All change for SuDS

In an about turn, the government has announced an alternative approach to implementing SuDS using the planning system, in an attempt to fast-track implementation after long delays. Chris Hodson reports.

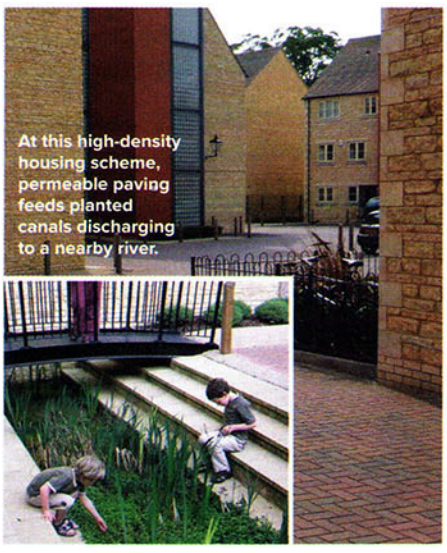
Without doubt, sustainable drainage systems (SuDS) and techniques such as concrete block permeable paving are essential to help fight flooding and pollution – particularly with overloaded sewers, urbanisation and climate change. There is ample research to demonstrate the link between growing urbanisation and flooding, notably the Pitt Review into the summer 2007 floods. Here, over two thirds of the 57,000 homes affected were flooded not by swollen rivers but by surface water runoff or surcharge from overloaded drainage systems.

The 2010 Flood and Water Management Act – resulting from the Pitt Review – was set to make SuDS mandatory. Under the act, SuDS Approving Bodies would have to be set up by local authorities to approve and, where appropriate, adopt SuDS schemes. Yet these measures still cannot be directly applied until implementation of Schedule 3 of the act, as well as the long-awaited National Standards for SuDS and related guidance – both documents still in draft. In June, Defra announced that yet another proposed implementation date this October would be missed. These delays have been largely attributed to developers' concerns about additional costs and local authorities' lack of time and resources to set up SuDS Approving Bodies.

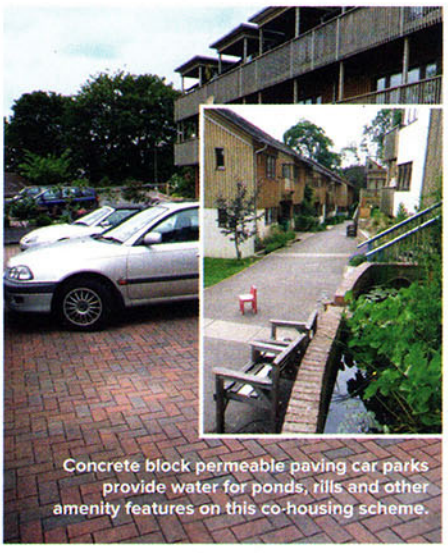
However, a ministerial statement on 12th September launched a consultation proposal that bypasses the Flood and Water Management Act. Instead, the planning system with national and local planning policies will form the basis for demanding SuDS on developments. Amended planning guidance – based on the latest draft National Standards – will bolster existing National Planning Policy Framework encouragement for SuDS. The proposed planning policy changes should now come into force in Spring 2015 and new guidance is expected to focus on adoption and long-term maintenance issues.

Once implemented, it is proposed that planning conditions, Section 106 agreements or other measures will be used to ensure that SuDS are maintained for the lifetime of the scheme. The government proposal points out that this should not increase costs, adding:

"All the available evidence is that sustainable drainage systems are generally cheaper to build; and maintaining them will be cheaper (or need be no more expensive) than the



At this high-density housing scheme, permeable paving feeds planted canals discharging to a nearby river.



Concrete block permeable paving car parks provide water for ponds, rills and other amenity features on this co-housing scheme.

Extensive permeable paving at Great Western Park, Didcot, supplies treated water for allotments and wildlife ponds.

same cost as is required to maintain conventional drainage at present."

Interpave, the trade association for precast concrete paving in the UK, welcomes this proposed strengthening of planning policy – and any other steps that would lead to further integration of multifunctional SuDS into the design of new developments and the planning process. However, local authorities are already failing to follow existing planning policies and regulations, and may well continue to do so.

SuDS have been a part of national planning policy for some time. Nonetheless, the recent Committee on Climate Change ASC Progress Report points out that:

"Less than half of the planning applications we reviewed considered sustainable drainage. This raises questions as to whether a large proportion of local planning authorities are following national planning policy on SuDS."

Clearly, more policies and best intentions are not enough. Additional legislative intervention is needed, particularly to establish realistic adoption and maintenance procedures. With concrete block permeable paving this is not a problem, as maintenance requirements are minimal. Extensive experience suggests that sweeping once a year should be sufficient to maintain an acceptable infiltration rate on most sites. There are examples of pavements that are more than ten years old that have hardly ever been swept but still work effectively.

In the absence of effective measures from government and in light of the ongoing reluctance of planning authorities to enforce the implementation of SuDS, developers and housing providers should consider taking a responsible approach, applying SuDS to their projects. Here, it is important to fully understand the principles and benefits.

SuDS technology is not new to the UK and is well established in other countries. Conceptually, a SuDS scheme comprises a 'management train' of interconnected features, each combining water storage, pollution removal and amenity benefits wherever possible. SuDS replicate, as closely as possible, the natural drainage from a site before development. That is not to say that all SuDS features have to be vegetated – for example, concrete block permeable paving is a well-used SuDS technique – or that urban projects need to take on a rural character with lower housing densities.

As the latest draft National Standards Guidance states, SuDS: *"should aim to manage surface water within sub-catchments, close to source and at or near surface as reasonably practicable"*. This avoids extensive excavations and major engineering interventions.

Clean Water for Amenity

Such measures are already supported by the code of practice BS 8582:2013, but this goes much further, linking water management and overall development planning from the start. It seeks to maximise opportunities for using space in a multi-functional way and for enabling SuDS features to form part of the character of the development: both key features of concrete block permeable paving.

It looks for: *"evidence that permeable surfaces and surface based conveyance and storage systems are to be used wherever practical."* An important capability of concrete block permeable paving is to supply a gradual supply of clean water for recycling, irrigation, biodiversity and real amenity use within the landscape to the benefit of all.

With concrete block permeable paving, SuDS offer imaginative designers opportunities, rather than just technical problems to be solved. Taking a holistic approach, designers can embrace SuDS as one of the central design considerations in housing from the very start of their projects, exploring innovative solutions that form an integral part of an overall landscape scheme. Drainage engineering then becomes simply a part of the process – not the primary driver and an end in itself.

*These issues are explored in Interpave's discussion document – **SuDS + Permeable Paving Today, Edition 2** – available via: **www.paving.org.uk/commercial**.*

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