

Local Development Framework Briefing Paper Water Resources and Flooding

Devon County Council's advice to Local Planning Authorities.

This is one of a series of briefing papers prepared by Devon County Council to assist the preparation of Local Development Documents.

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Local Planning Authorities are requested to take the following matters into account in preparing their Local Development Frameworks and other documents:

- a) **Location of development** - In deciding the location of development (on greenfield and brownfield sites) development should not be provided for where there would be a direct risk from flooding (including tidal inundation)
- b) **Land use changes / land management** - Opportunities through land use changes and management should be identified to protect areas important from the risk of flooding.
- c) **Drainage Assessment / Sustainable Drainage Systems** - All proposals for development should be subject to an appropriate drainage flood risk / technical assessment and wherever possible appropriate sustainable drainage systems.
- d) **Opportunities for 'managed realignment'** - should be explored by LPAs in consultation with Environment Agency and identified in order to provide certainty about the future, reduce the risk of flooding and create new wildlife habitats.
- e) **The cumulative impact of major development** - on the water management regime and the wider implications of flooding and water resources be must addressed by LPAs in meeting overall strategic housing and employment targets.
- f) **Provision of 'green infrastructure'** - LPAs should require the provision of 'green infrastructure' that provides for multi-functional uses in new and existing developments
- g) **Protection of Water Resource** - Development should not be provided for where such development would lead to a deterioration of in the quality, quantity, or natural flow of underground, surface and coastal waters
- h) **Ensure a sustainable water supply** - In areas identified as having significant growth levels ensure that there is a sustainable supply of water and appropriate capacity of capacity of existing water supply and sewerage systems
- i) **Ensure new development does not have an unacceptable impact on nature conservation, fisheries or any facet of the natural environment**
- j) **Safeguard the risks to the water environment** - Development should not be provided where adequate water resources do not already exist, or where their provision is likely to cause risk to existing abstractions, water quality, fisheries, nature conservation, amenity, or inland navigation interests or any facet of the water environment
- k) **Recognising the role of wetlands, forestry and ponds** in regulating the water cycle and flood management,
- l) **Explore any efforts to enhance biodiversity through water management in accordance with PPS9**
- m) **Promote sustainable water management practices** - All residents and businesses must be encouraged to reduce their water consumption and adopt sustainable water management practices.

1. Introduction

The water resources and flood risks are key issues for Devon's planning authorities to address in terms of the location of existing and future development in Devon, in terms of the use of managing water resources and flood risk and having regard to the likely consequences of climate change.

There growing scientific consensus that the consequences global warming and climate change in Devon could result in sea levels will rise by up to 7cm and increased winter rainfall by 2021. This together with anticipated increases in population will require careful consideration to be given to the location of existing and future development, in terms of a) securing sustainable water resources and b) avoiding the consequences of flood risk.

Current government and agency guidance about Flood Risk is set out in draft Planning Policy Guidance PPS25 – Development Control and Flood Risk (published by ODPM Dec 2005), and Making Space for Water Consultation Document (published by Defra September 2006). Other Studies and advice about water resources and flooding have been published by the Environment Agency. The water network, supply of water, quality of water and environmental issues are the responsibility of the Environment Agency and South West Water.

Regional Planning Bodies and Local Planning Authorities are required to take flood risk into account in determining the strategic planning considerations in the Regional Spatial Strategy (RSS) and Local Development Documents (LDD). Their Sustainability Appraisals, land allocations and development control policies should be informed by a Regional Flood Risk Assessments (RFRA) which will also provide the information needed to apply the sequential approach to flood risk. Policies in LDD should set out requirements for site-specific Flood Risk Assessments to be submitted with planning applications in areas of flood risk identified in the Plan.

The **Devon Structure Plan 2001 to 2016 and draft RSS 2006 to 2026** are looking to deliver substantial levels of housing in Devon. The proposals for large-scale house building offer a challenge to water management but also a unique opportunity to ensure improved water conservation measures are in-built to development from the outset. The Code for Sustainable Homes, that the government put out to consultation in December 2005, includes water efficiency and surface water management as two of the six 'essential elements' that will need to be met by developers to achieve the 'base level'.

Devon County Council has a broad interest in ensuring that water resources and flood risk are managed in a sustainable way in terms of its services to the public, the management of the highway network, climate change, biodiversity, ecological, partnership arrangement in securing major development and other issues.

This briefing paper provides guidance to district councils about matters to be addressed in Local Development Documents being prepared by District Councils from a County Council perspective regarding:

- a) Locating new development to avoid flooding and flood risk.
- b) Sustainable water management and flood risk
- c) water resources sustainability / protection
- d) encouraging water efficiency
- e) the need to safeguard the risks to water environment
- f) promoting the use of sustainable drainage systems

2. Devon's Vision for the future

In order to contribute to the county council's sustainable development objectives and meet current and future water resource needs of residents and businesses in Devon.

Devon's vision regarding water resource and flooding issues are:

- a) *To conserve water resources and their quality*
- b) *To minimise the risk of flooding to people and places*

3. Issues to be address

There are several water resource and flooding issues that Local Planning Authorities, agencies, developers and individuals should address:

a) Water Resources

- Managing the impacts of climate change on overall rainfall, sustainable drainage and water management
- Ensuring an appropriate evidence base to back up LPA requirements
- Balancing the desire for new developments to avoid high-risk flooding areas with the need to increase levels of residential and employment development
- Enhancing public awareness and understanding of managing water resources and reducing flood risk
- Providing a sustainable water supply to all households and businesses

b) Flooding

- Managing the effects of climate change / storm events and the associated increase in sea/river levels
- Feasibility of a Flooding Direction and the impacts of PPS25
- Danger that increased flooding could increase the incidence of water-borne diseases
- Ensure the requisite consultation with the Environment Agency regarding flooding issues
- Surface and groundwater pollution risks
- Ensure land uses don't exacerbate flood risks elsewhere
- Design new buildings to cope with more violent and concentrated rainfall

c) Management of Change

Key questions for Local Planning Authorities to ask:

- How can the need for environmental protection and enhancement be balanced against the objective of providing a decent home for everyone and achieving economic prosperity?
- Has the approach adopted been a holistic one that will achieve short-term and long-term benefits?
- Has the approach been achieved in consultation with statutory consultees, especially the Environment Agency?

4. DCC Proposals / Options to be taken into account in preparing Local Development Documents

The key elements of the county council's vision to be addressed in the preparation of Local Development Documents through policies/measures are as follows:

i) Location of development to avoid flooding and flood risk

- Locating development to avoid flooding and flood risk** - Development should not be provided for where would be a direct risk from flooding (including tidal inundation), or where it is likely to increase the risk of flooding elsewhere to an unacceptable level having regard to the sequential assessment of flooding risk. Growth should be directed to areas where it can be accommodated with little or no risk of flooding and not add to the risk of flooding elsewhere. The use of the precautionary principle. A risk based approach to the characterised of flood risk in determining development proposals
- Utilise opportunities offered by new development should be used to reduce flood risk and improve water management** in existing communities where appropriate.

- c) **Protect existing area of development from the risk of future flooding and** improve the management of drainage from developed areas where appropriate, having regard to opportunities for managed retreat.

ii) Sustainable water and flood risk management

- a) **Sustainable water and flood risk management** - In deciding the location of new development (on greenfield and brownfield sites) sustainable water and flood risk management should be a central factor, which should be compatible with sustainable water management. The potential effects of climate change and coastal defence options should be taken into account.
- b) **Drainage Assessment / Sustainable Drainage Systems** - All proposals for development (associated with new and existing development) should be subject to an appropriate drainage flood risk / technical assessment and wherever possible appropriate sustainable drainage systems, be able to accommodate high rainfall rates and changing climatic conditions and incorporate measures at the design and construction stages of development mitigate the effects of flooding. The use of sustainable drainage systems to control water runoff by water recycling, such as filter strips and swales
- c) **Opportunities for 'managed realignment'** - should be explored by LPAs in consultation with Environment Agency and identified in order to provide certainty about the future, reduce the risk of flooding and create new wildlife habitats.
- d) **The cumulative impact of major development** - on the water management regime and the wider implications of flooding and water resources be must addressed by LPAs in meeting overall strategic housing and employment targets.
- e) **Provision of 'green infrastructure'** - LPAs should require the provision of 'green infrastructure'¹ that provides for multi-functional uses in new and existing developments

iii) Water Resources sustainability / protection

- a) **Protection of Water Resource** - Development should not be provided for where such development would lead to a deterioration of in the quality, quantity, or natural flow of underground, surface and coastal waters
- b) **Ensure a sustainable water supply** - In areas identified as having significant growth levels ensure that there is a sustainable supply of water and appropriate capacity of capacity of existing water supply and sewerage systems
- c) **Ensure new development does not have an unacceptable impact on nature conservation, fisheries or any facet of the natural environment**

iv) Safeguard the risks to the water environment

- a) **Safeguard the risks to the water environment** - Development should not be provided where adequate water resources do not already exist, or where their provision is likely to cause risk to existing abstractions, water quality, fisheries, nature conservation, amenity, or inland navigation interests or any facet of the water environment
- b) **Recognising the role of wetlands, woodland and ponds** in regulating the water cycle and flood management,
- c) **Explore any efforts to enhance biodiversity through water management** in accordance with PPS9

v) Encouraging water efficiency

- a) **Promote sustainable water management practices** - All residents and businesses must be encouraged to reduce their water consumption and adopt sustainable water management practices

¹ Green infrastructure is the 'sub-regional network of protected sites, nature reserves, green spaces and greenway linkages'.

Appropriate Statistics/Trends

Flooding and Water Resources:

- » Around 5 million people, in 2 million properties, live in flood risk areas in England and Wales.
- » In 2001, households in the South West consumed 60% of water supplied, with 20% of water lost through leakage.
- » The South West contains 60% of England's protected coastline and 45% of England's bathing waters

Climate Change

Climate change over the next few decades is likely to mean milder, wetter winters and hotter, drier summers. This will result in:

- ❖ More extreme weather events (e.g. flash floods)
- ❖ Less rain overall and thus water shortage problems.
- ❖ More frequent and more severe coastal and river flooding
- ❖ Winter and spring precipitation becoming more variable
- ❖ Significant decrease in snowfall totals

Economic Impacts

The 2003 Envision project found that energy reduction measures could save companies £1.26 million per annum, with water reduction having the potential to save companies more than £600,000 a year (Source: Focus on Devon, 2003)

Related Documents:

ODPM Consultation Document: Planning Policy Statement [PPS] 25: Development and Flood Risk, December 2005 – Available at <http://www.odpm.gov.uk/index.asp?id=1162059>

ODPM Consultation Document: Code for Sustainable Homes, December 2005 – Available at http://www.odpm.gov.uk/pub/97/ConsultationPaperonNewPlanningPolicyStatement3PPS3HousingPDF523Kb_id1162097.pdf