the pre-development site

The main benefits of SUDS can include:

- Improved water quality and enhanced biodiversity in watercourses
- Groundwater recharge leading to increased base flow to watercourses
- Reduced potential for flooding downstream of the development
- Improved identification of accidental pollution events prior to discharge to watercourses
- Development opportunities in areas where the existing surface water sewer system may already be at capacity
- Potential to improve amenity and biodiversity in urban areas through the use of ponds and wetlands

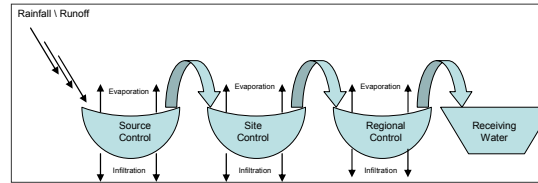
SUDS are measures to be incorporated into a sustainable water management systems that can be incorporated into a development and include:

- Filter Drains,
- Swales,
- Infiltration \ Detention Basins,
- Wet Ponds,
- Constructed Wetlands,
- Pervious Pavements
- Green Roofs

The SUDS Management Train mimics the natural runoff characteristics of the pre-development site by a series of control measures:

- Prevention – Good housekeeping measures such as street cleaning to reduce levels of pollution being washed from paved surface during rainfall
- Source Control – Controlling runoff at source (Individual buildings) through the use of soakaways and other infiltration methods to direct runoff into ground reduces the quantity of runoff reaching the receiving watercourse or stormwater sewer.
- Site Control – Controlling runoff from a site through the use of infiltration measures or detention measures with a controlled discharge to reduce the rate at which runoff is discharged to the receiving watercourse or stormwater sewer
- Regional Control – Control of runoff from a number of sites, this is typically through the use of large detention areas or constructed wetlands.

Project experience



SUDS Management Train

Attitudes to Sustainable Drainage Systems (SUDS)

In recent years, Public, Private and Governmental attitude towards the environment has improved and it is now essential for regulatory authorities and developers to demonstrate their commitment to the environment.

This focus coupled with the change in climate patterns has put new demands on traditional below ground stormwater drainage systems and requires both a reduction of peak flows and improvements in water quality that discharges to our rivers and groundwater aquifers. In this respect Sustainable Drainage Systems (SUDS) have gained and continue to gain in importance.

As part of an overall implementation of a Surface Water Management Plan, SUDS systems can be combined together to form flood prevention and pollution control and provide an impetus to improving flood prevention and 'grey water' reuse.



The sustainable approach to drainage requires a multidisciplinary team of engineers, scientists and modellers to provide innovative, sustainable solutions. This challenge requires a close liaison with infrastructure, building, environmental, landscape and other colleagues and professionals in order to provide holistic and economic solutions for our clients.

Staff in our Irish business also work closely with their colleagues in the UK who have been involved in the development of CIRIA guidance documents including "CIRIA C625 – Model Agreements for Sustainable Water Management Systems", which provides basic advice on the use and development of model operation and

Project experience

maintenance agreements for SUDS alongside simple guidance on their incorporation in developments and identifies maintenance considerations and provides an outline of how the long-term responsibilities for SUDS maintenance can be allocated.

SUDS Design Experience

Atkins Ireland has a wealth of experience in the design of SUDS and our staff have direct experience of assisting Developers, Consulting Engineers, Contractors & Local Authorities in the design and construction of SUDS features on a large number of projects for Private and Public clients including Residential and Commercial developments and the N6 Galway to Ballinasloe, N7 Castletown to Nenagh and M50 Design & Build and PPP National Roads Schemes in Ireland.

To improve the sustainability of new and existing developments we can also bring our extensive experience to complement other design professionals including Architects, Roads Engineers, Town Planners, Environmental Scientists and Ecologists in other areas of the water cycle and water usage such as grey-water recovery, rainwater harvesting, water usage efficiency, flood risk assessment and protection, constructed wetlands systems and other SUDS measures.



Our services typically involve identification of concept design in support of planning applications, project management of consultation procedures, detailed design services, tender preparation, site supervision and consultancy services in support of applications taken to planning inquiry.