

SUDS? Not in my back yard!

The Flooding and Water Management Bill is widely expected to be introduced next year which will fundamentally change the way developers approach the issue of surface water run off, and will also impact on house builder's abilities to comply with the Code for Sustainable Homes. With this in mind, we've invited Richard Whale of Atkins Water & Environment to give his thoughts on the use of Sustainable Drainage Systems (SUDS).

Premier Guarantee's Code for Sustainable Homes services include a comprehensive hydrology reporting facility which can provide you with advice and guidance on the best ways to improve the hydrological performance of your developments.

Currently on the occasions where SUDS are used, they are frequently shoehorned into the development plan without any careful consideration of the local and regional environment. In such circumstances, SUDS become nothing more than token gesture to appease our environmental conscious and inevitably fail to deliver on their potential.

However, the potential introduction of the Flooding and Water Management Bill could bring with it a set of National standards by which developers would have to adhere to when constructing residential developments. This would not be wholly restricted to the use of SUDS, but also an ending to the ability to automatically connect surface water drains and sewers to public sewerage systems.

This would mean that developers must consider alternative options for dealing with the surface water.

The application of 'soft SUDS' (for example swales, ponds and wetlands) in new development is often impractical as development densities of up to 40 dwellings per hectare are required. An emphasis on flood risk management and maintaining high residential densities has steered drainage engineers towards SUDS techniques that have the smallest impact on the development footprint. Consequently, below ground attenuation techniques using oversized pipes or tanks are chosen, with the natural hydrology of a site and its ecology rarely considered in detail during the planning process. This approach is unsustainable as it pays no regard to the quality of surface water runoff, biodiversity and is inconsistent with the Water Framework Directive.

Despite these problems, it is possible to incorporate SUDS into dense development. For example, patios, paths, drives and off-road car parking could incorporate permeable pavements which allow surface water to permeate through the surface and into the sub-soils below which reduces surface water runoff.

Examples of such surfaces include gravel, porous asphalt, block paving and grass surfaces reinforced with geo-grids. These techniques also improve water quality and can be easily incorporated into the development plan without compromising highway or sewer adoption. Planters may also be incorporated into the urban landscape and be designed to accept runoff from highways and car parks. Rainwater from roofs can also be simply routed through planters located at rainwater pipe outlets. These simple and inexpensive techniques in particular serve to improve water quality and biodiversity and are capable of attenuating flows and consequently reduce flood risk.

The implementation of the Flooding and Water Bill would lead to the greater utilisation of SUDS techniques and would overcome some of the greatest barriers to their use. To do this designers, developers, planners and regulatory authorities must pool their skills and apply drainage solutions to high density development that limit its impact on the water environment. To refrain from a more collaborative approach to resolving our drainage problems will inevitably lead to greater flooding and further deterioration of groundwater and river water quality.



Richard Whale
Atkins Water & Environment

Premier Guarantee Product Update

Over the past few months, we've added some new services to our range:

- Housing Quality Indicators
- Daylight Factor Calculations
- Ecohomes Assessments
- BER Certification
- BREEAM
- Hydrology Reports
- Ecology Reports

For further information on any of these services, contact our team on 08444 120 888 or email info@premierguarantee.co.uk.