



Ministry of Housing,  
Communities &  
Local Government

# A review of the application and effectiveness of planning policy for Sustainable Drainage Systems (SuDS)



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# 1 Introduction

Sustainable Drainage Systems (SuDS) have an important role in managing surface water run-off close to where it falls as rain. As well as helping to reduce the causes and impacts of flooding, SuDS can also provide additional benefits such as removing pollutants from urban run-off and combining water management with green space that offers scope for recreation and wildlife.

More than three years have passed since national planning policy for SuDS was strengthened to make SuDS a requirement in all new major developments. This review provides the opportunity to gauge how the new policy is being implemented, and meets the statutory duty in the Housing and Planning Act 2016 (Section 171) for a review of planning legislation, government policy and local planning policies concerning sustainable drainage in relation to the development of land in England.

Since this review was completed, the government has published a revised National Planning Policy Framework (NPPF) on 24 July 2018 which supercedes the version originally published in 2012. Where this report makes reference to the NPPF and national planning guidance, this should be taken as referring to the 2012 edition of the Framework and its accompanying planning guidance. The government will update the planning guidance to reflect changes made to the NPPF in autumn 2018.

## 1.1 Framework for the review

The Ministry of Housing, Communities and Local Government (MHCLG), supported by DEFRA and EA officials, in collaboration with a number of stakeholders focused on the following three elements of planning policy that are applicable to SuDS:

- The National Planning Policy Framework (NPPF) and the accompanying Planning Guidance.
- National planning policy expressed through the December 2014 written ministerial statement (HCWS161 – Sustainable drainage systems) – which came into effect in April 2015, and
- Local Plan policies and any relevant, associated Supplementary Planning Guidance.

A steering group of sector representatives was established to help guide the review, and provide advice and assurance on our proposed approach to each stage of evidence collection.

Stakeholder input was facilitated at two strategic levels: a small and focussed steering group to guide the work stream phases comprised of representatives of MHCLG, DEFRA, EA, ASC Secretariat and ADEPT (the Association of Directors of Environment, Economy, Planning and Transport); and a second tier engagement group with membership drawn from house builders, professional and statutory bodies and other agencies.

## 1.2 Planning policies applicable to SuDS

The National Planning Policy Framework<sup>1</sup> (NPPF) sets out the policy approach for preventing inappropriate development in areas at risk of flooding. The NPPF expects local planning authorities, when determining planning applications, to ensure that sustainable drainage is prioritised in areas at risk of flooding, conserve and enhance biodiversity, and, adopt strategies to mitigate and adapt to climate change.

The planning guidance<sup>2</sup> supports the NPPF, setting out the types of sustainable drainage systems that should be considered according to a hierarchy of drainage options.

The Secretary of State for Communities and Local Government made a written ministerial statement on 18 December 2014<sup>3</sup> stating that existing planning policy would be strengthened to make clear the expectation that sustainable drainage systems should be provided in all major new developments where appropriate, and that lead local flood authorities would be made statutory consultees on planning applications for major development with surface water drainage. This came into effect in April 2015.

## 1.3 Aims, objectives and approach of the review

The review examined the extent to which national and local planning policy has been successful in encouraging the take-up of sustainable drainage systems in new developments. The review looked at how national planning policies for SuDS are reflected in local plans and the uptake of SuDS in major and minor new housing developments and commercial/mixed-use developments. The review was approached in two phases: assessment of the content of local plans across England, and; assessment of planning applications and structured face-to-face interviews with a selection of local planning authorities (LPAs).

Twelve candidate LPAs were selected by listing all 338 LPAs by land value estimates<sup>4</sup>, dividing the LPAs into twelve groups, then using the average land value for all LPAs within

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<sup>1</sup> <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

<sup>2</sup> <https://www.gov.uk/government/collections/planning-practice-guidance>

<sup>3</sup> <http://www.parliament.uk/documents/commons-vote-office/December%202014/18%20December/6.%20DCLG-sustainable-drainage-systems.pdf>

<sup>4</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/407155/February\\_2015\\_Land\\_value\\_publication\\_FINAL.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/407155/February_2015_Land_value_publication_FINAL.pdf)

each group to identify the LPA with land value closest to the average in each group. The project steering group agreed that the selected LPAs represented a representative range.

## 1.4 Evidence gathered by the review

The first phase of the review involved a survey of all adopted and emerging local plans and adopted Supplementary Planning Guidance (SPG) from all 338 Local Planning Authorities in England.

The second phase focussed on the implementation of planning policy, with evidence collected from twelve LPAs and the respective Lead Local Flood Authorities (LLFAs). For this phase of work evidence was collected through analysis of a range of approved planning applications (minor residential, major residential and commercial/mixed-use developments) spanning the period 2012-16 and structured interviews with LPAs alongside the respective LLFAs.

## 2 Review findings

This section presents the principal findings from each stage of evidence gathered during the review.

### 2.1 Survey of local plans

The majority (80%) of adopted local plans contained policies<sup>5</sup> that clearly **reflected the requirements of the National Planning Policy Framework extant at that time**; that SuDS be prioritised in those areas at risk of flooding. This figure increases to just over 90% for emerging local plans.

80% of all adopted and 95% of emerging local plan policies reflected the **requirements of the written ministerial statement** that SuDS are to be provided in all major new developments wherever this is appropriate.

Just over 80% of all adopted local plans included SuDS policies that **go further than national policy expectations** (e.g. SuDS required for all developments regardless of location and scale). This proportion increases to 90% when only emerging local plans are considered.

Only 33% of adopted local plans were found to specify that clear arrangements should be in place for **ongoing maintenance** of the SuDS over the development's lifetime. This figure increased to approximately 60% when emerging local plan policies were considered. It is important to note that this does not mean that maintenance arrangements were not considered at the application stage.

70% of LPAs do not have a monitoring and/or a reporting regime in place to **monitor SuDS deployment** in their adopted local plans, this figure increases to about 75% in emerging local plans.

### 2.2 Analysis of planning applications

87% of the sample of approved planning applications explicitly stated that SuDS would feature (whether proposed by the applicant, or conditioned by the local planning authority) in the proposed development.

For the remainder where SuDS was not explicitly referred to within the planning application documentation, mitigating circumstances were described in the application, such as the

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<sup>5</sup> Local Plans are not expected to repeat/duplicate all national planning policies. Even where a specific Local Plan policy is silent on a particular policy, national planning policy is still a material consideration in determining planning applications.

development was directly adjacent to a water body or on previously developed land and a pre-existing connection to a sewer was proposed.

Of the proposals that did not specifically mention SuDS in the planning application, drainage of surface water to a water body was often described in such a way that could be interpreted as sustainable. For those applications proposing discharge of surface water into a sewer, it was frequently unclear whether this meant a combined or surface water sewer (mainly because detailed drainage plans were not available). Therefore the approved planning applications in our sample that will drain sustainably is likely to exceed 87%.

Of the applications assessed, 5% of major developments and 10% of developments in flood risk areas explicitly excluded SuDS. The reasons cited are the same as those given in previous paragraphs.

In 70% of all the planning applications analysed that included SuDS, it was unclear from the planning application documentation who is responsible for maintaining the SuDS. However this finding is unlikely to be conclusive due to inherent uncertainties that arose from surveying planning application documentation:

- Explicit statements were sought within the published material that explained maintenance responsibilities. Any apparent absence of such statements does not necessarily imply that no maintenance arrangements exist.
- Incomplete documentation/records on authority websites.
- Not all planning conditions had been discharged at the time the application was surveyed.
- Implicit that homeowners for smaller sites with drainage features located in their gardens and similarly for major commercial developments, that site owners will be responsible for the SuDS.

Of the major development applications analysed, about 40% were in line with national policy requirements for clear maintenance arrangements at the initial application stage. Subsequent conditions applied by the authority usually required more information on the proposed drainage strategy and clarification of maintenance arrangements.

A broad range of SuDS technologies and features were found to have been proposed across those planning applications analysed. These included ponds and attenuation basins, green roofs, permeable paving, tanks, swales and soakaways and frequently involved combinations of one or more of these components.

## 2.3 Structured interviews

Structured interviews were conducted with twelve LPAs and LLFAs. The questions were agreed in advance with the cross-departmental team and shared for comment with the



review's steering group. While the outcomes of these discussions were subjective, eight themes emerged:

### **1. LPAs are in favour of revisions to the National Planning Policy Framework**

Several LPAs proposed that revisions to the text of those sections of the NPPF extant at that time and accompanying planning guidance to prioritise SuDS for all developments, unless there are clear reasons for not doing so. However, this was not unanimous; with a number expressing existing provisions are sufficient.

### **2. Collaboration with other authorities and the LLFA is not widespread**

60% of the interviewed LPAs collaborate with other LPAs in the production of SuDS and flooding-related planning guidance. 50% stated they also collaborate with the LLFA in the production of guidance. The reported benefits of collaboration included a uniform county wide approach towards SuDS and improvements in working arrangements with the LLFA, Environment Agency and the water and sewerage company.

Half of LPAs interviewed also explained that they work in partnership with their respective water and sewerage company around surface water management, with a number of projects and initiatives concerning drainage and flood risk being considered and/or underway.

### **3. Developers for major sites are seeking advice, but their understanding is not generally good**

All LLFAs confirmed that they are approached for pre-application advice on SuDS for major developments. The pre-application advice offered ranged from standing advice, through to bespoke advice. One third of LLFAs stated they are not asked for pre-application advice on non-major developments, unless these developments are close to major development thresholds, are in a critical drainage area, or impact on a water course.

Only one quarter of LLFAs expressed the view that development applicants had a good understanding of local SuDS policies. The main concern noted was of a lack of applications where SuDS had been incorporated into developments from the master planning stage and a subsequent lack of any detailed information or considerations of surface water drainage at an early stage of development. However, LLFA officials were confident that following their involvement, the majority of re-submitted information did include SuDS proposals along with a fuller drainage and maintenance strategy.

Generally, no formal mechanisms appeared to exist to monitor the extent to which the LPA followed LLFA advice. Instead, more informal channels existed such as through pre-existing close working arrangements and follow-up conversations between the respective teams.

#### **4. Resources may be stretched**

Just over 40% of LLFAs suggested that their time, expertise and resources were under pressure with regard to assessing planning applications. These pressures were exacerbated by seasonal variations in volumes of applications. Some of the LLFAs suggested they had experienced difficulty recruiting drainage engineers.

#### **5. Developers are not providing sufficient justification for applications where SuDS are not included**

While recognising that SuDS uptake is high and increasing, LPA officials were also of the opinion that, in the majority of cases, the specific reasons cited by developers (typically around land-take and economic reasons) against the inclusion of SuDS were not justified.

There were three broad themes of suggestions on achieving greater take-up of SuDS:

- Improved knowledge and understanding of SuDS – particularly for developers to appreciate the multiple benefits of SuDS, thereby increasing the amenity and environmental value of SuDS installed.
- More certainty around adoption and maintenance arrangements for SuDS were seen as desirable.
- Revised national and local policy wording, to be clear that SuDS are prioritised for all developments unless there are clear reasons for not doing so.

Almost all LPAs stated in discussions that they do not monitor the uptake of SuDS, citing resource implications as the primary reason.

#### **6. Not all LPAs have detailed policies on SuDS, but are able to identify the requirements**

Just under half of the LPAs interviewed had policies that detailed the types of SuDS components that would be considered acceptable. Among the remainder, about half of these had policies that, while not specifying particular SuDS componentry, were clear that any SuDS planned should strive for systems delivering multiple benefits.

The majority of LPAs were clear that individual componentry of SuDS is less important than the overall system applying an integrated water treatment/management chain with source control. In general, there was a consensus that source control, water quality and provision of additional benefits should be the fundamental objectives of a SuDS proposal. Attenuation of flow was often seen as an inherent feature, rather than the primary objective for SuDS.

Generally, 'traditional' drains and sewers, gullies and catchment pits were identified by LPA and LLFA officials as falling outside the scope of acceptable SuDS. In addition heavily

engineered components involving such elements as excessive amounts of concrete, pumping systems, underground storage tanks and connections to main drains, or elements that were difficult to access or maintain were also viewed unfavourably.

## **7. There are few post-construction checks**

In general, LPAs had no specific checking regimes in place to ensure that SuDS had been constructed as agreed. A reactive approach to issues was generally taken, with checking undertaken following complaints or issues raised by third parties. One LPA stated that they were very proactive in checking the larger strategic sites, but resource issues prevented wider checking.

None of the interviewees gave an example of SuDS schemes that had failed. Collectively two examples were given where SuDS did not function effectively. The reasons behind the SuDS schemes' unsatisfactory performance were that it had not been adequately commissioned following construction and that an individual component had failed. In these examples, the issues were quickly resolved by the developer prior to any further action by the LPA being necessary.

## **8. Maintenance requirements are understood by larger developers, with a reliance on management companies**

LPA and LLFA officials suggested that applicants' understanding of requirements for SuDS maintenance was inconsistent, with the larger housebuilders appearing to demonstrate a better understanding than smaller, more locally-based developers.

Both LPA and LLFA officials suggested that specific concerns around adoption and maintenance, specifically the costs, were given as reasons for applicants not including SuDS in their planning proposal. They reported that developers often default to management companies due to concerns that other potential maintenance providers, for example local resident's groups, lack the knowledge and skills to adequately manage a SuDS. One third of LPA officials were unsure of the extent to which SuDS were adopted as agreed.

Some LPAs and LLFAs interviewed suggested that more clarity is needed in planning policy around adoption and maintenance arrangements.

### 3 Conclusion

This review has shown that current arrangements for SuDS in planning has been successful in encouraging the take-up of sustainable drainage systems in a cross-section of new developments with almost 90% of all approved planning applications sampled featuring SuDS.

While national planning policy has a clear role to play in facilitating the delivery of SuDS, the findings suggest that other factors, such as arrangements around sharing good practice and innovation can also influence the uptake of SuDS in new developments. There is potential for industry bodies to address skills and knowledge gaps through streamlined and updated industry guidance.

The findings suggest that the ability or otherwise of a development to connect to the public sewer is not a key determinant on whether SuDS feature in development proposals. As yet, there is no evidence to suggest that adoption by maintenance companies is problematic, with only two authorities able to recall an instance of where SuDS schemes required remedial action.

Government recognises that more emphasis on SuDS adoption and maintenance arrangements by applicants is required. LPAs need to be satisfied that clear maintenance arrangements are in place for the lifetime of the development. The Department has reviewed relevant sections of the National Planning Policy Framework, and changes to the Framework have embedded the December 2014 Written Ministerial Statement. A public consultation on the draft revised National Planning Policy Framework was undertaken between 5 March 2018 and 10 May 2018, with the revised Framework published on 24 July 2018. The government will update the planning guidance to reflect changes made to the Framework in autumn 2018.

## 4 Acknowledgements

The Ministry of Housing, Communities and Local Government is grateful to DEFRA and the Environment Agency for assisting with the review; to all of the Local Planning Authorities and Lead Local Flood Authorities who took part in discussions with the review team; and to all of the sector representatives who participated in the stakeholder and steering groups.

The Government also acknowledges that during the process of undertaking this review, a number of reports relevant to this work were published that helped to shape and guide the review. Specifically the Chartered Institution of Water and Environmental Management's report *A Place for SuDS*<sup>6</sup> and the Town and Country Planning Association's report *Planning for the Climate Challenge*<sup>7</sup> provided useful context for our review.

The Government is supportive of Water UK's work to clarify adoption by water companies, and looks forward to seeing the outcomes of this work in due course.

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<sup>6</sup> <http://www.ciwem.org/wp-content/uploads/2017/02/A-Place-for-SuDS.pdf>  
<sup>7</sup> <https://www.tcpa.org.uk/planning-for-the-climate-challenge>

# ANNEX - Analytical Findings

## Findings from examination of local SuDS policies

1. By far the majority of adopted local plans (81%) had policies that clearly expressed the requirements of the NPPF, that SuDS be prioritised in those areas at risk of flooding. This figure increases to 91% when emerging local plans are considered (Figure 1).

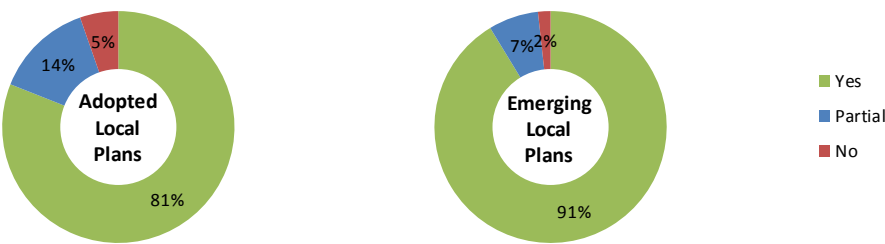


Figure 1. Local plan policies that expect SuDS be prioritised in those areas at risk of flooding.

2. 83% of local plan SuDS policies reflected the requirements of the WMS that SuDS be provided in all major new developments (unless inappropriate).

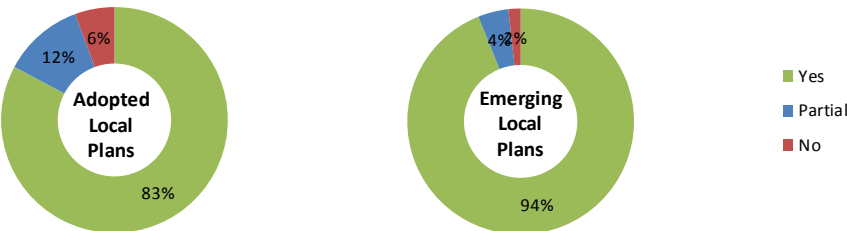
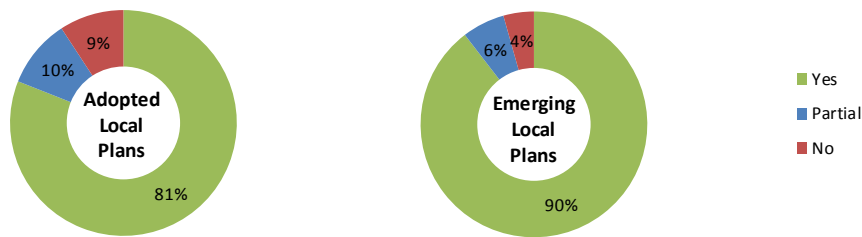


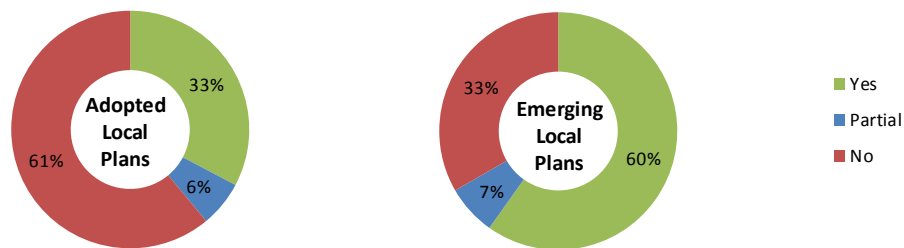
Figure 2. Reflection of local plan policies with WMS expectation that SuDS be provided in all major new developments (unless inappropriate) – local plan survey results.

3. Just over 80% of adopted local plan's SuDS policies go further than national requirements, increasing to 90% for emerging local plans (Figure 3).



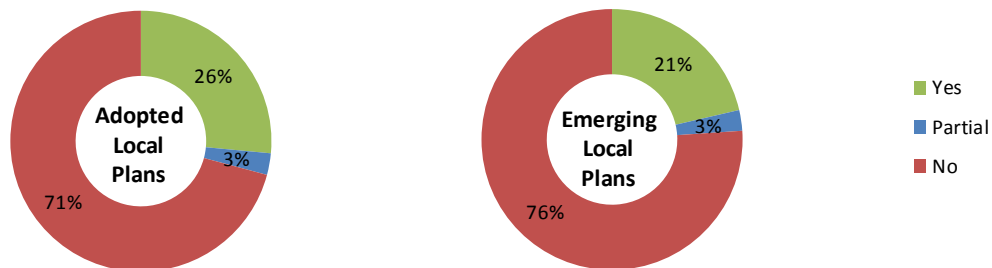
**Figure 3. Proportion of local planning authorities with local plan SuDS policies that go further than that required by national planning policy – local plan survey results.**

4. Analysis shows that 33% of adopted local plans were found to reflect the WMS requirement that clear maintenance arrangements should be in place for SuDS (Figure 4), rising to about 60% of emerging local plans.



**Figure 4. Proportion of local planning authorities with local plan SuDS policies that reflect WMS requirements for clear maintenance arrangements to be in place – local plan survey results.**

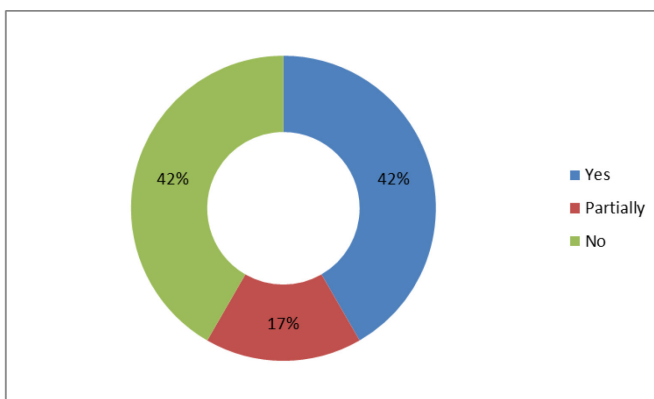
5. The final area explored with regard to local planning policy concerns monitoring and reporting arrangements of SuDS take-up. Figure 5 shows the proportion of local planning authorities with performance measures or reporting mechanisms for monitoring take-up of SuDS.



**Figure 5. Proportion of local planning authorities with performance measures or reporting mechanisms for monitoring take-up of SuDS – local plan survey results.**

### Findings from a deeper analysis of a sample of local planning policy

6. Analysis sought to understand the extent to which local planning policy reflected NPPG (or even Building Regulations or third-party) guidance on the hierarchy of drainage options. Figure 6 shows that almost half of the twelve LPAs surveyed had clear policies that reflected national planning practice guidance on the hierarchy of drainage.

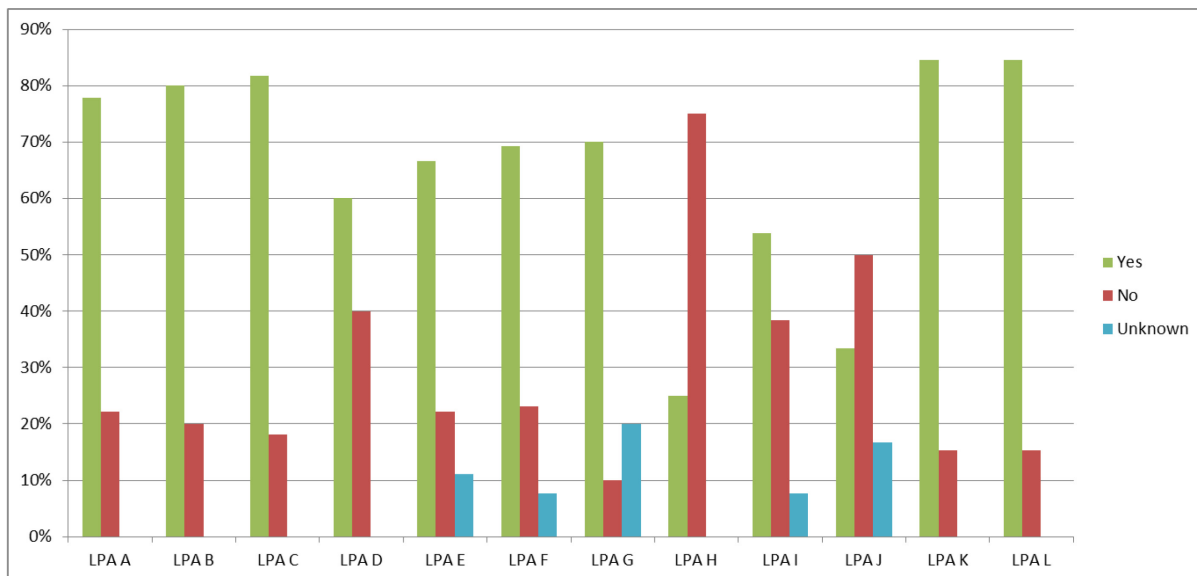


**Figure 6. Proportion of sampled local planning authorities with policies that reflected the hierarchy of drainage options.**



## Findings from analysis of approved planning applications

7. The extent to which SuDS featured in a range of sampled applications at the initial application stage are shown in figure 7.



**Figure 7. Proportion of planning applications, by LPA, where SuDS featured at the initial application stage.**

8. For the majority of authorities, over 50 – 85% of initial planning applications did include a SuDS proposal. In terms of the WMS's requirement that "...*planning applications relating to major development... ensure that sustainable drainage systems for the management of run-off are put in place, unless demonstrated to be inappropriate*" the findings reveal that:

- 75% of applications caught by this WMS requirement have proposed SuDS at the initial application stage.

Of the remaining 25%:

- 20% have not proposed SuDS at the initial application stage, and
- the situation is unclear for the other 5%.

9. Of these 20% of major applications that have not proposed SuDS, the LPA has subsequently placed a condition requiring SuDS on about 15%. This therefore implies that SuDS clearly do not feature in 5% of major developments caught by the WMS in our sample, and for the remaining 5%, the situation is unclear. The reasons why SuDS have not featured in 5% of these cases are twofold:

- Developments are adjacent to a water body

- New developments are on previously developed land that originally discharged to surface water / combined sewers, and the discharge rates post-development will equal or be less than the previous rates, hence pre-existing connections will be re-used.

10. In terms of the NPPF requirement that “...*only consider development appropriate in areas at risk of flooding where, informed by a site-specific FRA following the sequential, and if required the Exception Test, it can be demonstrated that: ... it gives priority to the use of SuDS*” our evidence shows that for those applications caught by this requirement (i.e. in Flood Zones 2 & 3; or in a high surface water flood risk area):

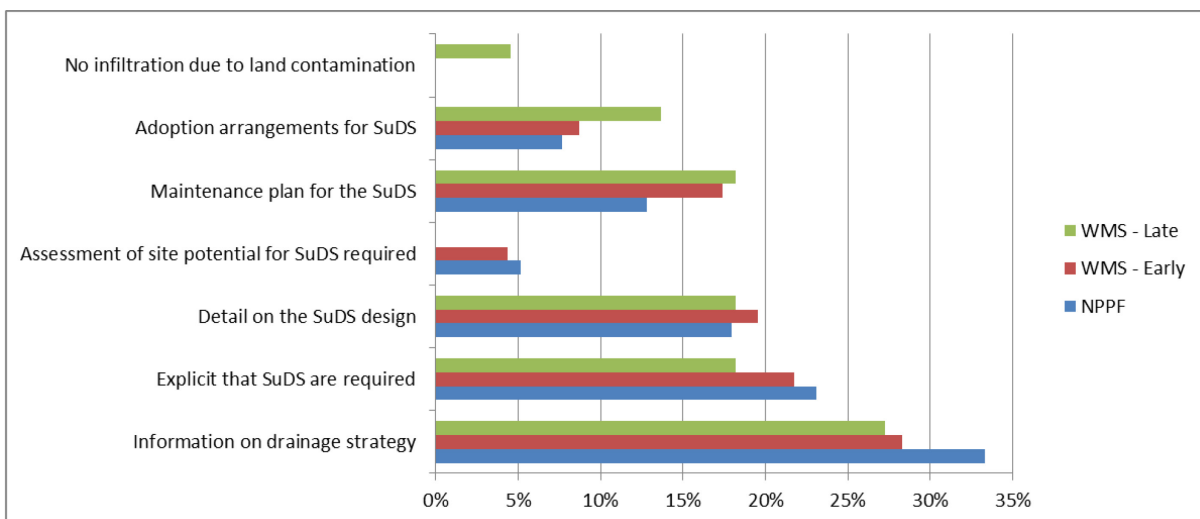
- 80% of applications caught by this NPPF requirement have proposed SuDS at the initial application stage

Of the remaining 20%:

- Half have a condition placed requiring SuDS
- Half do not have a condition placed that requires SuDS (but a general drainage condition does apply).

11. Therefore, about 90% of approved developments in higher flooding risk areas do feature SuDS. Of the 10% that do not, the reasons are the same as those cited above when considering the WMS requirements.

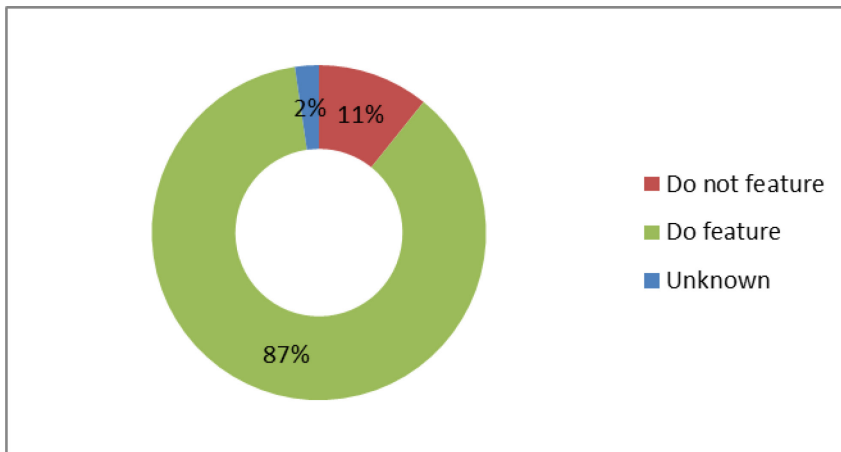
12. 95% of decision letters analysed contained a condition requiring that more information is to be supplied to the LPA on the proposed drainage strategy. Other conditions applied often sought more specific drainage-related information, as shown for example, for the major housing applications analysed in figure 8.



**Figure 8. Requirements of drainage-related conditions for approved major housing applications.**

13. The patterns depicted in Figure 7 are similarly replicated for minor housing and major commercial / mixed developments – a condition requiring more information on the drainage strategy features the most often in decision letters.

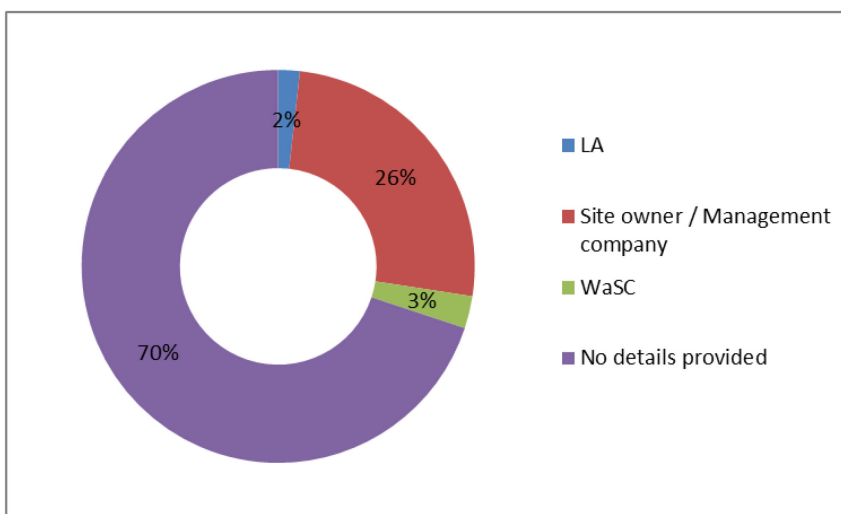
14. In terms of how many approved planning applications will feature SuDS (whether proposed by applicant or conditioned by the LPA), we observe that almost 90% of all approved planning applications will feature a SuDS in some form (Figure 9):



**Figure 9. Proportion of approved planning applications, of all development types that will feature SuDS**

15. No evidence was found for any enforcement action by local authorities amongst our sample of planning cases that concerned SuDS.

16. Finally, in considering who will own and / or be responsible for maintaining the SuDS once constructed, the evidence suggests that for 70% of SuDS, it is unclear from the planning application documentation which entity will be responsible for maintaining the SuDS (Figure 10).



**Figure 10. Who will maintain the SuDS.**