



# 13 Appendices



## Appendix A: Policy Review and Recommendations

# Policy Context

## Background

- 1.1 This section provides an overview of the national, regional and local policies relevant to flood risk within the South Gloucestershire administrative area. The sustainable flood risk management recommendations within this document need to be considered by South Gloucestershire Council with respect to future planning decisions.

## Regional Policies

### Making Space for Water

- 1.2 The Government released Making Space for Water in March 2005 (Defra, 2005) after a consultation period. Its intention is to inform the development of a new strategy on the management of issues surrounding flood risk and coastal erosion for the next 20 years. The report recognises the requirement for a holistic approach between the various responsible bodies, including flood defence operating authorities, sewerage undertakers and highways authorities, to achieve sustainable development. Making Space for Water does not state specific policies but provides the Governments objectives on:

- Land use planning – it strongly encourages Flood Risk Assessments to be prepared at all levels of the planning process;
- Rural issues – it promotes the environmental pillar of sustainable development through the use of wetlands and washlands, and managed realignment of coasts and rivers;
- Integrated urban drainage management – it is committed to ensuring that Sustainable Drainage Systems (SuDS) techniques are incorporated in new developments;
- Coastal issues – it seeks to develop a more strategic and integrated approach to managing coastal flooding and erosion risks; and
- Living with flood risk – it identifies that there is a need to raise awareness and preparation in local communities for the changing flood and erosion risks resulting from climate change. The protection of the functional floodplain forms an integral aspiration of the strategy.

### Planning Policy Statement 25: Development & Flood Risk (DCLG, 2006)

- 1.3 This planning policy document establishes the national policy for development and flood risk. The overarching aim of Planning Policy Statement 25 (PPS25) is to support the Government's objectives for sustainable development.

*'The aims of planning policy on development and flood risk are to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at high risk'.*

- 1.4 The core principles of PPS25 and the accompanying Practice Guide include:

- Allocate all sites in accordance with the Sequential Test, reduce the flood risk and ensure that the vulnerability classification of the proposed development is appropriate to the flood zone classification;
- Flood Risk Assessments (FRAs) should be undertaken for all developments within Flood Zones 2 and 3;
- FRAs are required for all developments of 1 hectare or greater in Flood Zone 1.
- Flood risk should be assessed for all forms of flooding;
- The development should result in no increase in flood risk to the site or to third parties;
- Where floodplain storage is removed, the development should provide compensatory storage on a level for level and volume for volume basis to ensure that there is no net loss in flood storage capacity.

## Regional Policies

### Draft Regional Spatial Strategy (South West Regional Assembly)

- 1.5 The South West Regional Assembly published the draft South West Regional Spatial Strategy (RSS) in June 2006. A draft revised RSS was published in July 2008. The RSS will supersede County Structure Plans as the statutory development planning document, and covers a period up to 2026. One of the important roles of the Draft RSS is to translate strategies into proposals for the provision of new houses.
- 1.6 The Draft RSS sets out the growth and dwelling requirements for the South West including the 'West of England' Housing Market Area (HMA) that covers South Gloucestershire. Policy HMA1 identifies the provision for sustainable housing growth of 32800 over the plan period.
- 1.7 Flood risk forms one of the key drivers for enhancing the 'quality of life' contained within the Draft RSS. Policy F1 complements the sequential approach outlined in PPS25 by directing growth to areas where it can be accommodated with little or no risk of flooding, whilst existing development needs to adapt and defend against the increasing risk from flooding taking account of climate change. Policy F1 seeks to:
- *Defend existing properties and, where possible, locate new development in places with little or no risk of flooding;*
  - *Protect floodplains and land liable to tidal or coastal flooding from development;*
  - *Follow a sequential approach to development in flood risk areas;*
  - *Use development to reduce the risk of flooding through location, layout and design;*
  - *Relocate existing development from areas of the coast at risk, which cannot be realistically defended;*
  - *Identify areas of opportunity for managed realignment to reduce the risk of flooding and create new wildlife areas.*

## Local Policies

### South Gloucestershire Local Plan (Adopted January 2006)

1.8 The South Gloucestershire Local Plan guides development within the administrative area up to 2011. Once adopted the South Gloucestershire Core Strategy will replace some of the policies in the South Gloucestershire Local Plan. Other policies in the Local Plan will be replaced by the other development plan documents in the South Gloucestershire Local Development Framework (LDF). At present, the policies contained within the Local Plan relevant to flood risk are:

- *Policy L3: Development within the undeveloped coastal zone will only be permitted where the proposal requires a coastal location and cannot be accommodated elsewhere,*
- *Policy L17: Development which would have an unacceptable effect on the water environment, including surface water and groundwater quality and quantity, river corridors and associated wetlands, will not be permitted.*
- *Policy L18: Development proposals will be required to incorporate Sustainable Drainage Systems (SuDs) for the disposal of surface waters. Where this is not practicable it must be demonstrated that an acceptable alternative means of surface water disposal is incorporated.*
- *Policy EP2: Development, including the extension and intensification of existing uses or land raising, which generates surface water run-off or water discharge will not be permitted where development could:*

- a. *Itself be at risk from flooding; or*
- b. *Require protection from flooding; or*
- c. *Reduce the capacity of the flood plain*
- d. *Increase the risk of flooding elsewhere; or*
- e. *Impede the flow of flood waters; or*
- f. *Affect the integrity of tidal or fluvial defences; or*
- g. *Alter the water table; or*
- h. *Increase river channel instability; or*
- i. *Cause unacceptable silt deposition; or*
- j. *Prevent maintenance of the watercourse; or*
- k. *Preclude the solution to existing loading problems;*

*Unless adequate environmentally acceptable measures are incorporated which provide suitable protection, attenuation or mitigation.*

- *Policy EP3: New coastal defence works, or improvements to existing coastal defences, will be permitted where the proposals would not have an unacceptable effect on:*
  - l. *The Severn Estuary Special Protection Area; or*
  - m. *Sites, structures or landscapes of archaeological importance; and would not involve:*

- n. *Land raising activities or other disturbance on existing coastal marshlands; or*
- o. *Structures or engineering works so close to the coast as to render soft engineering options unviable.*

*Where new coastal defences are permitted, these should be designed to minimise impact on the landscape.*

*Where new flood defences or improvements to existing flood defences are permitted, these will need to meet the minimum standards of 1 in 200 year event with provision for sea level rise over the lifetime of the development.*

1.9 In addition, Policy E2 relates to the commitment by South Gloucestershire to realise the long term economic potential of major, strategic location at Severnside. Within this, the policy relevant to flood risk is as follows:

- *Have no unacceptable impact on flooding, the landscape or the area's ecology.*

1.10 It should be noted that these policies are currently saved and will be carried forward into the LDF Core Strategy document.

1.11 South Gloucestershire Council have produced some supplementary planning guidance entitled Sustainable Drainage Systems, which is handed out to developers to raise awareness of this form of drainage and is contained within Appendix E.

### **South Gloucestershire Core Strategy – Issues and Options (April 2008)**

1.12 The South Gloucestershire Core Strategy is at the Issues and Options stage. This document will set out the core policies for the district to meet development requirements up to 2026. The Core Strategy alongside other Development Plan Documents forms the Local Development Framework that will replace the existing Local Plan.

1.13 The Core Strategy - Issues and Options Report identifies key issues within South Gloucestershire with respect to flood risk. Key Issue 8 'Reducing and adapting to climate change' identifies flood risk and provides questions for consultation. In addition, it identifies that this SFRA will inform the spatial strategy for future development.

### **South Gloucestershire Minerals and Waste Local Plan (Adopted May 2002)**

1.14 The South Gloucestershire Minerals and Waste Local Plan guides development within the administrative area up to 2011. The South Gloucestershire Core Strategy will replace some of the minerals policies of this Local Plan when adopted. Some of the waste policies will be replaced by the West of England Joint Waste Core Strategy Development Plan Document when adopted. Other policies in the Local Plan will be replaced by the other development plan documents in the South Gloucestershire LDF. At present, the policies contained within the Minerals and Waste Local Plan relevant to flood risk are:

- *Policy 20: Proposals for minerals or waste development will be permitted only where there would not be an unacceptable effect on water quantity and quality.*
- *Policy 21: Proposals for minerals or waste development will be permitted only where they will not:*

- a. *Reduce the capacity of the flood plain;*

- b. *Increase the risk of flooding off-site; or*
- c. *Be, themselves, at an unacceptable risk of flooding;*

*Unless appropriate environmentally acceptable mitigation measures can be secured.*

## Environment Agency Policies

### Catchment Flood Management Plan (CFMP)

- 1.15 CFMPs are high-level strategic planning documents that provide a catchment overview of the main sources of flood risk and how these can be managed in a sustainable way for the next 50 to 100 years. The Environment Agency engages stakeholders within the catchment in order to produce policies in terms of sustainable flood management solutions whilst also considering the land use changes and effects of climate change.
- 1.16 Two CFMPs cover the South Gloucestershire administrative area, these are:
- Bristol Avon CFMP (May 2007)
  - Severn Tidal Tributaries CFMP (January 2007)
- 1.17 It should be noted that these are currently in draft form and therefore are subject to change.
- 1.18 These policies should be considered in the development of the South Gloucestershire LDF Core Strategy. This allows wider policy considerations to be implemented and avoid conflicting drivers for flood risk management within South Gloucestershire.

### Bristol Avon Catchment Flood Management – Draft Plan (May 2007)

- 1.19 The Bristol Avon Catchment Flood Management Plan (CFMP) covers parts of South Gloucestershire. There are three Policy Units identified that are relevant within South Gloucestershire, these are the Lower Avon rural area, the Upper Avon rural area and Combined Urban areas (included Chipping Sodbury and Yate).
- 1.20 For the Lower Avon rural area, Policy Option 3 is considered for future flood risk management. This is as follows:
- Continue with existing or alternative actions to manage flood risk at the current level.
- 1.21 For the Upper Avon rural area, Policy Option 6 is considered for future flood risk management. This is as follows:
- Take action to increase the frequency of flooding to bring benefits locally or elsewhere.
- 1.22 For the Combined Urban areas, Policy Option 4 is considered for future flood risk management. This is as follows:
- Take further action to sustain the current scale of flood risk into the future.

## **Severn Tidal Tributaries Catchment Flood Management Plan – Draft Plan (January 2007)**

- 1.23 The Severn Tidal Tributaries CFMP covers parts of South Gloucestershire. There are three Policy Units that are relevant to South Gloucestershire; these are Severn Vale, Little Avon and Cam and Avonmouth/Sevenside.
- 1.24 For Severn Vale and the Little Avon and Cam Policy Units, Policy Option 3 is considered for future flood risk management. This is as follows:
- Continue with existing or alternative actions to manage flood risk at the current level (accepting that flood risk will increase over time from this baseline).
- 1.25 It is noted that there is an inconsistency within the document between the Policy Option within the Executive Summary and that within the Chapter 6. This should be confirmed with the Environment Agency to ensure any policies considered by South Gloucestershire are in line with the Catchment Flood Management Plan.
- 1.26 For Avonmouth/Sevenside Policy Unit, Policy Option 4 is considered for future flood risk management. This is as follows:
- Take further action to sustain current scale of flood risk into the future (responding to the potential increase in the flood risk from urban development, land use change, and climate change).

## **Severn Estuary Shoreline Management Plan (SMP)**

- 1.27 The Severn Estuary SMP is divided into twenty two process units, three of which are relevant to South Gloucestershire:
- Beachley to Sharpness
  - The Severn Crossings
  - New Passage to Portishead
- 1.28 Each process unit within the SMP is subdivided into management units. The management units within South Gloucestershire and the associated strategic management options for each of these are provided in Table 3.3.
- 1.29 There are four strategic management options for the management units within South Gloucestershire. These are:
- Do nothing – carry out no coastal defence activity.
  - Hold the Line – maintain the defence in its current position.
  - Advance the line – by intervention, move the defence seawards.
  - Retreat the line – by intervention, move the defence landwards.
- 1.30 The SMP is currently being updated and therefore the management units and associated strategic management options may be subject to change. These updates should be reassessed when this Level 1 SFRA is updated in the future.



Table 3.3: SMP Management Units and Management Strategies for South Gloucestershire.

Management Units		Strategies		
		Existing	Short Term	Long Term
15/1	New Passage to the north end of Severnside Works	Hold the Line	Hold the Line	Hold the Line or Locally Retreat the Line
15/2	Severnside Works to Mitchell's Salt Rhine	Hold the Line	Hold the Line	Hold the Line or Retreat the Line
7/4	Aust Cliff to Old Passage	Do nothing, Locally Hold the Line	Do nothing, Locally Hold the Line	Do nothing, Locally Hold the Line
7/5	Old Passage to New Passage	Hold the Line	Hold the Line	Hold the Line / Locally Retreat the Line
9/7	South of Berkeley Power Station to Chapel House	Hold the Line	Hold the Line	Hold the Line or Retreat the Line
9/8	Chapel House to south of Oldbury Power Station	Hold the Line	Hold the Line	Hold the Line or Retreat the Line
9/9	Oldbury to Littleton	Hold the Line	Hold the Line	Hold the Line or Retreat the Line

## Other Relevant Policies

### Internal Drainage Board Byelaws

- 1.31 The Lower Severn Internal Drainage Board works to the principles set out within PPS25 and provide advice to South Gloucestershire Council with respect to flood risk from tidal, fluvial and surface water sources alongside that from the Environment Agency.
- 1.32 Under Section 66 of the Land Drainage Act 1991, the Lower Severn Internal Drainage Board has made Land Drainage Byelaws that allow powers to control flows and development in or alongside watercourses within the area. The two byelaws that are relevant to development and flood risk are:
- *Byelaw 3: Control of introduction of water and increase in flow or volume of water - No person shall without previous consent of the board, for any purpose, by means of any channel, siphon, pipeline or sluice or by any other means whatsoever introduce any water into the district or whether directly or indirectly increase the flow or volume of water in any watercourse in the district*
  - *Byelaw 10: No obstruction within 8 m of the edge of the watercourse - No person without the previous consent of the board shall erect any building or structure whether temporary or permanent, or plant any tree, shrub, willow or other similar growth within 8 m of the landward toe of the bank where there is an embankment or wall or within 8 m of the top of the batter where there is no embankment or wall, or where the watercourse is enclosed within 8 m of the enclosing structure*

1.33 These byelaws focus on the maintenance of flow within the drainage system, placing controls on discharges to the watercourses and structures used to regulate flows. The overriding principle is that no works or discharges to the system may take place that have the potential to result in a detrimental impact to downstream areas.

1.34 These include provisions to restrict:

- Development within 8 m of the edge of a watercourse;
- Any development or temporary storage of material on the floodplain;
- The creation or diversion of watercourses;
- The introduction of water to the areas administered by the boards;
- Interference with flow control infrastructure;
- Infilling or culverting of watercourses.

### **Sewers for Adoption - 6<sup>th</sup> Edition (2006)**

1.35 Sewers for Adoption (2006) provides industry standard guidelines for the planning, design and construction of foul and surface water infrastructure for adoption by the water undertaker (Wessex Water) through a Section 104 Agreement under the Water Industry Act 1991. This includes guidance on the design criteria for the adoption of SuDS.

# Policy Recommendations

1.36 National, regional and local policies have been reviewed against the local flood risk issues and objectives identified by the Environment Agency. From these policies, the following catchment wide and specific area strategies have been developed under the headings Flood Risk, SuDS, Flood Mitigation and the Water Environment. Integration of these suggested strategies into policy considerations into LDF/LDD should ensure that the objectives and aspirations of the Environment Agency and national policy are met whilst strengthening the position of the Local Planning Authority with regard to flood risk management.

## Flood Risk

1.37 The sections below describe catchment wide and area specific strategies in relation to flood risk. These reinforce the principles set out within national, regional and local policies on a catchment wide scale but also address those areas where more specific measures may need to be taken as identified in the focussed assessments.

### Catchment Wide Strategies

- Allocate all sites in accordance with the Sequential Test to reduce flood risk and ensure that the vulnerability classification of the proposed development is appropriate to the flood zone classification according to PPS25;
  - Flood Risk Assessments should be undertaken for all developments within Flood Zones 2 and 3, and sites with identified flooding sources, to assess the risk of flooding to the development and identify options to mitigate the flood risk to the development, site users and surrounding area;
  - Flood Risk Assessments are required for all developments greater than 1 hectare, regardless of the flood zone designation. Where critical drainage problems have been identified within Flood Zone 1, liaison with the Environment Agency and South Gloucestershire Council should be undertaken to determine the scope and level of Flood Risk Assessment required;
  - Flood risk to development should be assessed for all forms of flooding;
  - Where floodplain storage is removed, the development should provide compensatory storage on a level for level and volume for volume basis to ensure that there is no loss in flood storage capacity.
- 1.38 Development should not be located within 8 m of the river bank to ensure access for maintenance but also to ensure amongst other things a wildlife corridor for improvement of the riverine environment and allowance of natural processes to operate within the floodplain.

### Area Specific Strategy

1.39 Development in rural areas needs specific attention to runoff management and drainage. There should be early liaison with relevant authorities that include the Environment Agency, South Gloucestershire Council and Lower Severn Internal Drainage Board for appropriate management techniques.

1.40 Within areas administered by the Lower Severn Internal Drainage Board, confirmation of the policies and byelaws should be sought to ensure both standing advice from the

Environment Agency and the Internal Drainage Boards are considered when development is proposed.

## Sustainable Drainage Systems

1.41 Information on Sustainable Drainage Systems (SuDS) is provided in Chapter 5, also see the South Gloucestershire supplementary planning guidance within Appendix E. Sustainable drainage policies should address the following issues as:

### Catchment Wide Strategies

- SuDS should be included in new developments unless it is demonstrable that it is not possible to manage surface water using these techniques;
- PPS25 requires the use of SuDS as an opportunity of managing flood risk, improving water quality and increasing amenity and biodiversity;
- Runoff rates from new developments on greenfield sites should not exceed greenfield runoff rates pre-development and should allow for increased runoff as a result of climate change;
- Reduce runoff rates from previously developed land to provide flood risk betterment downstream, where appropriate opportunities exist;
- Runoff and/or discharge rates should be restricted to greenfield runoff rates, where viable, particularly in areas known to have a history of flooding.

1.42 The developer should consult the Environment Agency and South Gloucestershire Council when considering the design of SuDS. The guidance contained within Appendix E, should also be considered.

### Area Specific Strategies

- Developments within Kingswood, Magotsfield, Marshfield, Frampton Cotterell, Yate / Chipping Sodbury, areas downstream of Thornbury and Emerson Green should consider the surface water incidents and/or the vulnerability identified and seek, where practicable, to reduce runoff to greenfield rates on previously developed land to provide betterment.
- In areas administered by the Lower Severn Internal Drainage Board, surface water drainage arrangement for any development site should be such that the volumes and peak flow rates of surface water leaving the developed site are no greater than greenfield rates unless off site arrangements are made and agreed by the Board. This is in keeping with their policies and byelaws.

## Flood Mitigation

1.43 The sections below describe mitigation measures that may be implemented to ensure future development remains safe for its lifetime and does not propagate flood issues to third parties.

### Catchment Wide Strategies

- Where an allocation is located within an area benefiting from flood defence, opportunities should be sought for the maintenance and upgrading of these flood defences to be partly funded by the development for its lifetime.

- Opportunities should be sought for developers to open culverted watercourses, where possible, to return them to a natural system. When opening up culverted watercourses consideration should be given to ensure flood risk is not exacerbated downstream;
- River channel restoration should be undertaken where possible to return the river to its natural state and restore floodplain to reduce the impact of flooding downstream;
- New development in Flood Zones 2 and 3 including floodplains benefiting from defence schemes should set finished floor levels at an agreed level above existing ground levels and incorporate other necessary flood mitigation measures;
- The provision of safe access and egress accounting for climate change needs to be agreed with the Environment Agency for developments within Flood Zones 2 and 3.

### **Area Specific Strategies**

- For the continued development of Avonmouth / Severnside, a strategy to provide improvements to existing infrastructure to accommodate growth is recommended. This may incorporate the improvement and maintenance of existing flood defences.
- Natural England with the Environment Agency and South Gloucestershire Council should ensure the conservation of water level and flood management to maintain nationally and locally important nature and wildlife designations. Where possible, opportunities should be sought for the maintenance of these areas through developer contributions for the lifetime of the development.

## **Water Environment**

### **Catchment Wide Strategy**

- Development should not have a detrimental impact on the water environment through changes to water quality or resources. This should be ensured through the use of appropriate drainage systems that limit the occurrence of pollution to the water environment.
- Developments should look to incorporate water re-use and minimisation technology for example green roofs, water butts. This will aid developments in contributing to the Code for Sustainable Homes and will contribute in adoption of source control SuDS as part of PPS25 requirements.