# Martha Grekos and Alexandra Woolmore<sup>1</sup>

[Keywords to follow]

## Introduction

It is not surprising to note that around 5 million people, in 2 million properties, live in flood risk areas in England and Wales. Flooding is a natural phenomenon. There is a periodic inundation of land by water and extreme precipitation or meteorological conditions which create erratic flows of water—all having an impact in the shape of the environment and the ecosystems. In addition, though, there is the concept of "flooding" which is an:

"anthropocentric idea that certain states of water inundation, whether naturally caused or influenced by human activity, are undesirable or unacceptable and should be avoided or counteracted wherever it is feasible to do so. Hence the idea of 'flooding', as an adversity to be striven against, is antithetical to the natural phenomenon of water inundation as an inevitable and neutral event. 'Flooding' only becomes an issue where land has been developed by human intervention and excess water is likely to be damaging to particular land-uses, built development or human life and property."<sup>2</sup>

Of course, it is important for social and economic reasons that development continues in flood risk areas, but that such flood risk is managed so that new development is safe and sustainable. This is why, in general, the new Planning Policy Statement (PPS) 25: "Development and Flood Risk" should be welcomed as it reinforces the importance of flooding and flood risk in terms of land use planning.

As the new PPS25 states:

"Flooding from rivers and coastal waters is a natural process that plays an important role in shaping the natural environment. However, flooding threatens life and causes substantial damage to property. The effects of weather events can be increased in severity both as a consequence of previous decisions about the location, design and nature of settlement and land use, and as a potential consequence of future climate change. Although flooding cannot be wholly prevented, its impacts can be avoided and reduced through good planning and management. Climate Change over the next few decades is likely to mean milder wetter winters and hotter drier summers in the UK, while sea levels will continue to rise. These factors will lead to increased and new risks of flooding within the lifetime of planned developments."

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<sup>&</sup>lt;sup>1</sup> Barrister and Associate respectively, Linklaters. Martha Grekos and Alex Woolmore work in the Environment and Planning Group at Linklaters. They both welcome comments on this article. They can be contacted by email: martha.grekos@linklaters.com and alexandra.woolmore@linklaters.com. The comments on this article are the authors' own.

<sup>&</sup>lt;sup>2</sup> William Howarth, Flood Defence Law (Shaw & Sons, 2002), p.6.

PPS25 was published in December 2006, replacing PPG25. Overall, it is an improvement on PPG25 in terms of its aims and role as a policy document for central, regional and local government. It also assists those with an interest in land use planning, including developers, statutory consultees and other interested third parties. It follows the clear pattern of other PPSs and properly links to the key objectives of the planning system set out in PPS1. It comes at a time when there is a need to enhance the sustainability of flood and coastal defence issues given land development and climate change. Scientists now say we are in a new stage of the Earth's history, the Anthropocene Epoch, when we ourselves have become the globe's principal force. However, several eminent scientists are concerned that we have become too successful-that the unprecedented human pressure on the Earth's ecosystems threatens our future as a species. Even the BBC News Online's "Planet Under Pressure" series took a detailed look at six areas where most experts agree that a crisis is brewing. One of them, of course, was climate change, the world's greatest environmental challenge, according to the United Kingdom's Prime Minister Tony Blair, with increased storms, floods, drought and species losses predicted.<sup>3</sup> Even the European Commission proposed on January 18, 2007 a directive on the assessment and management of floods. Its aim is to reduce and manage the risks that floods pose to human health, the environment, infrastructure and property.<sup>4</sup>

Given the publication of the new PPS25, we must all enquire what changes in practice are involved and what the cost implications of these are. It is ironic that we are faced with flooding issues when, on the other hand, during the summer months the South East of England was faced with a hose-pipe ban.<sup>5</sup> However, this reflects the uncertainties generated by climate change and that the planning system is required to grapple with these two extremes.

## Background—PPG25

A good summary of the historical development of flood defence law is set out by William Howarth.<sup>6</sup> With regard to PPG25, this was first issued in July 2001 and, broadly, the purpose of this guidance was to:

- reaffirm that the susceptibility of land to flooding is a material planning consideration;
- emphasise the lead role of the Environment Agency in providing advice on flood issues and in relation to planning applications;
- stress the need for development plan policies to give consideration to flood issues, recognising the uncertainties that may be involved;
- require planning authorities to apply the precautionary principle and a sequential approach towards flood risk;
- require planning authorities to recognise the importance of flood plains and avoid inappropriate development;

<sup>&</sup>lt;sup>3</sup> See: http://news.bbc.co.uk/1/hi/sci/tech/3686106.stm

<sup>&</sup>lt;sup>4</sup> Under the proposed Directive, Member States would first need to carry out a preliminary assessment to identify the river basins and associated coastal areas at risk of flooding. For such zones they would then need to draw up flood risk maps and then flood risk management plans focused on prevention, protection and preparedness.

<sup>&</sup>lt;sup>5</sup> Most of the South East's hosepipe and sprinkler ban was lifted recently owing to heavy winter rainfall and a significant drop in water demand. Despite this, the drought continues and water savings are still essential. Thames Water in consultation with the Environment Agency has lifted its nine-month hosepipe and sprinkler ban. The decision follows four months (September 2006 to December 2006) of above average rainfall in the region, topping up underground aquifers which keep our rivers flowing and reservoirs full. Three Valleys Water, Southern Water and Sutton and East Surrey Water have also lifted their bans, although the ban remains in place for Mid Kent Water and South East Water customers.

<sup>&</sup>lt;sup>6</sup> William Howarth, cited above fn.2, pp.27-34.

<sup>[2007]</sup> J.P.L., JUNE © SWEET & MAXWELL AND CONTRIBUTORS

- require developers to fund flood defences that are needed because of their developments; and
- emphasise that flood risk management needs to be applied on a whole-catchment basis.

As Howarth mentions, a major innovation provided by PPG25 was "the attempt to assess risk more systematically by applying an explicit approach to proposals for development in flood-risk areas."<sup>7</sup> The assessment of risk took account of the following factors<sup>8</sup>:

- the area liable to flooding;
- the probability of flooding occurring, both directly and over time;
- the extent and standard of existing flood defences and their effectiveness over time;
- the likely depth of flooding;
- the rates of flow likely to be involved;
- the likelihood of impacts of other areas, properties and habitats;
- the effects of climate change; and
- the nature and expected lifetime of the development proposed and the extent to which it is designed to deal with flood risk.

These risk factors, though, left quite a bit of discretion to local authorities. In addition, once this assessment was carried out:

"... a sequential test in allocating or allowing sites to be developed [was] applied. This sequential test [aimed] to ensure a prioritisation of development in those locations that [had] the least risk of river or coastal flooding. This is done by the application of increasing degrees of stringency towards development of sites that are placed in higher categories of flooding risk."<sup>9</sup>

The three categories of "flood zone" identified were: (i) zones with little or no risk flooding (annual probability less than 0.1 per cent); (ii) zones with low to medium risk of flooding (annual probability between 0.1 and 1.0 per cent for rivers and 0.1 and 0.5 per cent for coastal areas); (iii) (a) zones with high risk flooding (annual probability greater than 1.0 per cent for rivers and 0.5 per cent for coastal areas); (iii) (b) zones with high risk of flooding (annual probability greater than 1.0 per cent for rivers and 0.5 per cent for coastal areas); (iii) (c) zones with high risk of flooding (annual probability greater than 1.0 per cent for rivers and 0.5 per cent for coastal areas) with high risk of flooding (annual probability greater than 1.0 per cent for rivers and 0.5 per cent for coastal areas) with high risk of flooding (annual probability greater than 1.0 per cent for rivers and 0.5 per cent for rivers and 0.5 per cent for coastal areas) which are in functional flood plains.

Following publication of PPG25, "Learning to Live with Rivers"<sup>10</sup> was published and Defra prepared its strategy consultation document "Making Space for Water", which concentrated on the need for management of flood risk. However, rigid application of all of these policies resulted in planning refusal, and there was a need for local authorities to work with the Environment Agency to seek solutions which were compatible with these policies. It was said that PPG25 had areas of difficulty in terms of interpretation and that it has been "... predicated on the assumption that there is always residual risk, such that permissible land uses are taken as being based on flood risk at the time of application rather than the risk at the time of occupation", neglecting a consideration of the risks

<sup>&</sup>lt;sup>7</sup> ibid., p.376.

<sup>&</sup>lt;sup>8</sup> *ibid.*, as set out at p.376.

<sup>&</sup>lt;sup>9</sup> ibid., p.377.

<sup>&</sup>lt;sup>10</sup> By Professor George Fleming and the Institute of Civil Engineers.

during the lifetime of a development.<sup>11</sup> An example of difficulty in terms of interpretation can be seen in the case of R. (on the application of the Environment Agency) v Tonbridge and Malling BC,<sup>12</sup> where the central issue between the parties was the meaning of the guidance contained in PPG25.<sup>13</sup> The Environment Agency maintained that the only meaning which PPG25 is legally capable of bearing is that the sequential test must be applied expressly and correctly on the determination of an individual planning application whether or not members of the local planning authority are otherwise familiar with PPG25 or local flood issues. The Council maintained that it could comply with PPG25 without expressly considering, in the case of each planning application, whether a reasonable alternative site may be available which is within a zone of lower risk. Its decision on the planning application took account of the guidance in PPG25 because it was reflected in its Urban Capacity Study, which at the relevant date was in the form of a revised draft and that such decisions were in accordance with the Urban Capacity Study. Mr Justice Lloyd-Jones allowed the application. He agreed with the Environment Agency. The Council was required to apply PPG25 directly to the applications for planning permissions. The report to the Planning Committee did not contain any reference to the sequential test and so members would not have received any information about the test or how it was applied. There was a duty on the Council to have regard to the test and by not applying the test, there was a fundamental flaw in the process by which the Planning Committee arrived at its decision. The Council had a wrong opinion that the test only applied to green-field sites, so it was thought not be applicable in this case. As the Planning Committee did not have regard to the sequential test (nor did it apply it as part of its reasoning), the decision was quashed.

Given these inconsistencies, in December 2005 a draft of PPS25 was issued for consultation. It was published in December 2006, replacing PPG25.

#### **Analysis of PPS25**

The primary objective of PPS25 is to ensure that flood risk is considered at all stages of the planning process and that inappropriate development is avoided in areas which are at risk of flooding. It is widely viewed as an improvement on the previous PPG25 by clarifying some of the areas which were open to misinterpretation and introducing a more workable system to control development in floodplains.

PPS25 requires both Regional Planning Bodies (RPBs) and Local Planning Authorities (LPAs) to prepare and implement planning strategies which help to deliver sustainable development through the following:

- (i) Appraising risk by identifying land at risk of flooding and the degree of such risk and preparing Regional Flood Risk Appraisals (RFRAs) or Strategic Flood Risk Assessments (SFRAs) which act as freestanding assessment that contribute to the sustainability appraisal of their development plans.
- (ii) *Managing risk* by framing policies for the location of development which avoids flood risk and managing any residual risk, taking into account the potential impact of climate change,

<sup>12</sup> [2005] EWHC 3261, QBD, Admin; [2006] J.P.L. 1353.

<sup>&</sup>lt;sup>11</sup> Ben Mitchell, "Taming the beast: current policy on fluvial floodplain development" [2006] J.P.L. 1247 at p.1250.

<sup>&</sup>lt;sup>13</sup> The council had granted planning permission for the erection of 63 sheltered apartments at Medway Wharf Road, Kent, and the site was within the indicative 100-year flood plain. It had been severely affected by flooding on many occasions. The Environment Agency appealed by way of judicial review to change the Council's decision to grant planning permission. The application was allowed.

and only permitting development in areas of flood risk where there are no reasonably available sites in areas of lower risk.

(iii) Reducing risk by safeguarding land from development that is required for current and future flood management, reducing flood risk to new developments through location, layout and design and incorporating sustainable drainage systems and using opportunities offered by new development to reduce the causes and impacts of flooding.

In preparing their strategies, RPBs and LPAs should adhere to certain principles. RPBs will be expected to ensure that Regional Spatial Strategies (RSSs) include a broad consideration of flood risk from all sources and set out a strategy for managing it in line with RFRAs, SFRAs, Shoreline Management Plans, Catchment Flood Management Plans, River Basin Management Plans and of course, PPS25 itself. LPAs should ensure that Local Development Documents (LDDs) include policies relating to the allocation of sites and the control of development which avoids flood risk to people and property and manage it elsewhere in accordance with PPS25 and the RSS for their region. Further, in the event that some development becomes unsustainable in the long term due to the possible impact of climate change, the LPA should consider whether opportunities exist in the preparation of LDDs to enable the relocation of development to sustainable sites at less risk from flooding. Integration appears to be a watchword in PPS25 with the requirement that RPBs and LPAs should consider flood risk alongside other spatial planning issues (for example, housing, transport, economic growth) and integrate their policies effectively with other strategies of material significance. Further, the sustainability appraisal of RSSs and LDDs should incorporate or reflect the RFRA and SFRA.

Flood risk should also be considered as a key determinant when LPAs assess planning applications for flood risk areas. LPAs should have regard to the policies of PPS25 and, if relevant, the RSS for their region. Not only should such policies form material considerations for the purposes of determining an application, they may also supersede any policies in their existing development plan to the extent that it has not yet been revised to reflect PPS25. Where appropriate, planning applications should be supported by site-specific flood risk assessments and the development itself should be designed in a way which is flood resilient and resistant, with any residual risk being safely managed.

The inter-relationship between each stage of the planning process and the assessment of flood risk set out in PPS25's policies can only be a good thing. However, this should not be at the expense of specific decision making being restricted. There will always remain a need for specific and local conditions to be considered by a LPA when determining a planning application within a flood risk zone.

## Flood risk assessments

Flood risk assessments should be undertaken at all stages of the planning process, forming a chain of linked assessments which inform and relate to one another. For example, a RFRA should inform the RSS and take account of SFRAs where available. SFRAs should be carried out by LPAs to support the preparation of its LDDs and provide information needed to apply the sequential approach favoured by PPS25 (see commentary below). Consequently, LDD policies should set out requirements for the above-mentioned site-specific flood risk assessments to be carried out by developers and submitted with planning applications relating to flood risk areas. Appendix E of PPS25 sets out the minimum requirements for all levels of flood risk assessment, with additional guidance being provided in the Practice Guide accompanying the PPS.

#### Flood zones

The concept of flood zones, introduced by PPG25, is retained by PPS25.<sup>14</sup> Such zones are the basis of the sequential approach and refer to the probability of sea and river flooding only, ignoring whether or not existing defences are already in place. Zones 2 and 3 are those shown on the Environment Agency Flood Map and represent medium and high flood risk respectively. Zone 1 is all land falling outside zones 2 and 3 and is defined as having a low probability of flooding in any one year. A key change of PPS25 in this area is the removal of one zone 3 sub-category so that the remaining two sub-categories are now based solely on flooding functionality rather than combining this with existing land use. Sub-category 3a relates to land assessed as having a 1 in 100 or greater annual probability of river flooding or 1 in 200 annual probability of sea flooding, whereas zone 3b refers to land where water has to flow or be stored at times of flooding. It is perhaps not surprising that, subject to passing the "exception test" (see commentary below), any development within such functional floodplains is strictly controlled and restricted only to uses falling under certain vulnerability classifications,<sup>15</sup> namely, "essential infrastructure" and "water compatible uses".

It was often the case with PPG25 that the table setting out the planning response to each flood zone was perhaps overly analysed by practitioners seeking to find some interpretation which supported their proposals. It remains to be seen whether the amended flood zones set out in Table D.1 of PPS25 will be poured over in much the same way.

#### The sequential approach

A sequential risk-based approach, which was a key feature of PPG25, has been retained in PSS25. Such an approach should be applied at all levels of the planning process, for example when establishing locational criteria for regionally significant land uses or at a local level as part of the identification of land for development in flood risk areas.

As in PPG25, LPAs should continue to apply the "sequential test" when designating land for development in their LDD, the overall aim being to steer new development into flood zone 1 sites and match the flood vulnerability of the intended use to the flood risk of the site. It is envisaged that SFRAs will provide the basis for applying the sequential test using the flood zones,<sup>16</sup> although in the absence of an SFRA, the test will be based on the Environment Agency flood zones. An LPA must demonstrate that all lower flood risk sites have been considered prior to allocating land in higher risk areas. To the extent that there are no reasonably available sites in this zone, the LPA may systematically consider locating development in zones 2 and 3, taking account of the relevant flood vulnerability classification of the proposed development.

#### The exception test

If, having applied the sequential test, it is not possible, consistent with wider sustainability objectives, for the development to be located in low flood risk zones, the "exception test" can be applied. This is a new test introduced by PPS25 to provide a method of managing flood risk while also allowing necessary development to go ahead.

<sup>&</sup>lt;sup>14</sup> Refer to Table D.1, Annex D of PPS25.

<sup>&</sup>lt;sup>15</sup> Vulnerability classifications are set out in detail at Table D.2, Annex D of PPS25.

<sup>&</sup>lt;sup>16</sup> For further detail regarding each Flood Zone, refer to Table D.1, Annex D of PPS25.

For the exception test to be passed, it must be demonstrated that:

- (i) the development provides a wider sustainability benefit to the community which outweighs the risk of flooding;
- (ii) the development is on a brown-field site or that no alternative brown-field sites are reasonably available; and
- (iii) a flood risk assessment should be provided demonstrating that the development will be safe and will not transfer the flood risk elsewhere.

Ideally, the assessment should show that the development will in fact reduce flood risk overall.

The test may only be applied in the circumstances set where "more vulnerable" development and "essential infrastructure" cannot be located in zones 1 or 2 and "highly vulnerable" development cannot be located in zone 1.<sup>17</sup> It may not be used to justify "highly vulnerable" development in zone 3a or "less vulnerable", "more vulnerable" and "highly vulnerable" development in zone 3b. Further, to avoid the need to apply it to each individual planning application within an area, it is intended that the exception test is applied at an early stage in LDD policy formation, ideally when drafting criteria-based policies against which planning applications will be considered.

## Responsibilities

Whilst the government is under no statutory duty to protect land or property against flooding, it recognises that action is required in order to safeguard wider social and economic well-being of the country. Certain operating authorities such as the Environment Agency, local authorities and internal drainage boards have permissive powers, but not a statutory duty to carry out or maintain flood defence works in the public interest. The onus for protecting property against natural hazards and maintaining the drainage of their land is in fact on the landowner/developer themselves. Further, it is the developer's responsibility to ensure that the proposed development accords with the policies contained in PPS25 and the relevant LDD (for example, undertaking a flood risk assessment, ensuring mitigation measures are in place to deal with any flood risk and manage any residual risk<sup>18</sup>), and is designed in a way which reduces flood risk to the development and elsewhere.

A new feature of PPS25 is that the Environment Agency is now a statutory consultee when preparing flood risk policies in their LDDs and all applications for development in flood risk areas (with the exception of minor development).<sup>19</sup> Where the Environment Agency objects to an application but the LPA believes that it should be approved, the LPA should seek to enter into discussions with the Environment Agency in order to provide an opportunity for further representations or comments to be made. Further, if the Environment Agency objects to an application for a "major development" on flood risk grounds, all parties (including the applicant) should liaise with each other with a view to agreeing a course of action allowing the agency to withdraw its objection. If, following such discussions, the Environment Agency is not in a position to withdraw its objection and the LPA has not moved on its intention to grant permission for the major development, a new direction issued in conjunction with the PPS<sup>20</sup> requires the LPA to notify the Secretary of State of the proposal.

<sup>&</sup>lt;sup>17</sup> Refer to Table D.1, Annex D of PPS25.

<sup>&</sup>lt;sup>18</sup> Methods of managing residual flood risk are set out in Annex G of PPS25.

<sup>&</sup>lt;sup>19</sup> The consultation requirement was introduced by Statutory Instrument 2006/2375.

<sup>&</sup>lt;sup>20</sup> Town and Country Planning (Flooding) (England) Direction 2007. This came into force on January 1, 2007. For a discussion of the changes, see Current Topic "A Wider Role for the Environment Agency as a consultee in planning applications" [2007] J.P.L. 1.

This gives the Secretary of State the opportunity to review the application's general compliance with PPS25's policies and consider whether it should be called in for determination.

In addition to notifying the Environment Agency of all applications in flood risk areas, the LPA should also provide notification of the outcome of such applications. Other organisations which have been consulted, such as internal drainage boards, should be notified where conditions attached to planning permission may affect their area of concern, for example local drainage.

## Practice Guide

One criticism of PPG25 was that certain policies were open to misinterpretation. To assist with its implementation, a Practice Guide has been published to support PPS25 featuring case studies to illustrate how implementing flood risk management strategies can achieve multiple, social, economic and environmental benefits. It is hoped that the guidance will be used by all parties, not just local and regional planners, to add clarity on how the policies should be applied. However, at this stage, it is too early to judge whether it will be effective in meeting its objective.

## Conclusion

Flooding is best characterised as a risk which can be reduced by flood defence measures and management strategies, but never totally eliminated. The degree of precaution that is allowed must be balanced against cost measured in economic, environmental and social terms. PPS25 can be seen as demonstrating a precautionary approach: there are precautionary decision-making procedures which are balanced against the notion of sustainable development. As Ben Mitchell stated:

"There is a risk that the impact of man-made climate change may result in an increase in flood levels. Developer-funded improvements may be the only way to mitigate such an effect. There is a strong public perception that flood-plain development is bad, and so politicians will naturally play to this audience. This is where the professionals come into their own, as there is a duty on the practitioners and the engineering community in general to emphasise that much-needed development can be appropriate in some flood-plain situations. We should seek to address the legacies of past inappropriate development and the potential threat of climate change by putting forward robust and sustainable solutions. This means providing real benefit to local communities. Economies of scale dictate that such options may not always be practical or within the gift of small-scale developments, but would be more feasible for larger-scale developments."<sup>21</sup>

<sup>21</sup> Cited above fn.11, p.1249.