

5. Supporting references

- (i) Cotswold District Council Strategic Flood Risk Assessment - Updated Final Report, JBA Consulting, May 2016



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Cotswold District Council Strategic Flood Risk Assessment

Updated Final Report

May 2016

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Revision History

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Draft v2.0 May 2014	Amendments based on Environment Agency and CDC review. Updated with new modelling data, uFMfSW and NPPF Planning Practice Guidance.	Joanne Corbett (CDC), Laurence King (CDC), Luke Newbey (EA)
Final June 2014	Minor amendments based on Environment Agency and CDC review.	Joanne Corbett (CDC), Laurence King (CDC), Luke Newbey (EA)
Final July 2014	Minor amendments to Figure 2-2 based on CDC review and to Table 5-2 and 5-3.	Joanne Corbett (CDC), Laurence King (CDC), David Halkyard (CDC), Luke Newbey (EA)
Updated Final Draft v1.0 May 2016	Updates to include new Environment Agency model information for Bourton-on-the-Water and reference to new Government guidance on climate change allowances in section 6.3.5.	Joanne Corbett (CDC)
Updated Final v1.0 May 2016	Minor amendments following review by CDC	Joanne Corbett (CDC)

Contract

This report describes work commissioned by Cotswold District Council, in a letter dated 29 May 2013. The CDC representative for the contract was Joanne Corbett.

The May 2016 update was commissioned by Cotswold District Council, in an email dated 12 January 2016. The CDC representative for the contract was Joanne Corbett.

Purpose

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Front cover picture taken from the Environment Agency Report (2008) Fairford, Whelford, Kempsford & Lechlade Floods Review July 2007 - Photo 5. Fairford July 2007. Court Brook area, Snakes Lane.

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Executive Summary

Cotswold Strategic Flood Risk Assessment (SFRA) is a planning tool that will assist the councils in their selection and development of sustainable site allocations away from vulnerable flood risk areas in accordance with the National Planning Policy Framework and its associated Planning Practice Guidance on Flood Risk and Coastal Change. The purpose of this Level 2 SFRA is to provide detail on flood risk for 20 settlements (18 from the preferred development strategy of the Local plan plus 2 additional settlements), in order to carry out the sequential risk based approach on a site basis and provide an evidence base for the Exception Test. The SFRA has been completed to aid the preparation of the emerging Local Plan documents and exercises (e.g. Development Strategy Paper, Strategic Housing and Land Availability Assessment (SHLAA) and Strategic Employment and Land Availability Assessment (SELAA)). The assessment focuses on 92 potential housing sites and 34 potential economic development sites currently identified by the SHLAA and SELAA, but also contains mapping and guidance for assessing additional/windfall sites for development in the future.

Chapter 1 gives a background to the SFRA and Cotswold District, and Chapter 2 outlines the national legislation and planning framework, and national, regional and local planning flood risk guidance relevant to the SFRA.

Chapter 3 explains how we assess flood risk, and outlines the sources of national and local flood risk mapping data, information and evidence available for use in the SFRA. Advice on how they should be used and their limitations is noted.

Chapter 4 described flood risk from different sources in the District, including fluvial (flood risk from rivers), surface water, groundwater, sewers, reservoirs and other artificial sources. It also summarises the expected impact of climate change on flooding of all sources.

Chapter 5 is intended to summarise flood risk information for each of the sites in a way that can be easily utilised by CDC when carrying out their Sequential Test, highlighting those sites where constraints would exist on development as a result of flood risk. This information has also been supplied to CDC as an Excel spreadsheet to enable easy querying and sorting of the information.

Chapter 6 introduces guidance aimed at both planners and developers. The guidance should be read in conjunction with the NPPF and flood risk guidance from the Environment Agency. The guidance addresses requirements for development in each of the Flood Zones, dealing with surface water runoff and drainage, wastewater, making development safe, water quality and biodiversity, river restoration and enhancement as part of development, dealing with existing watercourses and assets, safeguarding land for future flood storage, and developer contributions to flood risk improvements.

It is important to remember that information on flood risk is being updated continuously. As CDC move forward with their Local Plan which includes site allocations, they must use the most up to date information in the Sequential Test, and developers should be aware of the latest information for use in Flood Risk Assessments.

The Flood and Water Management Act (2010), the Localism Act (2011) and the National Planning Policy Framework (2012) all offer opportunities for a more integrated approach to flood risk management and development. As they are in the relatively early stages of the site allocation process, the CDC have a real chance to make sure development provides improvements to flood risk overall and enhancements to the river environment.

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Abbreviations and Definitions

Actual Risk		The risk posed to development situated within a defended area (i.e. behind defences), expressed in terms of the probability that the defence will be overtopped, and/or the probability that the defence will suffer a structural failure, and the consequence should a failure occur
Annual Event Probability	AEP	Expresses the probability of a flood event of a specific magnitude occurring in any one year. For example, the 1 in 100 year flood event is expressed as the 1% AEP; there is a 1% chance of it occurring within any given year.
Area Action Plan	AAP	Planning document to guide development in a specific area. Forms part of the Local Plan.
Area Benefiting from Defence	ABD	Those areas which benefit from formal flood defences in the event of flooding from rivers with a 1% chance in any given year or from the sea with a 0.5% chance in any given year. If the defences were not there, these areas would be flooded.
Areas Susceptible to Groundwater Flooding	AStGWF	National map produced by the Environment Agency showing areas susceptible to groundwater emergence.
Asset Information Management System	AIMS	Environment Agency's asset database
Brownfield		Brownfield (sites or land) is a term in common usage that may be defined as 'development sites or land that has previously been developed'.
Combined sewer overflow	CSO	In combined sewerage systems, foul drainage and surface water are conveyed in the same piped system. During rainfall, when flows in the combined sewer are high, excess flow is diverted to watercourses or ground in order to reduce the risk of combined sewer flooding. CSOs can be a significant source of pollution to watercourses.
Core Strategy	CS	Term no longer used to describe a Development Plan Document setting out the long-term spatial vision, strategic objectives and policies relating to future development of an area. Where they remain, the Core Strategy forms part of the Local Plan.
Cotswold District Council	CDC	
Defended Area		An area offered a degree of protection against flooding through the presence of a flood defence structure
Development Plan Documents	DPDs	Documents that make up the Local Plan and form part of the statutory development plan for the areas. DPDs must include the Local Plan and adopted Policies Map. All DPDs are subject to public consultation and independent examination.
Flood Alleviation Scheme	FAS	Works designed to provide protection from flooding.
Flood and coastal erosion risk management Grant in Aid	FCRMGIA	Central government funding to flood risk management authorities to pay for a range of activities including schemes that help reduce the risk of flooding and coastal erosion.
Flood Estimation Handbook	FEH	Provides current methodologies for estimation of flood flows for the UK
Flood Map for Surface Water	FMfSW	National map produced by the Environment Agency showing flood risk from surface water at the 30 year and 200 year return periods.
Flood Risk Assessment	FRA	A detailed site-based investigation that is undertaken by the developer at planning application stage
Flood Risk Management		The introduction of mitigation measures (or options) to reduce the risk posed to property and life as a result of flooding. It is not just the application of physical flood defence measures
Flood and Water Management Act	FWMA	Part of the UK Government's response to Sir Michael Pitt's Report on the Summer 2007 floods, the aim of which is to clarify the legislative framework for managing surface water flood risk in England.
Flood Storage Area	FSA	Area designed to store water in a flood and release it later when flood waters have subsided.
Flood Zone		<p>Areas of land at risk from tidal or fluvial flooding as delineated by the Environment Agency.</p> <p>Flood Zone 1 - This zone comprises land assessed as having a less than 1 in 1,000 annual probability of river or sea flooding (<0.1%).</p> <p>Flood Zone 2 - This zone comprises land assessed as having between a 1 in 100 and 1 in 1,000 annual probability of river flooding (1% – 0.1%), or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.5% – 0.1%) in any year.</p> <p>Flood Zone 3 - This zone comprises land assessed as having a 1 in 100 or</p>