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From: Paul Crick, Director of Planning & Environment  
To: Environment, Highways & Waste Cabinet Committee  
Date: 10 January 2013  
Subject: KCC Drainage Adoption  
Classification: Unrestricted

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### **Summary:**

Implementation of the Flood and Water Management Act 2010 requires that KCC becomes the approving body for sustainable drainage. Defra have yet to announce the commencement date of this new duty. The interim period prior to commencement has extended from the Government's original proposal of October 2012 to an as yet undefined date. This is causing uncertainty for the development industry and failing to deal with drainage needs as identified in the Pitt Review. KCC has an opportunity to take the initiative to provide greater certainty for the development industry by adjusting what drainage infrastructure it currently adopts within our current powers and, as Lead Local Flood Authority with the highest risk of surface water flooding, to be seen as an exemplar, taking the lead in flooding solutions and reducing flood risk. KCC have already engaged with developers on specific projects to assess this adoption proposal and engagement with this sector will continue as we take the revised regime forward.

This paper outlines the changes to KCC's adoption regime and seeks comment from Cabinet Committee with respect to its implementation.

### **Recommendations:**

KCC take this forward including further engagement with developers and comments are invited from the Cabinet Committee.

This position is reviewed after an appropriate period of time (two years) or following any announcement or decision by Defra about the implementation of the SAB.

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## **1 Introduction**

1.1 The Government passed the Flood and Water Management Act 2010 (the Act) to provide new legislation for the management of flood and coastal erosion risk in England and Wales. The Act designated KCC as Lead Local Flood Authority (LLFA), which includes responsibility for the management of flood risk from surface water. In addition to clarifying responsibilities for flood risk, the Act (under Schedule 3) requires construction work with drainage implications to have its drainage systems approved before construction may begin and promotes the utilisation of sustainable drainage systems (SuDS).

- 1.2 SuDS aim to mimic natural drainage processes to ensure the runoff from a rainstorm is similar to the pre-development runoff. SuDS components can be both landscaped features, including green roofs, ponds, wetlands, and swales, as well as engineering features, such as permeable pavement and soakaways. SuDS have many benefits but importantly can overcome drainage problems not resolved by conventional piped drainage systems and which, if unresolved, may prevent a development from going ahead.
- 1.3 The “approving body” (known as the “SAB”) for this process has been designated as county councils and unitary authorities. The SAB must ensure that the applicant has designed the drainage in accordance with National Standards which promote SuDS. Once approved and constructed, the SAB must adopt and maintain those drainage systems that are functioning properly and serve more than one property.
- 1.4 Defra’s original intention was for implementation of the SAB commencing on 1 October 2012. Following a consultation exercise on the draft National Standards, Defra has announced that implementation will not occur in April 2013 and we are led to believe not prior to April 2014.
- 1.5 The lack of commencement on the drainage approval role causes uncertainty for developers about what is expected from the drainage system, who is responsible for providing the assessment and how it will be maintained in the long term. As the LLFA with the highest flood risk, and largest flood grant from Defra, KCC should be aiming to be seen as an exemplar, taking the lead in flooding solutions and reducing flood risk. It is timely and appropriate that KCC review its position in order to proactively promote sustainable drainage solutions and enable development, and therefore economic growth, to be supported in Kent.
- 1.6 Several other local authorities are considering or have undertaken action to address the adoption issue in the absence of official commencement from Defra. Essex County Council is adopting SuDS under S38 powers by widening the highway boundary in order to encompass these features and is also taking non-highway runoff. Other authorities undertaking SuDS adoption include: Oxfordshire County Council, Cambridge City Council, Leeds City Council, and Bracknell Forest Council.

## **2 Current Adoption Practices – “Do Nothing”**

- 2.1 Currently surface water drains which serve the adopted carriageway and are within the highway boundary are adopted by KCC. Other drainage features such as soakaways and swales may also be adopted if they are within the highway boundary. In special cases, structures that are outside the highway boundary will be adopted under an easement agreement with the third party property owner.
- 2.2 Surface water sewers which carry non-highway water, for instance roof water, are offered for adoption to the appropriate sewerage undertaker. Sewerage undertakers are unwilling to adopt drainage networks that include sustainable drainage elements, as they are only required to adopt piped systems. They are reluctant to change their current practice because there is an expectation that the Act will be fully implemented and the SAB will adopt these systems.

- 2.3 Under current planning guidance, local planning authorities and the Environment Agency are encouraging, and often requiring, the inclusion of sustainable drainage. However, as illustrated, there is currently no identified adoption authority or mechanism for a public body to take on this role. Over time, this will result in an increase in private sustainable drainage systems and, should these be insufficiently monitored and maintained, could lead to an increased likelihood of surface water flooding events.
- 2.4 As the LLFA with the highest risk of surface water flooding, if we do not assist developers in implementing sustainable drainage solutions we have the potential to worsen the very problem we are responsible for managing. It is not sufficient to blame a delay in the commencement of the duty when a solution is within our powers.

### **3 Adoption regime under consideration**

- 3.1 Under the Highways Act and the Water Industry Act, the highway authority or the sewerage undertaker may adopt systems that convey surface water from either premises or roads. There is no requirement for water from these sources to be separated. KCC could therefore adopt sustainable drainage systems under powers given by the Highways Act, which would assist the development industry.
- 3.2 The revised adoption regime is attached in Appendix A. The adoption would be voluntary and entirely the choice of the developer, providing a solution to enable the development rather than hinder it. Key principles of the revised adoption regime are to adopt on an agreed basis:
- Systems that receive highway and non-highway water;
  - Special road surfaces, such as permeable pavements;
  - Other drainage structures, including swales, soakaways, filtration trenches, below grade attenuation and bioretention within the proposed drainage network if within the highway boundary; and,
  - Only systems in new developments, where we as adopting authority have had opportunity to approve and inspect drainage design (and therefore would not include any retrospective adoption).
- 3.3 Drainage adoption would only be available when it is associated with a highway adoption and the proposed system is within the adopted highway boundary. KCC would not adopt any features (for example ponds) in public open space as these would be maintained by a district authority or third party.
- 3.4 Any adoption of SuDS is determined through consultation and agreement between the developer and KCC and would be voluntary for both parties.
- 3.5 The main difference to existing drainage adoption under S38 would be the wider variety of drainage infrastructure adopted (i.e. not only piped systems, with soakaways and swales) and the acceptance of runoff from areas other than the highway. The consideration of these matters does not represent any significant burden above and beyond current drainage approval, excepting the need to build staff capability in the technical understanding of other types of SuDS features. The Sustainable Drainage Engineer in Planning & Environment would

support this initial phase and the development of the necessary skills and knowledge.

- 3.6 The revised adoption regime would be part of the existing S38 adoption process which is currently accompanied by a technical approval fee and a commuted sum for maintenance. Staff time for approvals and future maintenance for a period of time will therefore be covered at cost.
- 3.7 KCC have engaged with the development community on specific projects to assess this adoption proposal. We will undertake further engagement individually and collectively with the development community to ensure a full understanding of the revised adoption regime and the associated opportunities, approach and costs.

## **4 Opportunities**

- 4.1 By taking definite steps for adoption of sustainable drainage, Kent will be addressing the current lack of certainty being faced by developers. This will facilitate development in the county and make Kent an attractive consideration for investment as it provides for cheaper asset requirements (requiring only one drainage system for surface water), may make drainage feasible for difficult development sites and negate the need for protracted adoption negotiations and/or an ongoing maintenance company.
- 4.2 The revised adoption regime will allow KCC to find a solution to barriers of SuDS due to adoption problems and promote sustainable drainage solutions more effectively. It will enable KCC to shape the type of drainage systems proposed to reduce the risk of flooding to the highway because we have ownership of the asset.
- 4.3 Benefits of including a sustainable drainage approach rather than conventional piped solutions also include:
  - Reduction of flood risk and an ability to improve difficult drainage situations;,,
  - Reduction in silt within the highway system and an effectively reduced maintenance need; and,
  - Improvements and protection of water quality of receiving waterways and support of environmental objectives.
- 4.4 In taking on the proposed approval role for SuDS now, KCC would be pre-empting tasks which would be required with commencement of the SAB. This would allow KCC to build experience and expertise with staff and develop processes over a time frame suitable for the organisation rather than being imposed by Defra. During this interim period, KCC would be able to demonstrate an alternative, less bureaucratic solution to Defra and act as the vanguard for SuDS adoption.
- 4.5 In time there could be an opportunity to sell this increased expertise outside the county.

## **5 Constraints**

- 5.1 In the revised adoption regime, KCC would be going beyond its statutory duty as designated within the Highways Act with an increase in risk and liability

associated with the increased asset base. This would be mitigated by the provision of required standards, technical scrutiny of designs and inspection at construction stage before the schemes are adopted.

- 5.2 The standard of construction would be dependent upon the KCC specification for adoptable standards to ensure that the systems operate effectively. KCC is currently updating the Kent Soakaway Design Guide and developing further information in readiness for the future SAB role. With no National Standards set by Defra at this stage, KCC is free to set our own specific standards. These will be voluntary for developers but will need to be complied with if they are seeking adoption by KCC.
- 5.3 In the revised adoption regime, KCC has financial risks associated with the determination of appropriate commuted sums. Highways and Transportation have extensive experience of determination of commuted sums and have operated a successful adoption program.

## **6 Funding**

- 6.1 At present payments are made for sewer adoption of conventional piped systems to sewerage undertakers. Sewerage undertakers currently charge for developer enquiries and sewer connections as well as adoption inspections from a minimum fee of £500 increasing to 2.5% of the agreed estimated construction costs of the surface water system for large projects.
- 6.2 KCC received payments for adoption of highways: technical approval, managing the agreement and inspection fee charged at 8% of total construction cost of adopted works; and commuted sums for adoption of non-standard materials and other items. Commuted sums are required for: highway structures, soakaways, additional landscaping, unusual materials and sustainable drainage systems.
- 6.3 For the revised adoption regime, KCC would utilise the technical approval fee equivalent to sewerage undertaker charge of 2.5% of the agreed estimated construction costs as in Section 6.1 and seek commuted sums from developers via a S38 highways agreement for unusual drainage elements. The sums would cover fees for technical approval and maintenance liabilities for an appropriate period of time for the asset.
- 6.4 No additional costs will be incurred by the developer above current practice. The developer would not make any payments to the sewerage undertaker with respect to surface water sewerage and would make savings in some cases by provision of only one surface water system.
- 6.5 The calculation of the commuted sum would be based on best practice and current experience with maintenance activities. This sum is specifically calculated to cover the ongoing maintenance and/or replacement costs for the asset.

## **7 Conclusion and Recommendations**

- 7.1 KCC will be required to undertake adoption of SuDS schemes under the Act at an undetermined date in the future. Within our current powers we can address some of the uncertainty currently faced by developers, can develop expertise in preparation for the new regulation and assist in addressing our responsibilities as the LLFA with the highest flood risk.

7.2 We are confident that the revised adoption regime poses little risk to KCC, as discussed in Sections 5 and 6 and instead provides an opportunity to lead the way in promoting sustainable drainage solutions and supporting developers in Kent. In the absence of a directive from central government to commence our SAB duties, and the likelihood it could be another 18 months until we receive this; we consider that KCC should take the initiative and put in place the revised adoption regime.

7.3 It is recommended that:

- KCC take this forward including further engagement with developers and comments are invited from the Cabinet Committee
- This position is reviewed after an appropriate period of time (two years) or following any announcement or decision by Defra about the implementation of the SAB.

## 8 References

CIRIA, The Community for sustainable drainage at: <http://www.susdrain.org/>

Draft National Standards and statutory instruments are available online at: <http://www.defra.gov.uk/consult/2011/12/20/sustainable-drainage-systems-1112/>

Flood and Water Management Act 2010 is available online at: <http://www.legislation.gov.uk/ukpga/2010/29/contents>

## 9 Contacts

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## **APPENDIX A**

### **SUMMARY OF REVISED DRAINAGE ADOPTION REGIME**

#### **1. Extent of Drainage Adoption**

- 1.1. The drainage system to be adopted may consist of an extent of piped network, soakaways, underground attenuation systems, permeable pavements, filtration trenches, swales or other vegetated sustainable drainage elements, designed to manage surface water flows from both roof and highway areas, provided it complies with standards as specified by the Highways Authority.
- 1.2. Drainage adoption shall only be considered if the drainage system is contained within the highway boundary or forms an integral part of a road being offered for adoption.
- 1.3. Drainage within private areas will not be adopted at this time, unless the drainage element or network is contained within public open space to be adopted by the district council or town or parish council and will be adopted per specific requirements in Section 2.3.
- 1.4. Adoption infers that the drainage system will be highway maintainable at public expense, subject to appropriate financial arrangements for ongoing maintenance.

#### **2. Specific adoption requirements**

- 2.1. Permeable pavements: Permeable pavements shall only be adopted within roads with speeds of less than 30mph, which are not a designated bus route, and carry less than 1,000 vehicles per day.
- 2.2. Below grade attenuation: Below grade attenuation shall only be adopted if appropriate cover is provided with a downstream and upstream inspection chamber and the attenuation system is located within a non-trafficked area within the highway verge or open space.
- 2.3. Basin, ponds and wetlands: Adoption will occur up to the outfall headwall to the basin or pond. The basin or pond area will not be adopted by the Highways Authority, which if within open space will be maintained by the district or parish council. Consideration will be given to adoption of any communicating pipe work from the basin outflow to the sewerage undertakers demarcation chamber or final outfall upon site specific consideration.
- 2.4. Drainage elements proposed for adoption which utilise infiltration shall only be adopted if infiltration is greater than  $1 \times 10^{-5}$  m/s, demonstrated through appropriate ground investigation.

#### **3. Adoption Agreement**

- 3.1. To secure adoption of the sustainable drainage elements, the developer (applicant) must apply in writing to the Highways Authority to enter into an agreement under Section 38 of the Highways Act 1980, which specifically states the inclusion and extent of specific sustainable drainage elements.
- 3.2. Appropriate fees will be payable for the administration of the agreement, legal services, technical approval, site inspections and issue of certifications, specifically for sustainable drainage elements above that required for Section 38 highway adoption and approval.

#### **4. Consultation**

- 4.1. Consultation will be undertaken by the applicant prior to submission of the Section 38 application with the Environment Agency in respect of any discharge of water to a river or watercourse, and with the relevant District Council or IDB with regard to all development which might have implications for land drainage.

5. Communication with public sewers

- 5.1. Consultation will be undertaken the applicant with the relevant sewerage undertaker prior to submission of the Section 38 application to confirm feasibility of connection and required discharge rate, with respect to any discharge of water to a public sewer system.
- 5.2. The applicant will be required to provide evidence from the sewerage undertaker that sufficient capacity is available within the receiving sewer system and provide information in relation to any flow control which may be required.
- 5.3. A demarcation chamber, adopted by the sewerage undertaker, will define the ultimate connection point to the public sewer and the extent of the drainage system adopted by the Highways Authority.

6. Landscaping maintenance

- 6.1. The maintenance liability must be a design consideration of all landscaping proposals which are required for vegetated sustainable drainage systems.
- 6.2. The commuted sums for maintenance will be assessed according to the initial size of the species planted. Costs will include weed controls, firming of plants, usual arboricultural maintenance, fertiliser application, and watering.

7. Other standard conditions

- 7.1. All other standard conditions for provision of information, fees, inspections, and enforcements apply to drainage adoption as applies to adoption of standard highway drainage.