



Via email to: [FloodsandWaterBill@defra.gsi.gov.uk](mailto:FloodsandWaterBill@defra.gsi.gov.uk)

Simon Hewitt  
Flood and Water Management Bill Team  
Department for Environment, Food and Rural Affairs  
Area 2C Ergon House  
London  
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Dear Sir,

**Draft Flood and Water Management Bill**

In response to your invitation letter dated 21 April, I am writing to submit the following views on the draft Flood and Water Management Bill from the trade association Interpave and its Members.

Interpave is the Precast Concrete Paving and Kerb Association, promoting and developing concrete block paving, paving flags and kerbs - ranging from domestic uses to the most taxing heavy industrial applications. It represents the UK's leading manufacturers Brett, Charcon, Marshalls, Townscape and Hanson Formpave. Interpave is a product association of the British Precast Concrete Federation Ltd., operating from the Federation's Leicester offices and this response has been collated from technical expertise within the association and incorporating members' comments. Further information on Interpave is available from [www.paving.org.uk](http://www.paving.org.uk)

Interpave is the driving force behind the development of concrete block permeable paving (CBPP), working directly with SUDSnet, CIRIA, Environment Agency and The Concrete Centre. Interpave seeks to ensure that CBPP is understood by all as an established technology with impressive, predictable performance characteristics and has developed an extensive information resource (available via [www.paving.org.uk](http://www.paving.org.uk)).

As a result, the following views and responses to specific questions are confined to aspects related to SUDS and, in particular, permeable paving. Before addressing specific questions from the consultation documents, I would like to draw your attention to the following key issues:

1. Interpave welcomes recognition of the importance of permeable paving in Section 2.6, generally as a SUDS technique (165) and specifically to take the place of traditional impermeable roads and pavements draining to sewers (189).
2. Although frequently used in conjunction with other SUDS techniques, CBPP

is unlike other SUDS. Most SUDS techniques are 'soft' landscaping features still regarded as unconventional drainage devices with particular maintenance issues and some uncertainty over long-term performance. This is not the case with CBPP which uses established engineering technology and has predictable performance proven over more than two decades in the UK and abroad. In addition, CBPP requires no additional land-usage and simply provides a sustainable alternative to conventional paving with piped drainage, but on the same footprint. It therefore merits a separate approach both to the development of National Standards and to adoption. Interpave would welcome the opportunity to work with Defra on both issues.

3. CBPP is a well-established engineering technology with a wealth of research and information resulting from extensive use internationally. Definitive, detailed guidance is currently available in Interpave's 2008 Edition 5 of '*Permeable Pavements – Guide to the Design, Construction and Maintenance of Concrete Block Permeable Pavements*' (the Interpave Guide). This guidance is based on research undertaken at Newcastle University, information from Germany – where over 20,000,000m<sup>2</sup> of permeable pavements are installed annually, and published data from the USA. Information from the Interpave Guide is also widely used in BS 7533-13:2009 '*Guide for the design of permeable pavements...*', and the '*SUDS Manual*' (CIRIA, 2007). The Interpave Guide is available from [www.paving.org.uk](http://www.paving.org.uk) which is already referred to in '*Guidance on the permeable surfacing of front gardens*' (Communities and Local Government, 2008). **It is recommended that National Standards related to the design, detailing, construction, maintenance and adoption of CBPP be developed in conjunction with Interpave and based on the Interpave Guide.**
4. In its response to the previous 'Improving Surface Water Drainage' Defra consultation, Interpave argued for a different approach to the adoption of CBPP from other SUDS techniques. Although most SUDS techniques fall outside the immediate highway area, CBPP simply provides a sustainable alternative to conventional paving with its piped drainage, but on the same footprint. So, at adoption it will itself become the highway, along with impermeable areas draining onto it. The limited maintenance regimes that apply to CBPP, such as sweeping, are similar to those for conventional highways. CBPP should, therefore, be treated similarly to conventional highways and associated drainage with Highways Act 1980, Section 38 adoption agreements with highway authorities, rather than with SABs. Alternatively, SABs and highway authorities will need to jointly adopt CBPP.
5. In any event, it is essential to remove any barriers to Section 38 adoption of CBPP as a highway (as distinct from a drainage system, as catered for in the draft Bill). **To achieve this aim, it is recommended that the new National Standards also be applied to Highways Act Section 38 adoption.**
6. In developing National Standards, it is important to take account of the recommendations of other national guidelines covering urban design, accessibility and sustainable development, such as the '*Manual for Streets*' and '*Code for Sustainable Homes*'.
7. The new National Standards should also encourage use of sustainable, locally sourced materials in line with government policy.
8. It will also be **essential** to update Building Regulations Approved Documents to avoid conflicts with the draft Bill. For example, Interpave has previously expressed particular concerns about the possible interpretation of the '5 metre rule' in Building Regulations Approved Document H (ADH) and confirmation of the following should be sought from CLG to remove this

barrier. ADH Section 3.25 of H3 currently states that “Infiltration devices should not be built: within 5m of a building or road...” H3.23 states that: “Infiltration devices include soakways, swales, infiltration basins and filter drains.” However, designers and Building Control Officers might also include CBPP within this definition, which would preclude the use of CBPP close to buildings, if applied. However, infiltrating CBPP may be used close to buildings as it allows dispersed infiltration similar to natural vegetation, rather than ‘point’ infiltration typical of soakways. There are now numerous examples of projects successfully applying this principle. If a concentrated outflow (such as a roof drainage outlet) is used within the CBPP, this should be at a sufficient distance away from the building to ensure the stability of the building is not affected. We believe this requirement was intended to apply to soakways not CBPPs. There is some evidence from the market that this requirement (or rather the misinterpretation of it) is inhibiting the use of CBPPs near buildings and on driveways and recommend clarification now and suitable amendment of the ADB at the next opportunity.

9. In developing National Standards, it is important to take account of the need for SUDS to improve water quality by removing pollutants, as well as to attenuate runoff, so meeting the requirements of PPS23 and the EU Water Framework Directive. In this context, SUDS with proven water treatment capabilities should be considered as preferable to simple storage devices, such as attenuation tanks, with no such capabilities.

The following responses refer to specific questions posed in the consultation documents:

*Q1. How far, in general, would you say that the draft legislation is written in a reasonably clear style that is likely to be understood by readers?*

A1. Writing style is clear, understandable and appropriate.

*Q2. In general, do you think the individual clauses are too long, too short or about the right length? How far is their overall order in the draft legislation reasonably logical and easy to follow?*

A2. Length of individual clauses is appropriate. Order of clauses is logical and understandable.

*Q3. In general, do you think the individual sentences in the draft are too long, too short?*

A3. Sentence length is appropriate.

*Q42. Do you agree that national design, construction and performance standards for sustainable drainage of new developments and redevelopments should be developed and approved by the Secretary of State and Welsh Ministers?*

A42. Yes, subject to the following. It is essential for National Standards to be based on proven existing standards and trade association guidance. This approach will minimise the time and cost of developing the new Standards and ensure compliance of SUDS schemes designed or constructed prior to application of those Standards. See also item 3 above.

*Q43. Are there particular issues which must be addressed in the standards to make them effective, that have not been mentioned?*

A43. Yes, there are various issues specific to each SUDS technique which will require resolution. For example, in the case of permeable paving accommodation of statutory services and consideration of the paving as a structural highway are critical issues. For this reason, it is essential that trade associations and other organisations with appropriate expertise are closely involved. See also item 5-8 above.

*Q45. Does the process for adoption and connection described here provide a clear and workable approach for developers, local authorities and water and sewerage companies? Do you have any suggestions which would make the process simpler, speedier or lower cost?*

A45. In general, yes, subject to consideration of other, non-drainage adoption regimes to avoid barriers to SUDS. See also items 4-5 above. In some instances, alternative construction such as linear drainage feeding from impermeable surfaces to SUDS water handling systems could save money on the overall construction, Interpave would be pleased to discuss this further if required.

*Q47. Do you agree with how the envisaged arrangements for replacing the automatic right to connect will work?*

A47. Yes. The enforcement of this, and other legislation in this area, needs to be properly funded and resourced, otherwise it will not be effective.

*Q49. What is the appropriate balance to enable good SUDS designs that work with the lie of the land, can discharge to watercourse, and can be accessed for maintenance and inspection, whilst protecting the rights of land-owners?*

A49. Not an issue for permeable paving as it will itself constitute the adopted highway, as now, unless serving a single property (discussed below). Selection of SUDS techniques requiring minimal maintenance, such as CBPP, will help.

*Q52. Views are welcomed on how best to ensure the maintenance of private SUDS, and ensure that they are not redeveloped.*

A52. It is assumed that this will apply only to single properties. In such cases, SUDS would be installed in accordance with planning consents (with conditions), Building Regulations and new National Standards (if sewer connection required). Redevelopment would constitute a breach requiring active enforcement and should become exposed in searches at the time of sale – both incentives to comply. See also answer to Q131, below. Selection of SUDS techniques requiring minimal maintenance, such as CBPP, will help. Also – could House-builders be made

responsible for providing information relating to this issue as part of the information pack they provide to new purchasers?

*Q131. Do you agree that a new statutory nuisance should be created to tackle the risk of run-off flooding?*

A131. Yes. It is already clear that the removal of permitted development rights for impermeable front garden paving is only being actively enforced on the ground by local authorities following complaints (from neighbours or Parish Councils). Statutory nuisance will also provide a useful means of action on neighbour complaints, as well as an encouragement to maintain private SUDS (see Q52).

*Q136. Should local authorities be encouraged to make more use of their Article 4 powers to reduce the growth in surface run-off risk?*

A136. Yes.

Interpave would like to thank the Flood and Water Management Bill Team for the opportunity to contribute to this consultation and would welcome the opportunity to contribute further should any additional questions or enquiries arise.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Colin Nessfield', with a horizontal line underneath.

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