

Local Flood Risk Management Strategy

Strategic Environmental Assessment

Environmental Report (Appendices)

Warwickshire County Council

February 2016

Table of contents

Appendices	Pages
A. Review of relevant plans, policies and programmes	3
B. Baseline Data	40
C. Consultation Responses to Scoping Report	87

A. Review of relevant plans, policies and programmes

Table A.1 – Implications from PPP review

DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE STRATEGY AND THE SEA	IMPLICATIONS FOR EMERGING LOCAL FLOOD RISK MANAGEMENT STRATEGY	IMPLICATIONS FOR THE STRATEGIC ENVIRONMENTAL ASSESSMENT
EUROPEAN			
Habitats Directive (92/43/EEC)	Aims to protect wild plants, animals and habitats. Directive created a network of protected areas called Natura 2000 sites, including Special Areas of Conservation (SACs) – supporting rare, endangered or vulnerable natural habitats, plants and animals (other than birds), and Special Protection Areas (SPAs) – supporting significant numbers of wild birds and their habitats.	LFRMS should seek to conserve and enhance biodiversity, and avoid any significant impacts on Natura 2000 sites. In determining interventions, account should be taken of the particular sensitivities of each Natura 2000 site that could potentially be affected, and advice from Natural England should be sought.	Ensure biodiversity objective within SEA framework. HRA Scoping will assess whether full Appropriate Assessment is necessary.

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Birds Directive (2009/147/EC)	Emphasis's protection of habitats for endangered and migratory species, especially through the establishment of a coherent network of Special Protection Areas (SPAs).	LFRMS should seek to conserve and enhance biodiversity, and avoid any significant impacts on SPAs. In determining interventions, account should be taken of the particular sensitivities of each SPA site that could potentially be affected, and advice from Natural England should be sought.	Ensure biodiversity objective within SEA framework. HRA Scoping will assess whether full Appropriate Assessment is necessary.
Water Framework Directive (2000/60/EC)	Looks at the ecological health of surface water bodies as well as traditional chemical standards. In particular it will help deal with, amongst others diffuse pollution, habitat, ecology, hydromorphology, barriers to fish movement, water quality, flow and sediment. Successful implementation will help to protect all elements of the water cycle and enhance the quality of our groundwater, rivers, lakes, estuaries and seas.	LFRMS should be informed by the WFD's aims and objectives and should aim to improve water quality.	Ensure water quality forms part of SEA framework.

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Groundwater Directive (2006/118/EC)	Establishes a regime which sets underground water quality standards and introduces measures to prevent or limit inputs of pollutants into groundwater. Establishes quality criteria taking account of local characteristics. Member States have to establish standards at the most appropriate level and take into account local or regional conditions. It requires groundwater quality standards to be established by the end of 2008; pollution trend studies to be carried out by using existing data and mandatory WFD data; pollution trends to be reversed so that environmental objectives are achieved by 2015; measures to prevent or limit inputs of pollutants into groundwater; reviews of technical provisions of the directive to be carried out in 2013 and every six years thereafter; compliance with good chemical status criteria. This directive will be replaced by the WFD at the end of 2013.	LFRMS should seek to protect groundwater quality.	Ensure water quality objective within SEA framework.
Air Quality Directive (2008/50/EC)	Merges most existing air quality legislation into a single directive that sets standards and target dates for reducing concentrations of fine particles, which together with coarser particles known as PM10 already subject to legislation, are among the most dangerous pollutants for human health. Under the directive Member States are required to reduce exposure to PM2.5 in urban areas by an average of 20% by 2020 based on 2010 levels. It obliges them to bring exposure levels below 20 micrograms/m ³ by 2015 in these areas. Throughout their territory Member States will need to respect the PM2.5 limit value set at 25 micrograms/m ³ .	LFRMS should seek to protect air quality.	Ensure air quality objective within SEA framework.
Floods Directive (2007/60/EC)	Concerns the assessment and management of flood risk and requires Member States to assess if all water courses and coast lines are at risk from flooding, to map the flood extent and assets and humans at risk in these areas and to take adequate and coordinated measures to reduce this flood risk. Also reinforces the rights of the public to access this information and to have a say in the planning process.	LFRMS will provide many of the actions required under the Directive.	Ensure flooding objective within SEA framework.

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European Landscape Convention (2000)	<p>Promotes landscape protection, management and planning, and European co-operation on landscape issues. The Convention recognizes that the landscape is shaped by natural and cultural influences.</p> <p>Highlights the importance of developing landscape policies dedicated to the protection, management and creation of landscapes, and establishing procedures for the general public and other stakeholders to participate in policy creation and implementation.</p>	LFRMS should seek to protect landscape from harmful development and should recognize the cultural and historic dimension of the landscape. Full consideration to the Warwickshire Landscape Character Assessment Supplementary Guidance.	Ensure landscape objective within SEA framework.

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NATIONAL			
Wildlife and Countryside Act 1981	The Act [inter alia] prohibits certain methods of killing or taking wild animals; amends the law relating to protection of certain mammals; restricts the introduction of certain animals and plants; amends the Endangered Species (Import and Export) Act 1976; amends the law relating to nature conservation, the countryside and National Parks; and amends the law relating to public rights of way.	LFRMS should ensure Protection and enhancement of biodiversity. Policies should also ensure that public rights of way are taken into account in considering flood risk management interventions.	Ensure biodiversity and public rights of way are covered by objectives within SEA framework.
Natural Environment and Rural Communities Act 2006	Section 40 of the Act requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'. The aim of the biodiversity duty is to raise the profile of biodiversity in England and Wales, so that the conservation of biodiversity becomes properly embedded in all relevant policies and decisions made by public authorities.	LFRMS should seek to protect and enhance biodiversity through guiding interventions to avoid adverse impacts, and to seek net biodiversity gain.	Ensure biodiversity objective within SEA framework.

Guidance for Local Authorities on Implementing the Biodiversity Duty, DEFRA (2007)	<p>The guidance is intended to assist local authorities in meeting the Biodiversity Duty. The conservation of biodiversity is highly dependent on the extent to which it is addressed in infrastructure and development projects and how well the planning process integrates biodiversity into planning and development control policies.</p> <p>Core Strategies and Local Development Plan Strategies set out the overarching policy framework for the plan area. Strategic objectives and policies should be developed for biodiversity, including objectives for enhancement. Consideration should also be given to how biodiversity enhancement can be used to bring about more sustainable development, through integration with other policy objectives and other land uses, for example housing and economic development, health, education and social inclusion.</p>	LFRMS should be informed by the guidance in seeking to protect and enhance biodiversity.	Ensure biodiversity objective within SEA framework.
Climate Change Act 2008	<p>The Act aims to improve carbon management, helping the transition towards a low-carbon economy in the UK and to demonstrate UK leadership internationally. Key provisions of the Act include:</p> <ul style="list-style-type: none"> - a legally binding target of at least an 80% cut in greenhouse gas emissions by 2050 and a reduction in emissions of at least 34% by 2020 (both against 1990 baseline). - a carbon budgeting system that caps emissions over five-year periods; - creation of the Committee on Climate Change; - further measures to reduce emissions, including measures on biofuels; - a requirement for the Government to report at least every five years on the risks to the UK of climate change, and to publish a programme setting out how these will be addressed. The Act also introduces powers for Government to require public bodies and statutory undertakers to carry out their own risk assessment and make plans to address those risks; 	LFRMS should seek to ensure that carbon emission are minimized, including through encouraging lower-carbon practices in flood risk infrastructure and operations.	Ensure climate change objective within SEA framework.

Localism Act 2011	<p>The Localism Act takes power from central government and hands it back to local authorities and communities.</p> <p>Community organisations have the chance to bid to take over land and buildings that are important to them.</p> <p>Local communities can shape new development through Neighborhood Plans. Once written, the plan will be independently examined and put to a referendum of local people for approval.</p> <p>Neighborhood Plans will enable local people to ensure there are enough homes in their area by providing planning permission for homes in community ownership (particularly through the Community Right to Build). The 'general power of competence' gives local authorities the legal capacity to do anything an individual can do that isn't specifically prohibited.</p>	<p>LFRMS should seek to engage Parish Councils in consultation. Local communities should have adequate opportunities to become involved with the Strategy as it develops through a variety of consultation methods, including those aimed at hard-to-reach groups.</p>	<p>No direct implications for SEA.</p>
Flood and Water Management Act 2010	<p>The Act addresses the threat of flooding and water scarcity. It defines unitary/county councils as lead local flood authorities for their area, but enables this role to be delegated to another risk management authority by agreement.</p> <p>It creates a duty to establish and maintain a register of structures/features likely to have a significant effect on flood risk. Information on the structures/features, including ownership and state of repair, must also be recorded.</p> <p>The Act requires a lead local flood authority to develop, maintain, apply and monitor a strategy for local flood risk management in its area. The Act establishes a SuDS Approving Body (the "SAB"), with responsibility for approving proposed drainage systems in new Developments/redevelopments at county/unitary level. Approval must be given before the developer can commence construction.</p>	<p>LFRMS is being produced in accordance with statutory provisions, and will be informed by a range of evidence, including the register of structures and features.</p>	<p>Ensure flooding objective within SEA framework.</p>

<p>Natural Environment White Paper (2011)</p>	<p>The Natural Environment White Paper has four ambitions:</p> <p>Protecting and improving our natural environment Growing a green economy Reconnecting people and nature International and EU leadership</p> <p>It looks at ecosystem services provided by natural systems and promotes a step-change in nature conservation which makes sustainable use of natural capital and natural networks by working at a landscape scale. It aims to ensure that by 2020 17% of England is managed effectively to safeguard biodiversity.</p>	<p>LFRMS should seek to conserve and enhance biodiversity and to take forward green infrastructure principles. LFRMS should be informed by the need to contribute to delivery of the key ambitions of the White Paper.</p>	<p>Ensure biodiversity and landscape form part of SEA framework.</p>
<p>Making Space for Water: Taking forward a new Government strategy for flood and coastal erosion risk management in England (March 2005)</p>	<p>The Government will, over the 20-year lifetime of the new strategy, implement a more holistic approach to managing flood and coastal erosion risks in England. The approach will involve taking account of all sources of flooding, embedding flood and coastal risk management across a range of Government policies, and reflecting other relevant Government policies in the policies and operations of flood and coastal erosion risk management. The aim will be to manage risks by employing an integrated portfolio of approaches which reflect both national and local priorities, so as to:</p> <ul style="list-style-type: none"> • reduce the threat to people and their property; and • deliver the greatest environmental, social and economic benefit, consistent with the Government's sustainable development principles. <p>Many of the approaches set out in this document have since been taken forward through policy and legislation, including the new role of LLFA through the Flood and Water Management Act 2010.</p>	<p>LFRMS should seek to take forward the broad aims of the Government's overall strategy for flood risk management, through reducing the threat to people and property, and through delivering the greatest environment, social and economic benefit.</p>	<p>SEA includes objectives for social dimension, but addressing economic benefits is beyond the scope of the assessment.</p>

<p>House of Commons Environment, Food and Rural Affairs Committee: Managing Flood Risk, Third Report of Session 2013–14, Volume I (2 July 2013)</p>	<p>Report on a House of Commons inquiry into the effectiveness of the Government’s flood risk management policies. Recommendations include:</p> <p>Funding must be delivered more swiftly to local authorities. The current method for allocating funds is biased towards protecting property, largely in urban areas. This poses a risk to the security of UK food production. The Environment Agency must amend its scoring system so that agricultural land receives a higher proportion of funding.</p> <p>Defra must liaise more effectively with the Department for Communities and Local Government to stop planning rule changes, such as additional permitted development rights, having cumulative impacts on the ability of an area to absorb surface water.</p>	<p>LFRMS should recognize the value of protecting agricultural land as well as land in urban areas.</p> <p>The cumulative impact of development on an area's ability to absorb surface water should also be considered.</p>	<p>The SEA should include an objective on flooding and one which recognizes the value of agricultural land.</p>
<p>Environment Agency: National Flood and Coastal Erosion Risk Management Strategy</p>	<p>The strategy encourages more effective risk management by enabling people, communities, business, infrastructure operators and the public sector to work together to:</p> <ul style="list-style-type: none"> • ensure a clear understanding of the risks of flooding and coastal erosion, nationally and locally, so that investment in risk management can be prioritized more effectively; • set out clear and consistent plans for risk management so that communities and businesses can make informed decisions about the management of the remaining risk; • manage flood and coastal erosion risks in an appropriate way, taking account of the needs of communities and the environment; • ensure that emergency plans and responses to flood incidents are effective and that communities are able to respond effectively to flood forecasts, warnings and advice; • help communities to recover more quickly and effectively after incidents. 	<p>The LFRMS must conform to the overarching approach of the national strategy.</p>	<p>Flooding will be included within the SEA framework.</p>

<p>Spatial Planning for Sport and Active Recreation: Guidance on Sport England's Aspirations and Experience (2005)</p>	<p>Spatial planning creates opportunities for addressing the needs, and wider contribution, of sport and active recreation through the development of cross-cutting policies and plans; through multifaceted development proposals which include sports-related elements; through increasing recognition of the role of community interests in shaping space; and through greater partnership working in policy development and delivery.</p> <p>The guidance states that there is the prospect of delivering a planned approach to the provision of facilities, and in doing so adding value to the work of others and helping to deliver sustainable development goals, which might mean taking a broader view of the role of spatial planning as an enabling function which goes beyond the setting and delivery of land-use policy; identifying opportunities for delivering an enhanced quality of life for communities, in the short, medium and longer term; recognizing and taking full advantage of the unique ability of sport and active recreation to contribute to a wide array of policy and community aspirations; the development of partnership working stimulated by, and perhaps centered on, sport and active recreation as a common interest; and using sport and recreation as one of the building blocks of planning and delivery of sustainable communities.</p>	<p>LFRMS should wherever possible seek to protect and enhance existing sports and recreation.</p>	<p>No direct implication for the SEA although sports and recreation will be considered as part of the SEA objective covering Health.</p>
<p>Strategic Environmental Assessment, Sustainability Appraisal and the Historic Environment, English Heritage (2010)</p>	<p>English Heritage will look to see how the historic environment is considered in SEA. This covers cultural heritage, including architectural and archaeological heritage, landscape and material assets. English Heritage recommends that Scoping Reports are tailored to the type, purpose, and level of plan under consideration. The tiering of Scoping Reports, through the use of an overarching report subsequently fine-tuned for particular documents, can help to reduce repetition and give a better focus to the appraisal framework. Recommends that a review of PPPs draws out implications for developing SEA/SA objectives, and draws out implications for relevant plans.</p>	<p>LFRMS should be informed by EH advice and ensure EH is fully consulted as the LFRMS develops.</p>	<p>Ensure historic environment objective within SEA framework.</p> <p>EH's 'tiering' recommendation has been followed: the LFRMS SEA framework is based on a Warwickshire-wide SEA/SA which has been tailored accordingly.</p>

Planning (Listed Buildings and Conservation Areas) Act 1990	Governs special controls in respect of buildings and areas of special architectural or historic interest. Any alteration, extension or demolition of a listed building in a way that affects its character as a building of special interest requires Listed Building Consent.	LFRMS should ensure that Listed Buildings and Conservation Areas are conserved and enhanced. This includes avoiding adverse impacts through location and design of flood risk management infrastructure.	Ensure historic environment objective within SEA framework.
Ancient Monuments and Archaeological Areas Act 1979	Under the Act a monument which has been scheduled is protected against any disturbance including unlicensed metal detecting. Permission must be obtained for any work which might affect a monument above or below ground. English Heritage gives advice to the Government on each application. In assessing an application the Secretary of State will try to ensure any works on protected sites are beneficial to the site or are essential for its long term sustainability.	LFRMS should ensure that Ancient Monuments and archaeology are conserved and enhanced. This includes avoiding adverse impacts through location and design.	Ensure historic environment objective within SEA framework.

<p>National Planning Policy Framework, DCLG (2012)</p>	<p>Sets out Government planning policy for England. The purpose of the planning system is to contribute to the achievement of sustainable development, the three dimensions of which are:</p> <p>economic role – contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;</p> <p>a social role – supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community's needs and support its health, social and cultural well-being; and</p> <p>an environmental role – contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimize waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy.</p> <p>Local planning authorities should adopt proactive strategies to mitigate and adapt to climate change, taking full account of flood risk, coastal change and water supply and demand considerations.</p> <p>Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere. Local Plans should be supported by Strategic</p>	<p>Although not a purely planning document in the sense of being a DPD or SPD, the LFRMS will have a key relationship with the planning system and should aim to contribute to the achievement of sustainable development.</p> <p>Any flood risk management intervention in Warwickshire should ensure that flood risk is not worsened elsewhere as a result.</p>	<p>SEA includes objectives for social dimension, but addressing economic benefits is beyond the scope of the assessment.</p>
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	<p>Flood Risk Assessment and develop policies to manage flood risk from all sources, taking account of advice from the Environment Agency and other relevant flood risk management bodies, such as lead local flood authorities and internal drainage boards. Local Plans should apply a sequential, risk-based approach to the location of development to avoid where possible flood risk to people and property and manage any residual risk, taking account of the impacts of climate change, by:</p> <ul style="list-style-type: none"> - applying the Sequential Test; - if necessary, applying the Exception Test; - safeguarding land from development that is required for current and future flood management; - using opportunities offered by new development to reduce the causes and impacts of flooding; and - where climate change is expected to increase flood risk so that some existing development may not be sustainable in the long-term, seeking opportunities to facilitate the relocation of development, including housing, to more sustainable locations. <p>The aim of the Sequential Test is to steer new development to areas with the lowest probability of flooding. Development should not be allocated or permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding. The Strategic Flood Risk Assessment will provide the basis for applying this test. A sequential approach should be used in areas known to be at risk from any form of flooding.</p> <p>If, following application of the Sequential Test, it is not possible, consistent with wider sustainability objectives, for the development to be located in zones with a lower probability of flooding; the Exception Test can be applied if appropriate. For the Exception Test to be passed:</p>		
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	<ul style="list-style-type: none"> - it must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by a Strategic Flood Risk Assessment where one has been prepared; and - a site-specific flood risk assessment must demonstrate that the development will be safe for its lifetime taking account of the vulnerability of its users, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall. <p>Both elements of the test will have to be passed for development to be allocated or permitted.</p> <p>When determining planning applications, local planning authorities should ensure flood risk is not increased elsewhere and only consider development appropriate in areas at risk of flooding where, informed by a site-specific flood risk assessment following the Sequential Test, and if required the Exception Test, it can be demonstrated that:</p> <ul style="list-style-type: none"> - within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location; and - development is appropriately flood resilient and resistant, including safe access and escape routes where required, and that any residual risk can be safely managed, including by emergency planning; and it gives priority to the use of sustainable drainage systems. <p>For individual developments on sites allocated in development plans through the Sequential Test, applicants need not apply the Sequential Test. Applications for minor development and changes of use should not be subject to the Sequential or Exception Tests but should still meet the requirements for site-specific flood risk assessments.</p>		
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Technical Guidance to the National Planning Policy Framework (2012)	<p>This document provides additional guidance to local planning authorities to ensure the effective implementation of the planning policy set out in the National Planning Policy Framework on development in areas at risk of flooding and in relation to mineral extraction.</p> <p>The guidance gives further information on the sequential and exception tests.</p> <p>Flood resistance and resilience measures should not be used to justify development in inappropriate locations.</p>	<p>LFRMS should be informed by the approach to different types of development in different flood zones.</p> <p>Any proposed flood risk management measures should not be used to justify development that would be inappropriate in that flood zone.</p>	<p>Include SEA objective on flooding.</p>
Securing the Future: UK Sustainable Development Strategy (2005)	<p>Four broad objectives:</p> <ul style="list-style-type: none"> - Sustainable consumption and production – working towards achieving more with less. - Natural resource protection and environmental enhancement - From local to global, building sustainable communities - Climate change and energy <p>Our landscapes and seascapes are inseparable from our culture, bearing the imprints of generations of land use. Our physical and mental health is reliant on the quality of the environment. There must also be access to a variety of well-managed and maintained green spaces for leisure, sport, recreation and general public benefit to help people choose healthy lifestyles, in urban as well as rural areas.</p>	<p>LFRMS should embody sustainability principles, and recognize the valuable contribution that flood prevention and alleviation can make to society, the economy and the environment.</p>	<p>The SEA process should help to ensure that sustainable development principles are considered in LFRMS preparation, and to help ensure the social, economic and environmental benefits are maximized, although the scope of SEA means there is less emphasis on the economic aspects.</p>

<p>The national flood and coastal erosion risk management strategy for England: Understanding the risks, empowering communities, building resilience (Defra, 2011)</p>	<p>Flood and coastal erosion risk in England is expected to increase due to climate change and development in areas at risk. It is not possible to prevent all flooding or coastal erosion, but there are actions that can be taken to manage these risks and reduce the impacts on communities.</p> <p>This strategy builds on existing approaches to flood and coastal risk management and promotes the use of a wide range of measures to manage risk. Risk should be managed in a coordinated way within catchments and along the coast and balance the needs of communities, the economy and the environment. This strategy will form the framework within which communities have a greater role in local risk management decisions and sets out the Environment Agency's strategic overview role in flood and coastal erosion risk management (FCERM). This approach is aligned with the recommendations made by Sir Michael Pitt in his review of the summer 2007 floods.</p> <p>The strategy encourages more effective risk management by enabling people, communities, business, infrastructure operators and the public sector to work together to:</p> <ul style="list-style-type: none"> • ensure a clear understanding of the risks of flooding and coastal erosion, nationally and locally, so that investment in risk management can be prioritized more effectively; • set out clear and consistent plans for risk management so that communities and businesses can make informed decisions about the management of the remaining risk; • manage flood and coastal erosion risks in an appropriate way, taking account of the needs of communities and the environment; • ensure that emergency plans and responses to flood incidents are effective and that communities are able to respond effectively to flood forecasts, warnings and advice; • help communities to recover more quickly and effectively after incidents. <p>The strategy shows how communities can be more involved in local flood and coastal erosion risk management. It also emphasises the need to balance national and local activities and funding.</p> <p>In setting out future approaches to FCERM, this strategy considers the level of risk and how it might change in the future, the risk management measures that may be used, roles and responsibilities, future funding and the need for supporting information.</p>	<p>The LFRMS must comply with the national strategy.</p>	<p>SEA must address flood risk issues.</p>
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<p>A Strategy for England's Trees, Woods and Forests, DEFRA (2007)</p>	<p>Aims to provide a resource of trees, woods and forests where they can contribute environmental, economic and social benefits now and for future generations; to ensure that existing and newly planted trees, woods and forests are resilient to climate change and contribute to biodiversity and natural resources adjusting to a changing climate; to protect and enhance water, soil, air, biodiversity and landscape, and the cultural and amenity values of trees and woodland; to increase the contribution that trees, woods and forests make to quality of life; and to improve the competitiveness of woodland businesses and promote development of new/improved markets for sustainable woodland products and ecosystem services.</p> <p>It seeks to do this through the long-term sustainable management of trees, woods and forests; by seeking 'the right tree in the right place'; by effective use of public investment; and by ensuring synergies with other Government policies.</p>	<p>LFRMS should recognize the value of trees and should seek to avoid any loss where practicable through location and design policies. The potential contribution of trees in schemes should be explored and maximized.</p>	<p>Ensure flora and fauna objective within SEA framework.</p>
<p>Flooding and Historic Buildings, English Heritage (2010)</p>	<p>Integrated flood-risk management is essential if the historic environment is to be protected from flood damage, and effective communication between all those involved is therefore vital in securing the appropriate response</p> <p>Despite substantial investment in flood management, large numbers of properties remain at significant risk of flooding. Estimates suggest that as many as half of all properties at high risk from flooding might be in areas where large-scale public defenses cannot be justified or are unlikely to receive future funding.</p> <p>Private protection measures therefore have a significant part to play in reducing potential damage and the cost of future flood claims. It is estimated that property-level protection measures can reduce flood damage by between 50 and 80 per cent. Protection works must be applied with sensitivity to a historic building so that they do not damage the special interest or integrity of the building or any associated archaeological remains. In particular, the aim must be to retain and respect the existing structure and materials.</p>	<p>Development of the LFRMS should provide opportunities for consultation with historic environment representatives. Consideration should be given to sensitive solutions where the significance of heritage assets could be affected.</p>	<p>Ensure historic environment objective within SEA framework.</p>

<p>Developing the evidence base to describe the flood risk to agricultural land in England and Wales</p> <p>Joint Defra/EA Flood and Coastal Erosion Risk Management R&D Programme (August 2011)</p>	<p>The impact of flood and coastal erosion risk management (FCERM) on agriculture is increasingly becoming a high profile issue. Plans to manage flood risk through the further creation of flood storage areas on agricultural land or to reduce public FCERM investment in rural areas judged to be at low risk or to cease to defend or realign some stretches of eroding or low lying coastline may be strongly opposed by the farming industry and local community representatives concerned about implications for national food security.</p> <p>Traditionally, and noticeably since WWII, operating authorities have undertaken much work that directly or indirectly supports agricultural production through the construction and maintenance of river and coastal flood defenses, through building and operating pumping stations draining low lying land, and through dredging and annual vegetation management in rivers.</p> <p>There are a number of public sources of information relevant to the flood risk to agricultural land and there is now an increasing need to consolidate and confirm them. In addition, much of the previous work has used differing methodologies with varying results. There is currently a lack of clarity on basic statistics such as the total area and grade of land under agricultural production that is at flood risk, currently protected by defenses, given over to managed realignment schemes, or likely to be impacted in the future by changes in flood risk as a result of climate change.</p>	<p>Farming representatives should be included in consultations on the emerging LFRMS, which should consider the impact on agricultural production of any flood risk management measures. There is scope to further the evidence base by seeking to identify the location and amount of agricultural land at flood risk as described.</p>	<p>Include SEA objective which covers agricultural land considerations.</p>
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	<p>The national percentage of best and most versatile land (ALC Grades 1, 2 and 3) located in the floodplain is 13% in England.</p> <p>58% of the total resource of Grade 1 agricultural land in England is within the floodplain. Of this Grade 1 land in England only 5% of that land in the floodplain is at very significant flood risk. In England 78% of Grade 1 land in the floodplain is at low flood risk, and 48% of the best and most versatile land in the floodplain is at low flow risk.</p> <p>Fluvial defenses provide protection to agricultural land and reduce flood related agricultural losses in England by around £5m annually.</p> <p>1180ha of land in England has been converted to intertidal habitat through managed realignment schemes (1991 to 2009). About 700ha of this was previously in arable use (in 1990). The total area of agricultural grade land within flood storage areas in England is 12,270ha.</p>		
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REGIONAL			

<p>West Midlands Historic Environment Strategy (2009)</p>	<p>Sets out a description of the places and special qualities that make up the historic environment of the region, some of the successes and achievements of the many people and organizations who champion and care for historic places, the strategy – People, Places and Policies – for making the most of the positive contribution of the historic environment, and an action plan to realize the vision. It looks at three broad themes:</p> <p>People: Everyone benefits from improved and enhanced physical and intellectual access to the historic environment, so that the lives of present and future generations are enriched through enjoyment, learning and physical activity, leading to a better quality of life.</p> <ul style="list-style-type: none"> • People and communities are actively engaged in the management and enhancement of their historic environment through volunteer, civic and business activities. • There are sufficient people with the expertise and traditional skills to ensure that the historic environment is properly maintained and managed and secured for the future. <p>Places: The ‘everyday’ places of the historic environment, not just the protected and iconic, whether old or modern, are better understood and valued for the way in which they shape the unique character and identity of the West Midlands.</p> <ul style="list-style-type: none"> • New buildings and places complement the historic urban and rural environment and are of a design standard and quality that will allow them to be valued by future generations. • The significance of the West Midlands’ industrial legacy, which put our region on the world stage, is recognized and valued. This industrial heritage is put to sympathetic and sustainable re-use, so that it contributes to carbon reduction and the regeneration of the region. <p>Policies: Strategies and policies for the region benefit from a robust evidence-base which furthers understanding of the positive contribution that the historic environment can make to the region’s prosperity and economic well-being.</p> <ul style="list-style-type: none"> • Policies and plans for the West Midlands reflect the needs of the historic environment, and recognise, promote and use the positive contribution that it can make to well-being and culture. • The policies and strategic plans of all those engaged in the management and championing of the historic environment are developed in partnership, in order to ensure that their aspirations and objectives are aligned towards shared goals and outcomes. 	<p>LFRMS has a role to play in helping to maintain historic environment assets.</p>	<p>Historic environment objective to be included within SEA framework.</p>
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Regional Sustainable Development Framework (2006)	<p>This Framework, rather than being a separate strategy for sustainable development in itself, is designed to help all strategies, policies and plans to contribute to a sustainable future for the West Midlands. An aligned, consistent and mutually reinforcing approach to policy at regional, sub-regional and local level is essential to ensure sustainable development can be delivered. A Vision of a sustainable West Midlands “Our vision for a sustainable West Midlands is one of an economically successful, outwardlooking and adaptable region, rich in culture and environment, where everyone, working together, is able to enjoy well-being and quality of life, meeting their aspirations and needs without prejudicing the ability of others, now or in the future, to do the same.”</p> <ul style="list-style-type: none"> • Putting people and communities at the centre of strategy development and policy decisions; engaging people in the decisions that affect their lives and their communities, promoting personal wellbeing, social cohesion and inclusion, creating equal opportunity for all, and meeting the varied needs of our diverse communities in terms of gender, age, ethnicity, disability, faith, sexuality, and background, and in the various rural and urban communities in the West Midlands region. • Valuing the environment and living within environmental limits, respecting the limits of the earth’s ability to provide resources and reabsorb pollutants in order to avoid serious or irreversible damage, and recognising the importance of the environment and biodiversity to well-being, health and economic vitality. • Gathering and using sound evidence as the basis for policy-making, taking account of whole-life costs and benefits of our decisions and activities, including impacts that can’t easily be valued in money terms, and taking account of long-term impacts in the wider social, environmental and economic context, and adopting the “precautionary principle”, that is, where there is a possibility that an action might result in damage to human health or the environment, the action should be avoided or measures identified to prevent or limit damage and degradation. • Taking account of the national and global implications of our activities, as well as those within the Region, and wherever possible adopting the “polluter pays” principle, that those responsible for environmental or social degradation should meet the costs of the consequences. 	LFRMS should embody sustainability principles, and recognize the importance of flood risk management to society, the economy and the environment.	The SEA process should help to ensure that sustainable development principles are considered in LFRMS preparation, although the SEA Directive provides less focus on economic aspects.
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DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE STRATEGY AND THE SEA	IMPLICATIONS FOR EMERGING LOCAL FLOOD RISK MANAGEMENT STRATEGY	IMPLICATIONS FOR THE STRATEGIC ENVIRONMENTAL ASSESSMENT
COUNTY			
Warwickshire Preliminary Flood Risk Assessment Report (2011)	<p>This Preliminary Flood Risk Assessment (PFRA) report for Warwickshire has been prepared to comply with the Flood Risk Regulations 2009 and the Flood and Water Management Act 2010 and in accordance with the Environment Agency's Final PFRA Guidance published in December 2010.</p> <p>It summarises the findings from the first two stages of the flood risk management cycle for the County of Warwickshire and presents the results of a high level screening exercise, identifying areas of significant flood risk. Warwickshire County Council have recognised their role as the central point in the management of local flood risk and have strengthened and extended their partnership network to enable the collection, collation and assessment of available historic and future flood risk information for the County.</p> <p>Using this information the scale and consequences of past flooding has been summarised, identifying six flood risk events with locally adverse consequences over the past twenty years (all of which meet a defined local 'significance criteria'). The potential impacts of future flood events have been summarised and the Environment Agency's Flood Map for Surface Water (FMfSW) defined as the appropriate 'Locally Agreed Surface Water Information'. No Indicative Flood Risk Areas (IFRA) have been identified within the County, although its proximity to the West Midlands IFRA has been recognised, as have flood risk 'clusters' affecting Nuneaton, Rugby and Leamington Spa.</p> <p>The report concludes with structured actions for the County Council to implement to support and progress local flood risk management in the future.</p>	<p>The PFRA provides a major source of evidence to underpin the LFRMS. The LFRMS should identify how, when and where the interventions necessary to manage flood risk will be determined.</p>	<p>Ensure SEA objectives include consideration of flooding and adapting to the impacts of climate change.</p>

<p>Warwickshire Surface Water Management Plan Methodology Report (2014)</p>	<p>In the context of this study, surface water flood risk is defined as the following.</p> <ul style="list-style-type: none"> • Surface water runoff - as a result of high intensity rainfall when water is ponding or flowing over the ground surface before it enters the underground drainage network or watercourse, or cannot enter it because the network is full to capacity, thus causing flooding (known as pluvial flooding). • Flooding from groundwater - where groundwater is defined as all water which is below the surface of the ground and in direct contact with the ground or subsoil. • Sewer flooding – occurring when the volume of rainfall exceeds the capacity of the underground drainage system, resulting in flooding inside and outside of buildings. Sewer flooding in 'dry weather' conditions resulting from blockage, collapse or pumping station mechanical failure is not considered here and is a sole concern of the drainage undertaker (commonly Severn Trent Water in Warwickshire) <p>To develop a comprehensive understanding of surface water flood risk in Warwickshire, it is important to capture where surface water flooding has occurred in the past, but also to identify where surface water flooding may be more likely to occur in the future. Predictive flood risk information is from the Environment Agency's 'updated Flood Map for Surface Water' (uFMfSW). To understand which areas are at greater risk, or where there are greater consequences, a series of thresholds have been required to refine the results. These rules will allow the ranking of sites which can be used to identify surface water flooding historic and future 'hotspot' locations and a priority list for further investigation. Draft outputs are to be tested with a sensitivity analysis and have been discussed with project stakeholders. Feedback from these workshops will be combined with that from the public consultation before finalising the initial top sites. Following which, opportunities for flood risk management partnership schemes with the Environment Agency and Severn Trent Water will be investigated before creating a final priority list of approximately ten sites. These may be taken forward for detailed analysis, including the development of options to reduce flood risk, an action plan for each site and a supporting Investment Strategy.</p> <p>The SWMP project is still ongoing and this document presents the interim findings and methods used. This document has been issued as part of the public consultation on the Strategy in order to receive feedback prior to the completion of the SWMP, and the identification of locations to examine in further detail.</p>	<p>The SWMP will be a major source of evidence to underpin the LFRMS. The LFRMS and Action Plan should be informed by the SWMP and identify how, when and where the interventions necessary to manage flood risk will be determined. The LFRMS could promote the use of rainwater capture and recycling to reduce flood risk and the abstraction of water.</p>	<p>Ensure flooding objective within SEA framework.</p>
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<p>A Sustainable Community Strategy for Warwickshire (2009 - 2026)</p>	<p>The SCS identifies a vision for Warwickshire that in 2026, Warwickshire will be a fair, safe and prosperous place where:</p> <ul style="list-style-type: none"> • Inequalities that exist by geography or within communities are reduced; • There is good access to services, choice and opportunity; • Sustainability is pursued through balancing our current needs with those of future generations. <p>This vision will be achieved through a focus on three themes of People, Places and Prosperity and nine Outcomes:</p> <p>Places</p> <ul style="list-style-type: none"> • Our environment is clean, green and sustainable • Our housing is appropriate and affordable • Our places are connected through transport, technology and services <p>People</p> <ul style="list-style-type: none"> • We belong to safe and strong communities where people get on together • We all live healthy, active and independent lives • We all have the opportunity to enjoy and achieve <p>Prosperity</p> <ul style="list-style-type: none"> • Our economy is innovative, competitive and entrepreneurial • Our workforce is diverse, trained and highly skilled • Our economic wellbeing is continuously improving 	<p>LFRMS can help deliver all three of the county-wide priorities, but will be of particular relevance in helping to achieve the economic and environmental priority outcomes. The LFRMS should foster a collaborative, partnership approach, which will be essential when maximising the reach of limited budgets.</p>	<p>SEA should include objectives and criteria relating to health and the environment.</p>
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<p>Warwickshire Climate Change Strategy (2006)</p>	<p>This Climate Change Strategy sets out the framework of what Warwickshire County Council and its partners in Warwickshire intend to do to tackle climate change. Climate change is something that has global dimensions but local impacts.</p> <p>This Strategy identifies five key areas where actions locally can assist in both mitigating the impacts of climate change, in energy, transport and resource efficiency and addresses the steps needed to adapt to the climate change that is already happening and that which will happen whatever we do from now on. To make this work and to encourage the people, businesses and other organisations in Warwickshire to play a part, a communications and education dimension is also critical. The overarching aim of this strategy is:</p> <p>“To reduce greenhouse gas emissions in Warwickshire to at least the level set out by Government policy, 15%-18% reduction by 2010 and a 60% reduction by 2050 (against 1990 levels). We will achieve this whilst maintaining and improving the quality of life of Warwickshire residents through the implementation of a policy of sustainable development”.</p> <p>By implementing this strategy the Partnership will meet its 2010 target to reduce greenhouse gas emissions by 15%-18% and have substituted low carbon technologies, where this is possible, in all sectors.</p> <p>The Objectives are:</p> <ul style="list-style-type: none"> • To reduce greenhouse gas emissions through improving energy efficiency, minimising waste and increasing the use of renewable sources of energy. • To reduce greenhouse gas emissions resulting from transport (particularly road transport) both through effective consideration and promotion of the public transport, car sharing, home working and other interventions, as well as encouraging walking and cycling. • To reduce greenhouse gas emissions through better waste management, including waste minimisation and increased recycling, more efficient use of resources and more environmentally aware procurement (including infrastructure). • For organisations to educate their employees and as a result, the wider communities of Warwickshire, on their responsibilities and actions required to limit the effects of climate change in our county. 	<p>LFRMS should be informed by the latest climate change projections. It should seek to minimize additional CO₂ emissions and to adapt to the consequences of climate change.</p>	<p>Ensure climate change objective forms part of SEA framework.</p>
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<p>Warwickshire Landscape Character Guidelines (1987)</p>	<p>The Warwickshire Landscape Project set up in 1987, provided a set of guidelines designed to offer advice on maintaining diversity and beauty, to conserve the landscapes for future generations.</p> <p>The first level of assessment identified a total of 10 regional character areas within and around the fringes of the county. Only four of these, Arden, Dunsmore, Avon Valley and Feldon can be truly described as Warwickshire landscapes. The others show characterising more typically associated with surrounding counties. This is especially true of the Cotswolds, the Ironstone Wolds and the High Cross Plateau. Similarly, the Mease Lowlands is another marginal Warwickshire region, while the area to the east of the river Tame is transitional between Arden and Cannock Forest.</p> <p>Each of the four regions has a guidance documents describing these regions in greater detail with a series of management strategies and landscape guidelines have been developed. These are aimed at all involved in landscape management and point to how and where landscape character needs to be conserved, restored, or enhanced.</p>	<p>LFRMS should seek to ensure that the landscape impact of proposals is taken into account.</p>	<p>Ensure landscape objective within SEA framework.</p>
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<p>Warwickshire Coventry and Solihull Green Infrastructure Strategy (2014)</p>	<p>The purpose of this Strategy is to provide evidence for the preparation of plans, policies and strategies relating to Green Infrastructure (GI) at a sub-regional level and at a local level. It also details how GI can be delivered with the help from landholders and partners. The strategy covers the disciplines of</p> <ul style="list-style-type: none"> • Landscape • Biodiversity • Accessibility <p><u>Landscape</u> The main strategic areas of opportunity for strengthening landscape character are identified in the Warwickshire Landscapes Guidelines and are still relevant, including opportunities to demonstrate exemplary approaches to landscape conservation management. However, it is recommended that the Enhancement Zones be re-assessed to identify target areas for landscape restoration. In particular, planning and implementing substantial landscape frameworks, well in advance of major developments and transport infrastructure, can bring many benefits, including safeguarding and enhancing vital landscape assets, helping to create a sense of place for new development and retaining vital links with the past.</p> <p><u>Biodiversity</u> The strategy identifies sub-regional GI Biodiversity Assets and identifies Strategic Areas for delivering the Biodiversity Strategy's aim to reconnect habitats throughout the sub-region. It makes the recommendation consistent with national policies and strategies to safeguard, enhance and create GI Biodiversity Assets to connect individual sub-regional GI Biodiversity assets together to form core areas creating large functional clusters of woodland, wetland and grassland habitats. After this has been scientifically demonstrated the next aim is to Connect the large functional areas together. However, this does not preclude the opportunity to create new areas that will be large enough to function independently.</p> <p><u>Accessibility</u> The Strategy uses the Natural England's Accessible Natural Greenspace Standard criteria and the Woodland Access Standards to identify sub-regional GI Accessibility Assets. It recommends that areas of deficiency are identified so that new or existing features can be created or enhanced to meet the sub-regional needs.</p>	<p>LFRMS should seek to ensure that Green Infrastructure is taken into account.</p>	<p>Ensure Green Infrastructure objectives within SEA framework.</p>
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<p>Warwickshire County Council: Biodiversity Strategy (2008)</p>	<p>The overarching aim of this strategy is “To work with partners to protect and enhance existing and future wildlife populations and habitats in Warwickshire, within a resilient landscape. We will achieve this by increasing the amount of land and buildings positively managed for biodiversity, averting local extinction of species and reducing the number of species on the danger list.”</p> <p>WCC’s objectives are:</p> <ul style="list-style-type: none"> • To obtain, manage and share environmental data to inform decision-making and monitor changes. • To ensure that WCC considers biodiversity in exercising all of its regulatory functions. • To improve the management of land and buildings owned by WCC for biodiversity. • To raise awareness, engender a sense of care and responsibility towards and promote opportunities for formal and informal learning about and understanding of the natural world. • To act as an exemplar of best practice, by considering biodiversity issues when developing relevant strategies and during partnership working. <p>Reporting and Review: – We will establish and maintain an internal reporting mechanism to inform and report on how WCC is actively sustaining and enhancing biodiversity.</p>	<p>LFRMS should seek to ensure that Biodiversity is taken into account into decision making.</p>	<p>Ensure WCC Biodiversity objectives within SEA framework.</p>
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DOCUMENT	KEY OBJECTIVES/TARGETS/GUIDANCE RELEVANT TO THE PLAN AND THE SEA	IMPLICATIONS FOR EMERGING LOCAL FLOOD RISK MANAGEMENT STRATEGY	IMPLICATIONS FOR THE STRATEGIC ENVIRONMENTAL ASSESSMENT
OTHER			

<p>River Basin Management Plan Severn River Basin District, DEFRA/EA (2009)</p>	<p>This plan focuses on the protection, improvement and sustainable use of the water environment.</p> <p>The Plan identifies physical modification ("changes to the structure of water bodies, such as for flood defence") as one of the most significant pressures which need to be dealt with in the river basin district.</p> <p>Some surface water bodies are designated as 'artificial' or 'heavily modified'. This is because they may have been created or modified for a particular use such as water supply, flood protection, navigation or urban infrastructure.</p> <p>Physical modification for flood protection can impact on fish and invertebrates.</p> <p>Document recognizes the opportunities to reduce diffuse pollution and overland flood flows by undertaking woodland planting, including wet and dry woodland, and hedgerow restoration work.</p> <p>River basin management is an opportunity for people and organisations to work together to improve the quality of every aspect of the water environment.</p> <p>Where the work of a public body affects a river basin district, that body has a general duty to have regard to the River Basin Management Plan. Ministerial guidance states that the Environment Agency should:</p> <ul style="list-style-type: none"> • work with other public bodies to develop good links between river basin management planning and other relevant plans and strategies, especially those plans that have a statutory basis such as the Local Development Plans and Wales Spatial Plan; • encourage public bodies to include Water Framework Directive considerations in their plans, policies, guidance, appraisal systems and casework decisions. 	<p>LFRMS should recognize the impact that flood risk management interventions can have on the water environment and should seek to ensure that protective policies are in place.</p>	<p>Objectives to protect and enhance water, soil and air quality and biodiversity to be included within SEA framework.</p>
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<p>River Severn Catchment Flood Management Plan, Summary Report December 2009</p>	<p>Gives an overview of the flood risk in the River Severn catchment and sets out the Environment Agency's preferred plan for sustainable flood risk management over the next 50 to 100 years.</p> <p>To aid planning, the EA have divided the catchment into sub-areas. Warwickshire includes part of 4 of these sub areas, each of which has its own policy focus:</p> <ul style="list-style-type: none"> - Middle Avon, Tributaries, Arrow and Alne, Rugby and Teme <p>Policy Option 3 – Areas of low to moderate flood risk where we are generally managing existing flood risk effectively. We have selected this policy because the risks are currently managed appropriately and the risk of flooding is not expected to increase significantly in the long term. We may need to review whether what we are doing currently is the best way of managing the risk in the longer term, but we are confident that the risks do need managing. This policy may lead to reviewing the flood warning services and/or how we manage assets that may be in place.</p> <ul style="list-style-type: none"> - Middle Severn Corridor <p>Policy Option 4 – Areas of low, moderate or high flood risk where we are already managing the flood risk effectively but where we may need to take further actions to keep pace with climate change. We have selected this policy here because although the risk is currently managed appropriately, it is expected to rise significantly in the long term. In these circumstances, we will need to do more in the future to reduce the expected increase in the risks.</p>	<p>LFRMS should be informed by the identified policy foci for the sub-areas covering Warwickshire.</p>	<p>Land use and water management issues to be covered by SEA objectives.</p>
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	<ul style="list-style-type: none"> - Telford, Black Country, Bromsgrove, Kidderminster & Coventry cluster; Policy Option 5 – Areas of moderate to high flood risk where we can generally take further action to reduce flood risk. This policy is about reducing the risk where the existing flood risk is too high. We need to take action in the short term to reduce this level of risk. - Lower Severn corridor and Leaden Catchment; Policy Option 2 – Areas of low to moderate flood risk where we can generally reduce existing flood risk management actions. We have selected this policy because current and future risks do not warrant as much intervention (for example on maintaining existing defences) and it is therefore not worth continuing. We can allow the risk of flooding to increase in a managed way so that we do not create unacceptable risks. Under this policy we would look at the options and timing of stopping maintenance or retreating existing flood defences in our System Asset Management Plans (SAMPs). Although one effect of this policy is generally to allow flood risk to increase with time, for example because of climate change, we will minimize the rise by encouraging third parties to reduce the risks posed by their activities. Benefits from improvements to land-management and land-use in other sub areas further upstream, for example Sub area 1 where additional flood attenuation and storage may be achieved. 		
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<p>River Trent Catchment Flood Management Plan: Summary Report (December 2010)</p>	<p>CFMPs help us to understand the scale and extent of flooding now and in the future, and set policies for managing flood risk within the catchment. CFMPs should be used to inform planning and decision making by key stakeholders such as:</p> <ul style="list-style-type: none"> • The Environment Agency, who will use the plan to guide decisions on investment in further plans, projects or actions; • Local authorities who can use the plan to inform spatial planning • activities and emergency planning; • IDBs, water companies and other utilities to help plan their activities in the wider context of the catchment; • Transportation planners; • Land owners, farmers and land managers that manage and operate land for • agriculture, conservation and amenity purposes; • The public and businesses to enhance their understanding of flood risk and how it will be managed. <p>CFMPs aim to promote more sustainable approaches to managing flood risk. The policies identified in the CFMP will be delivered through a combination of different approaches. Together with our partners, we will implement these approaches through a range of delivery plans, projects and actions.</p>	<p>LFRMS should be informed by the identified policy foci for the sub-areas covering Warwickshire.</p>	<p>Land use and water management issues to be covered by SEA objectives.</p>
<p>Humber River Basin District: flood risk management plan (EA 2014)</p>	<p>This document sets out:</p> <ul style="list-style-type: none"> – what flood risk planning is going on across the river basin district – the timing of specific consultations – which organizations lead on those consultations <p>By highlighting these activities early on we hope that you will get involved in shaping the plans and be part of managing the risk from floods.</p> <p>The document also includes the proposed scope of the strategic environmental assessments for the plan that we are preparing. We are sharing our proposals with statutory environmental bodies so they can help shape our proposed approach.</p>	<p>LFRMS should be informed by the identified policy foci for the sub-areas covering Warwickshire.</p>	<p>Land use and water management issues to be covered by SEA objectives.</p>

<p>The Avon Warwickshire Management Catchment: A summary of information about the water environment in the Avon Warwickshire management catchment (EA, 2014)</p>	<p>This document gives an overview of the Avon Catchment and how the water in this system is used. It divided the Avon Warwickshire into 3 operational catchments due their distinct characteristics and pressures. It describes 'Protected Areas', the status of waters, pressures on the waters and how consultation is still ongoing to determine:</p> <ul style="list-style-type: none"> • Why is the Warwickshire Avon important for wildlife, people and the local economy? • What can be improved to benefit local people, visitors, wildlife, water and business? • What can we do together to make the Warwickshire Avon better? <p>The document also investigates measures that could improve the water environment and draws links to an economic appraisal and environmental assessment of measures to improve the water environment.</p>	<p>This document should be used to inform the LFRMS by identifying those areas at greatest risk from flooding and other associated risks.</p>	<p>SEA should include an objective on flooding and economic appraisals</p>
<p>The Tame, Anker and Mease Management Catchment: A summary of information about the water environment in the Tame, Anker and Mease management catchment (EA, 2014)</p>	<p>This document gives an overview of the Tame, Anker and Mease Catchments and how the water in this system is used. It divided the Avon Warwickshire into 6 operational catchments due their distinct characteristics and pressures. It describes 'Protected Areas', the status of waters, pressures on the waters and consultation concluded:</p> <ul style="list-style-type: none"> • The significant issues that are limiting the benefits society obtains from the water environment (the challenges) • The best way to address these issues and what should be done first (the choices). <p>The document also investigates measures that could improve the water environment and draws links to an economic appraisal and environmental assessment of measures to improve the water environment.</p>	<p>This document should be used to inform the LFRMS by identifying those areas at greatest risk from flooding and other associated risks.</p>	<p>SEA should include an objective on flooding.</p>

Cotswolds AONB Management Plan 2013-18	<p>Identifies water flow and flood risk as a key 'regulating service' within the AONB: Healthy porous soils and vegetation, particularly woodlands, help to regulate water flow and alleviate flooding in times of high and low rainfall. Action in the Cotswolds to manage catchments can help reduce peak flood levels and sustain river flows during drought periods.</p> <p>Cotswold rivers often suffer from natural 'low flows' as levels in the aquifers drop during drought periods and concentrate pollutants. The management of flows from the AONB is an important part of aquifer recharge and flood control measures in the Severn Vale, Bristol Avon, Upper Thames and Oxfordshire.</p> <p>Natural Resources Policy NRP5: Water resources are conserved and their quality enhanced, by appropriate management and use, in order to both secure aquifer recharge and reduce low flows and flooding.</p>	LFRMS should have regard to the purposes of AONB designation: to conserve and enhance the Cotswolds.	Include SEA objective relating to natural assets and landscape.
Cotswolds Conservation Board Position Statement: Development in the setting of the Cotswolds AONB	<p>Provides guidance to local planning authorities, landowners and other interested parties regarding the consideration of the impact of development and land management proposals which lie outside the AONB but within its "setting". The Board considers the setting of the Cotswolds AONB to be the area within which development and land management proposals, by virtue of their nature, size, scale, siting materials or design can be considered to have an impact, positive or negative, on the natural beauty and special qualities of the Cotswolds AONB.</p> <p>The Board will seek to ensure that the importance of considering the impact of development and land management proposals outside the Cotswolds AONB on the natural beauty and special qualities of the AONB is made clear in all Local Development Framework documents and in policies in other relevant documents.</p>	Consider including reference to the need to consider the impact of flood management measures on the Cotswolds (and Malvern Hills) AONB.	Include SEA objective relating to natural assets and landscape.

B. Baseline Data

Context of the Study Area

- B.1 Warwickshire lies to the south and east of the West Midlands conurbation and has established strong links with the adjoining authorities of Coventry, Birmingham and Solihull in the West Midlands, but also with the South East.
- B.2 Warwickshire is bounded to the North West by the West Midlands Metropolitan conurbation and Staffordshire, Leicestershire to the north east, Northamptonshire to the east, Worcestershire to the west, Oxfordshire to the south and Gloucestershire to the south west. Despite the focus of population within the main towns of the County, a significant part of Warwickshire is rural in nature with the majority of people living in the north and central areas of the County. Warwickshire lies at the heart of Britain's transport network and several key strategic routes pass through the County.
- B.3 Warwickshire is a two-tier local authority comprising of five District/Borough areas:
- North Warwickshire Borough
 - Nuneaton & Bedworth Borough
 - Rugby Borough
 - Stratford-on-Avon District
 - Warwick District

Population Trends and Demographics

- B.4 Warwickshire has a population of around 548,000, which is an increase of over 4,000 people from the mid-2011 population estimates. To the north of the County, Rugby and Nuneaton and Bedworth are traditional industrial towns, where established industries include (or included) coal mining, textiles, cement production and engineering. In the centre and south of Warwickshire, lie the more prosperous towns of Royal Leamington Spa, Warwick, Kenilworth and Stratford-upon-Avon.
- B.5 Warwickshire's population has been growing for the past four decades with a key factor being the continued in-migration from the urban areas of Coventry and Birmingham.
- B.6 However, growth across Warwickshire's five districts has not been consistent. Rugby Borough has seen the largest increase in population since 2001, up by 14.4% North Warwickshire has only seen a slight increase of 0.3% on 2001.

Table 1: Warwickshire Population sizes (mid 2012 estimates)

Districts	Population
North Warwickshire	62,200
Nuneaton and Bedworth	125,800
Rugby	100,800
Stratford-upon-Avon	120,600
Warwick	138,600
Warwickshire	548,000

Source: Quality of Life Report, 2013/14

Table 2: Warwickshire Population change, 1981-2011

Population ('000s)	1981	1991	2001	2011	Change 2001 – 2011
North Warwickshire	60.0	61.0	61.8	62.0	0.3%
Nuneaton & Bedworth	113.9	117.5	119.2	125.3	5.1%
Rugby	87.5	85.0	87.5	100.1	14.4%
Stratford-on-Avon	100.6	105.4	111.6	120.5	8.0%
Warwick	115.3	118.1	126.1	137.6	9.1%
Warwickshire	477.2	487.1	506.2	545.5	7.8%

Source: Quality of Life Report, 2013/14

- B.7 The population of Warwickshire is projected to reach a total of 591,200 by 2021 which is an increase of 44,600 people or 8.2% over the ten year period from 2011.
- B.8 Within Warwickshire, Rugby Borough is expected to experience the highest rates of population growth with an increase of 11.1% between 2011 and 2021.
- B.9 Across Warwickshire as a whole, the highest rates of projected population growth are in the groups aged 65 and over. The rate of growth increases with age, with the oldest age group (those aged 85 and over) predicted to increase by more than 40% between 2011 and 2021.

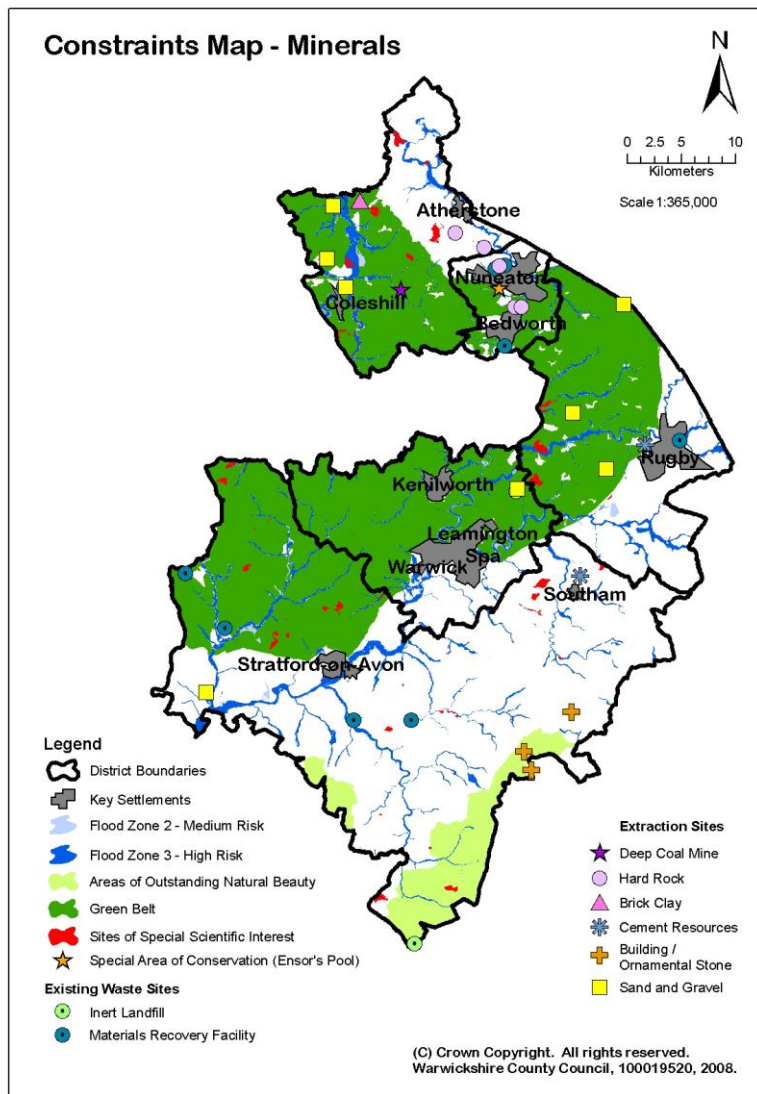
Biodiversity, Nature Conservation and Landscape

- B.10 Warwickshire has a landscape of considerable variety and complexity, with seven distinct landscape character areas: Arden, Dunsmore, Avon Valley, Feldon, Cotswolds, High Cross Plateau and Mease Lowlands. Part of the Cotswolds character area is designated as an Area of Outstanding Natural Beauty (AONB), a national designation to conserve the natural beauty of landscapes of recognized importance. Furthermore, a large proportion of the County is covered by a swathe of designated Green Belt.
- B.11 There are many sites designated for nature conservation purposes within the County. There is one site designated as of European importance for nature conservation - the Ensor's Pool Special Area of Conservation (SAC) in Nuneaton. There are 62 nationally designated Sites of Special Scientific Interest (SSSIs) in Warwickshire and 489 locally designated Local Wildlife Sites (LWSs) and a further 1308 sites awaiting surveying known as potential Local Wildlife Sites (pLWSs)¹ in the wider Warwickshire, Coventry and Solihull region. Twenty of the SSSIs are designated for reasons of geological interest. Furthermore, there are approximately 90 Local Geological Sites (LGSs, formerly Regionally Important Geological Sites) within the County. There are no National Nature Reserves, although there are 22 Local Nature Reserves.
- B.12 Single Data Set 600-0 Biodiversity reporting to Defra indicate a general rise in the number of Local Sites where positive conservation management is being or has been implemented in the previous 5, with the exception of 2013 reporting. The reason for this loss is currently being evaluated.

¹ Source: Habitat Biodiversity Audit (2013) and Natural England website (2014)

- 2008/2009 – 34% Local Sites in sensitive management
- 2009/2010 – 31% Local Sites in sensitive management
- 2010/2011 – 39% Local Sites in sensitive management
- 2011/2012 – 42% Local Sites in sensitive management
- 2012/2013 – 43% Local Sites in sensitive management
- 2013/2014 – 42% Local Sites in sensitive management

Figure 1: Environmental designations, mineral sites, materials recycling sites and landfills in Warwickshire.

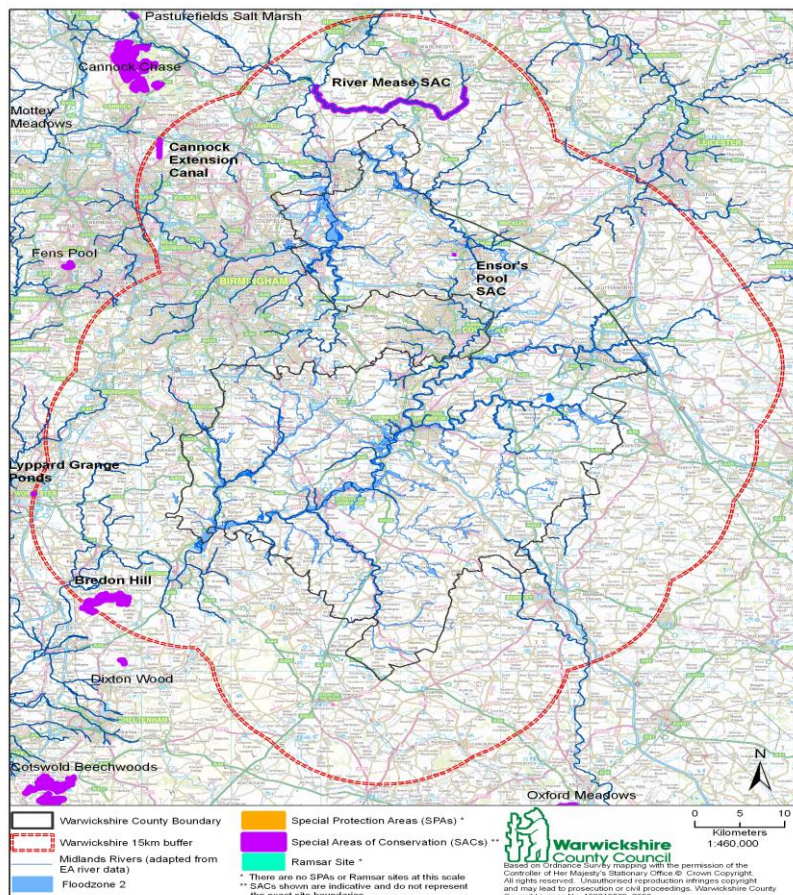


Source – Minerals Core Strategy Revised Spatial Options 2010

- B.13 In accordance with Articles 6.3 and 6.4 of the European Habitats Directive, Warwickshire County Council must undertake a Habitats Regulations Assessment (HRA) to assess that its plans or projects, either individually or in combination, do not impact upon the conservation objectives of European designated sites.
- B.14 The County has seen a decrease in unimproved grassland as well as a loss of hedgerows and traditionally managed woodland. Warwickshire is one of the two worst hit Counties in England, as flower rich pasture and meadowland has reduced to just a few hundred acres (a 97% loss between the second World War and 1996) and approximately 32% of hedgerows have been lost, both as a result of agricultural intensification. Although there have been isolated successes in halting the loss of Warwickshire's biodiversity, there is a need for appropriate spatial planning to protect and enhance wildlife populations and habitats.
- B.15 The Biodiversity Action Plan is informed by the Habitat Biodiversity Audit (HBA), a project led by the Warwickshire Wildlife Trust that seeks to provide up-to-date, accurate and readily accessible ecological data to partners including the County Council. This will provide

accurate measurements and monitoring of priority habitats in the County. The Warwickshire Biological Records Centre also provides information on species distribution and ecological sites in the County.

Figure 2 Special Areas of Conservation in Warwickshire and in close proximity to the county



Source: Warwickshire Habitats Regulation Assessment Document 2011

Wildlife Habitats

- B.16** Although there have been isolated successes in halting the loss of Warwickshire's biodiversity, there is a need for appropriate spatial planning to protect and enhance wildlife populations and habitats. Therefore the Minerals Plan will seek to support the overarching aim and objectives of the County's Biodiversity Strategy, and seek to protect or enhance the 26 species and 24 habitats set out in the Warwickshire, Coventry and Solihull Biodiversity Action Plan. The Biodiversity Action Plan is informed by the Habitat Biodiversity Audit (HBA), a project led by the Warwickshire Wildlife Trust that seeks to provide up-to-date, accurate and readily accessible ecological data to partners including the County Council. This will provide accurate measurements and monitoring of priority habitats in the County. The Warwickshire Biological Records Centre also provides information on species distribution and ecological sites in the County. This work will provide an important context for the Waste Core Strategy and will help shape the proposals and policies contained within it.
- B.17** Sites of Special Scientific Interest (SSSIs) are the country's best wildlife and geological sites and include some of the most spectacular and beautiful habitats. In England, there are over 4,100 SSSIs, 62 of which are within Warwickshire. In order to be able to record the

condition of SSSIs, they are split into units where appropriate and graded by Natural England. There are 99 units in Warwickshire.

- B.18 As of 22nd May 2015, 79.8% of the 99 SSSI units in Warwickshire have been rated as 'favourable' by Natural England and nearly 99% are meeting the Public Service Agreement (PSA) target. This suggests that the land is being adequately conserved and is meeting its 'conservation objectives'. However, there are a few sites where recovery is underway, particularly in Stratford-on-Avon District, Rugby Borough and North Warwickshire Borough. Some of the major challenges that remain for habitats across the County include, reduced herb ratios, water pollution, invasive freshwater species and loss of grassland.
- B.19 The unfavourable areas with no change (1%) include the River Blythe and its streams in North Warwickshire Borough, which is regarded as being unlikely to meet favourable conditions due to water pollution from agricultural discharges and invasive species. An area of approximately 1.66ha in Stratford-on-Avon District, covering the Racecourse Meadow SSSI, is considered unfavourable declining, as the site condition is becoming progressively worse due to low herb ratios.
- B.20 Butterflies are increasingly being recognized as valuable environmental indicators, both for their rapid and sensitive responses to subtle habitat or climatic changes and as representatives for the diversity and responses of other wildlife. In Warwickshire, Butterfly Conservation volunteers scientifically monitor nearly 50 sites including seven sites designated as SSSI's. This monitoring allows the performance of butterfly species to be compared between these sites in Warwickshire and with the other 2,000 sites which are monitored nationally.
- B.21 The natural environment within Warwickshire is monitored through the County Council's Biodiversity Strategy, which outlines how it can work with partners to protect and enhance Warwickshire's wildlife. This state of Warwickshire's Environment report produced by the Habitat Biodiversity Audit Partnership is reported to the Local Nature Partnership.
- B.22 Brandon Marsh, Harbury Spoilbank, Stockton Cutting and Quarries, Ufton Fields, several sites within the Blythe Valley and Whitacre Heath contain biological SSSIs, and LGSs are present at several sites. Several further sites have been formally designated as LWSs, but the majority are informally-designated County Ecosites, including two of the best limestone sites (which are now confirmed as having nationally important insect assemblages).
- B.23 To the east of Coventry, in the Avon Valley is the Brandon Marsh Wildlife Trust reserve and partial SSSI and 2km south of this off the floodplain, the satellite sand pits such as The Dell, Ryton and the Brandon Hall Sand Pit occur nearby.
- B.24 Newbold Quarry and Stockton Cutting are Local Nature Reserves. Kingsbury Water Park, Ryton Pools and Ufton Fields are Country Parks. Several sites support great-crested newts, which are specifically, protected under the Wildlife & Countryside Act and Ensor's Pool supports native crayfish, resulting in SAC status (of International Significance).
- B.25 Limited information exists for quarries lying within or adjacent to a Site of Special Scientific Interest (SSSI). The following information has been published by Natural England and reports on the condition of the SSSI.
- B.26 The sand and gravel quarry at Coleshill, North Warwickshire, includes a section of the River Blythe SSSI. All sections of this SSSI were assessed during October 2010. One section was reported as being in an unfavourable, but recovering condition, whereas the remaining four are classed as unfavourable with no change.
- B.27 The sand and gravel quarry at Wood Farm, Bubbenhall in Warwick District is adjacent to the Ryton Woods SSSI. In their most recent assessment (in June 2009), all sections of this SSSI were reported to be in a favourable condition.

Historic and Cultural Heritage

- B.28 The County's Historic Environment Record (HER) has recorded 18,882 Historic Landscape Character Areas (including 4968 Historic Farmstead Records) and 10,470 monuments. Of these monuments, 198 are designated as Scheduled Monuments of national importance. The County also has approximately 6,008 Listed Buildings of historical or architectural interest and 138 Conservation Areas. Furthermore, there are 31 Registered Parks and Gardens and there is 1 Registered Historic Battlefield at Edgehill. Warwickshire's historic landscape makes a considerable contribution to the County's character and local distinctiveness and the Warwickshire Historic Landscape Characterization project (in conjunction with English Heritage) will further contribute to the understanding of how the County's landscape has developed over time, and its capacity for change, so that an integrated approach to sustainable management can be established.
- B.29 There is a substantial cultural heritage resource within Warwickshire, with a high proportion of Listed Buildings and Conservation Areas. Table A.3 shows the number of Listed Buildings, Scheduled Monuments, Registered Parks & Gardens and Conservation Areas in the whole of Warwickshire.

Table 3: Listed Buildings, Scheduled Monuments, Registered Parks & Gardens and Conservation Areas in Warwickshire

Area	Listed Buildings I and II*	Listed Buildings II	Scheduled Monuments	Registered Parks and Gardens	Conservation Areas
Warwickshire	465	5,523	182	32	138

Source: English Heritage, 2011

Geological Assets

- B.30 Regionally Important Geological and Geomorphological Sites (RIGS), designated by locally developed criteria, are currently the most important places for geology geomorphology outside statutorily protected land such as Sites of Special Scientific Interest (SSSI).
- B.31 For many years, quarries near Bubbenhall in Warwickshire, operated by Smiths Concrete, have been the source of the high quality aggregate produced from the extraction of Pleistocene sands and gravels. A result of this mineral excavation has been formation of the large Ryton Pools or Bubbenhall complex, which now forms a part of the Country Park. Important geological and archaeological finds resulting from the excavations, have provided evidence for major climate changes and human habitation during Warwickshire's Ice Age past.

Landscape

- B.32 The Stratford-upon-Avon District of Warwickshire is home to the Cotswolds Area of Outstanding Natural Beauty (AONB). This is a national designation, indicating a landscape of the highest status. The Cotswolds is the third largest protected landscape in

the UK. It is given unity by its underlying limestone geology and the visible character of this stone seen throughout its buildings, walls and other structures.

- B.33 Together with neighboring Solihull and Coventry, Warwickshire's biodiversity is encompassed by a local Biodiversity Action Plan which in turn includes specific plans aimed at conservation of 27 specific species and 24 specific habitats considered to be of specific conservation value to the region.
- B.34 A vast amount of Warwickshire's land is in agricultural use. It is an important natural resource and how it is used is vital to sustainable development. The Agricultural Land Classification (ALC) recognises that Warwickshire contains areas of agricultural land of Grade 3a and above and provides a method for assessing the quality of farmland to enable informed choices to be made about its future use within the planning system. It helps underpin the principles of sustainable development. Figures show that Warwickshire has a very small amount of Grade 1 land (0.1%) which is all in North Warwickshire. The County has 11.9% of land in Grade 2 category.

Natural Resources (Groundwater, Air and Soil)

- B.35 Warwickshire takes in two of the major water catchments of the Midlands region. The Avon Catchment takes water from the south and east of the Midlands into the River Severn and Bristol Channel via the Avon and its tributaries (e.g. the Sowe, Leam, Dene, Stour, Alne and Arrow), while the Tame Catchment takes water from the north-west of the County (as well as much of the West Midlands) into the Trent, Humber and North Sea via River Leam the Tame and its tributaries (e.g. the Blythe, Cole and Anker). In addition to these two major catchment areas, an element of the Thames Catchment also lies within the extreme southern tip of Warwickshire.

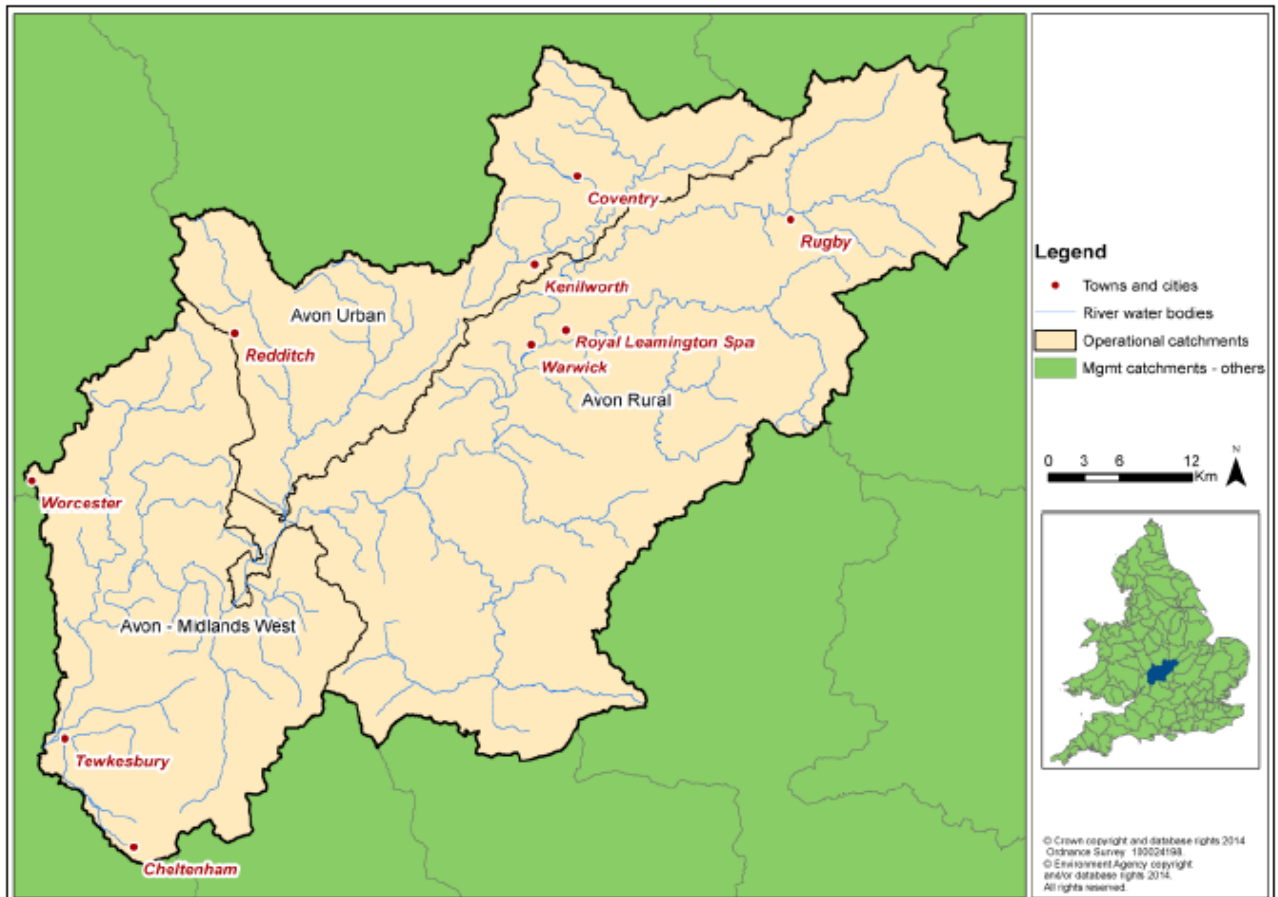
Environment Agency Catchment Abstraction Management Strategies

- B.36 On a National scale, Catchment Abstraction Management Strategies (CAMS) are currently being developed by the Environment Agency in order to provide a means of managing the quantity of water abstracted from surface and underground water resources. Through considering the management needs of the individual catchment areas which comprise the country, the Environment Agency is developing the strategies for managing the rivers' natural characteristics and abstraction permitting.
- B.37 Warwickshire is captured substantially within two Catchment Abstraction Management Strategies. The northern local authorities of Warwickshire lie within the geographic scope of the Tame, Anker and Mease CAMS, which also takes in the Rivers Bourne, Blythe and Cole. To the south, the Warwickshire Avon CAMS represents most of the County, particularly Rugby, Warwick and Stratford upon Avon Districts. In addition, the strategy reaches to other transboundary areas of the Avon catchment including the urban centre of upstream Coventry and downstream rural counties of Worcestershire and Gloucestershire.
- B.38 CAMS divided each catchment into a number of Water Resource Measurement Units and compares water availability with licensed abstractions. With the exception of a short section of the Avon upstream of Warwick, all sections of the Avon are assessed to have "no water available" and that current abstraction meets the minimum available water supply. Upstream of the town of Rugby and passing into Leicestershire, the surface water is considered to be over-abstracted.
- B.39 The CAMS further defines groundwater management units (GWMU) within the area covered by Warwickshire Avon. Within the Warwickshire region and immediate surroundings, the Coventry GWMU, Kenilworth GWMU, Whitely GWMU and Warwick GWMU are defined as the groundwater abstraction sources for the south of the County.

Lying beyond and on the periphery of Warwickshire, the Coventry GWMU is considered to be “over-abstracted” while capacity of the adjacent Whitely GWMU, lying within Warwick District, has not yet been exceeded. Further south, yet still within Warwick District, resource availability within the Kenilworth aquifer is classed as “no water available” while that of Warwick aquifer is exceeded.

Surface Water Quality

- B.40 The Environment Agency has assessed the characteristics of surface waters against the recent European Water Framework Directive (WFD) which aims to protect and enhance water resources, promote sustainable water consumption, reduce water pollution and lessen the effects of floods and droughts. As a result they have compiled statistics of abstraction and flow regulation, physical or ‘morphological’ alteration to water bodies and alien species. All rivers within Warwickshire classified under the WFD assessment were determined to be “at risk” from one or more of the criteria.
- B.41 In addition to rivers and streams, Warwickshire’s water resources are complemented by the addition of seven navigable canals, the Grand Union, Oxford, Coventry, Ashby, Birmingham, Fazeley and Stratford upon Avon Canals. A few stretches of these are classified by British Waterways as ‘unsatisfactory’ for a combination of physical and chemical reasons, however water quality has improved dramatically over the last decade to reach the current grades, allowing others to return to the canals to breed, rest and predominantly fish.
- B.42 There are three river catchments within Warwickshire County: Avon Warwickshire Catchment, the Blythe Operational Catchment (part of the larger Humber/Tame Catchment) and the Cherwell Operational Catchment (part of the larger Thames Catchment). The Environment Agency carries out yearly assessments of water quality in all water bodies in each catchment, regardless of protection status. The results for each catchment are provided below.
- Avon Warwickshire Catchment*
- B.43 In 2009 this catchment was divided up into 91 river water bodies, 9 canal water bodies, 3 lakes, 2 surface water transfers, 0 estuaries & coastal waters and 5 groundwater water bodies. At this time 18% of water bodies were classified at Good Ecological Status (GES) or better. This decreased slightly after assessment in 2013 as can be seen in Figure 5 below. The reasons for failing to achieve good status are detailed in Figure 4.
- B.44 Within the catchment, there are two areas protected for drinking water abstraction: Draycote Reservoir and the River Leam. Neither is currently compliant with the standards set for their protection due to being at risk from pesticides originating within the catchment. A Safeguard Zone approach is being developed with Severn Trent Water and other partners to protect drinking water abstractions and help target voluntary efforts to reduce pollution.



Source: Map extract from Environment Agency Warwickshire Management Catchment Report.

Figure 3: Map of Avon Warwickshire Management Catchment

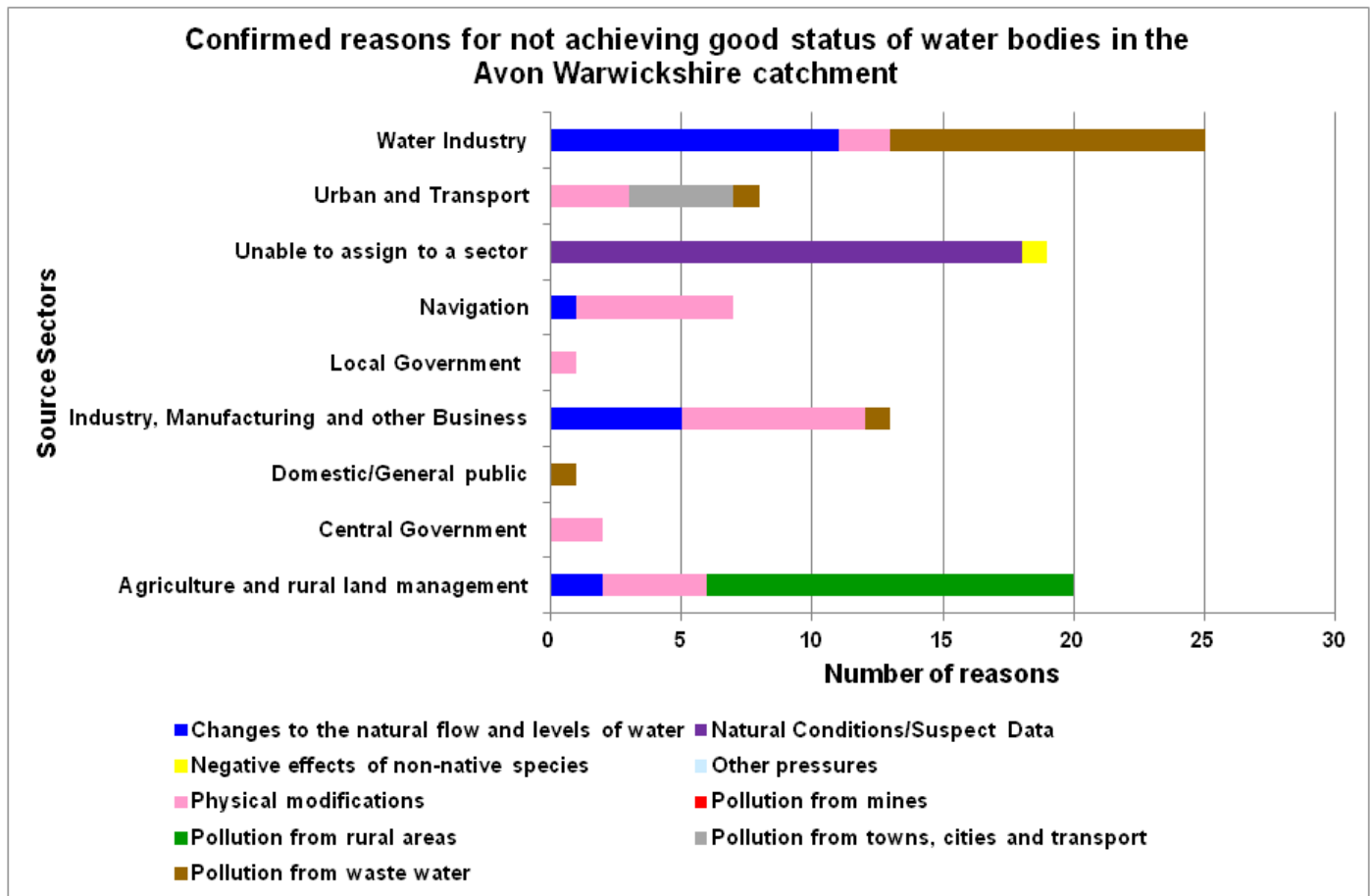


Figure 4: Confirmed reasons for not achieving good status of water bodies in the Avon Warwickshire Catchment.

Source: Environment Agency Warwickshire Management Catchment Report

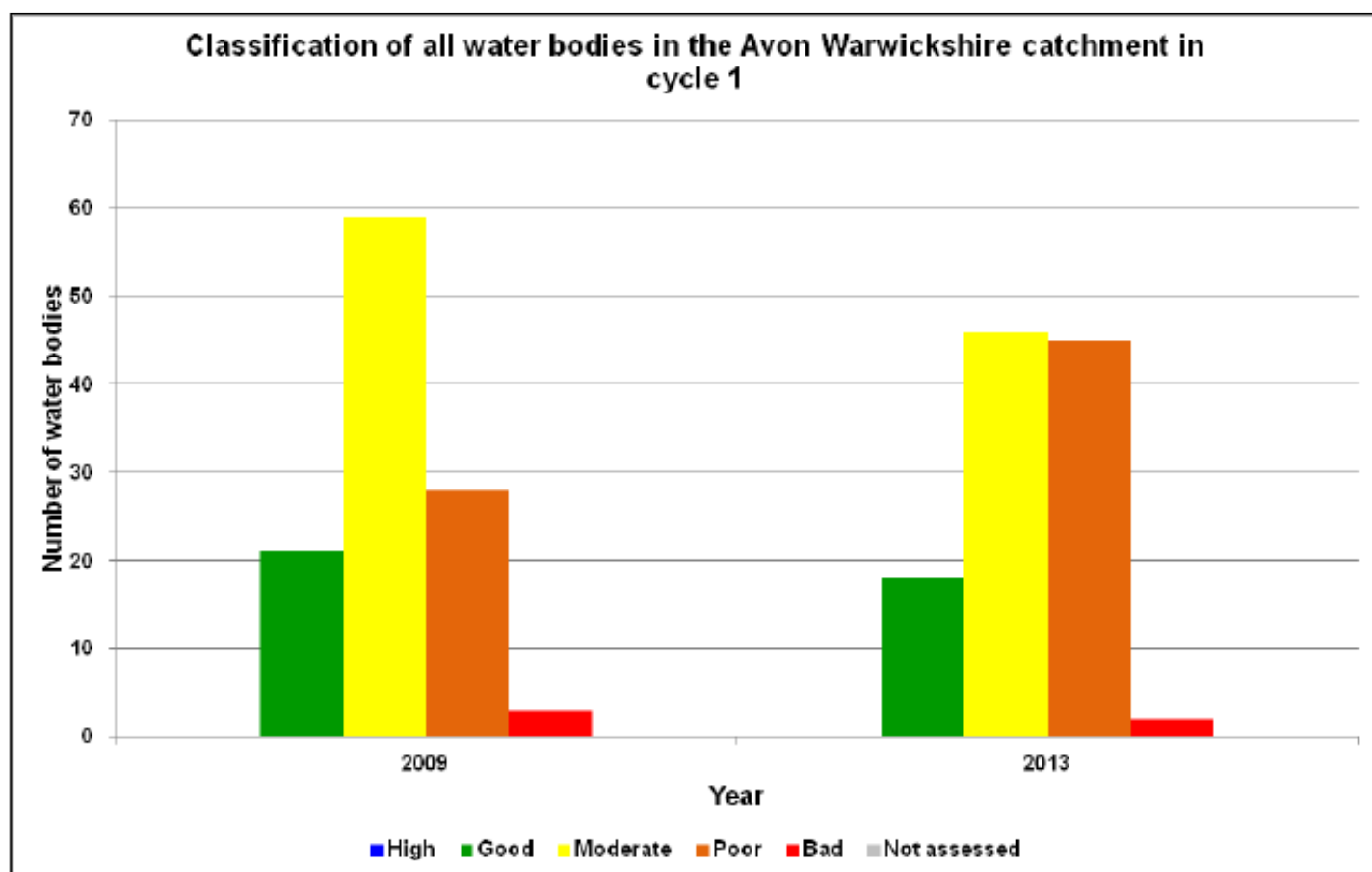


Figure 5: Chart showing the classification and long term objectives of all water bodies in the Avon Warwickshire catchment in cycle 2.

Source: Environment Agency Warwickshire Management Catchment Report.

Blythe Operational Catchment (Part of Humber/Tame Catchment)

- B.45 The River Blythe rises south west of Earlswood and runs adjacent to the conurbations of Solihull, Birmingham and the M42 corridor before joining with the River Cole north of Coleshill. The Grand Union and Stratford upon Avon canals cross the catchment. It forms part of a designated drinking water protected area and is also a Site of Special Scientific Interest (SSSI), being a particularly fine example of a lowland river on clay.
- B.46 There are 5 river water bodies, 1 canal, 1 lake, 0 estuarine & coastal waters and 1 groundwater water body in this catchment. The status (health) of the water environment in 2009 was assessed as being generally moderate. In 2014, the status of the water environment had deteriorated, as is shown in Figure 7 below. The reasons for failing to achieve good status are presented in Figure 6.

Figure 6: Reasons for not achieving good status of water bodies in the Blythe Catchment

Source: Environment Agency Warwickshire Management Catchment Report.

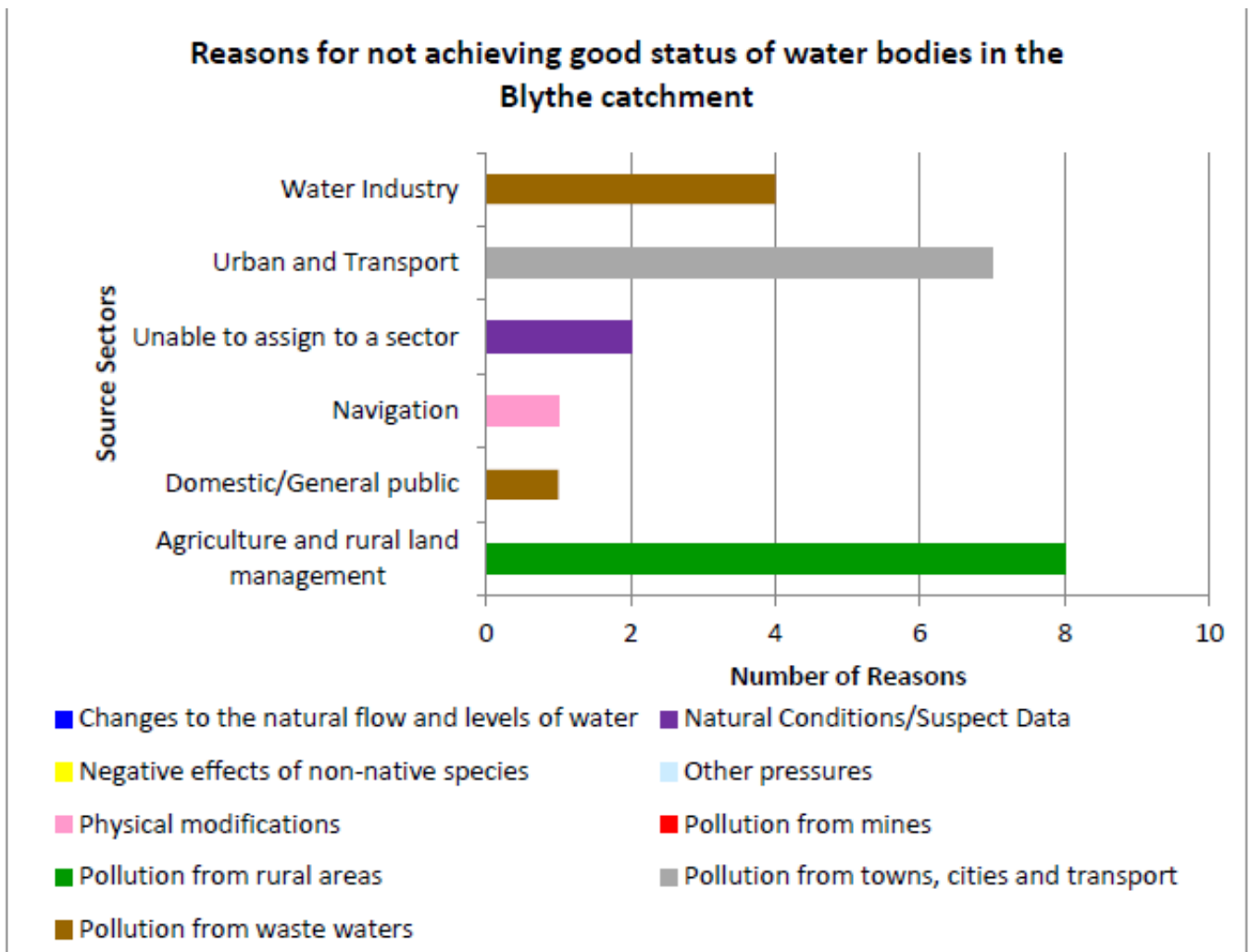
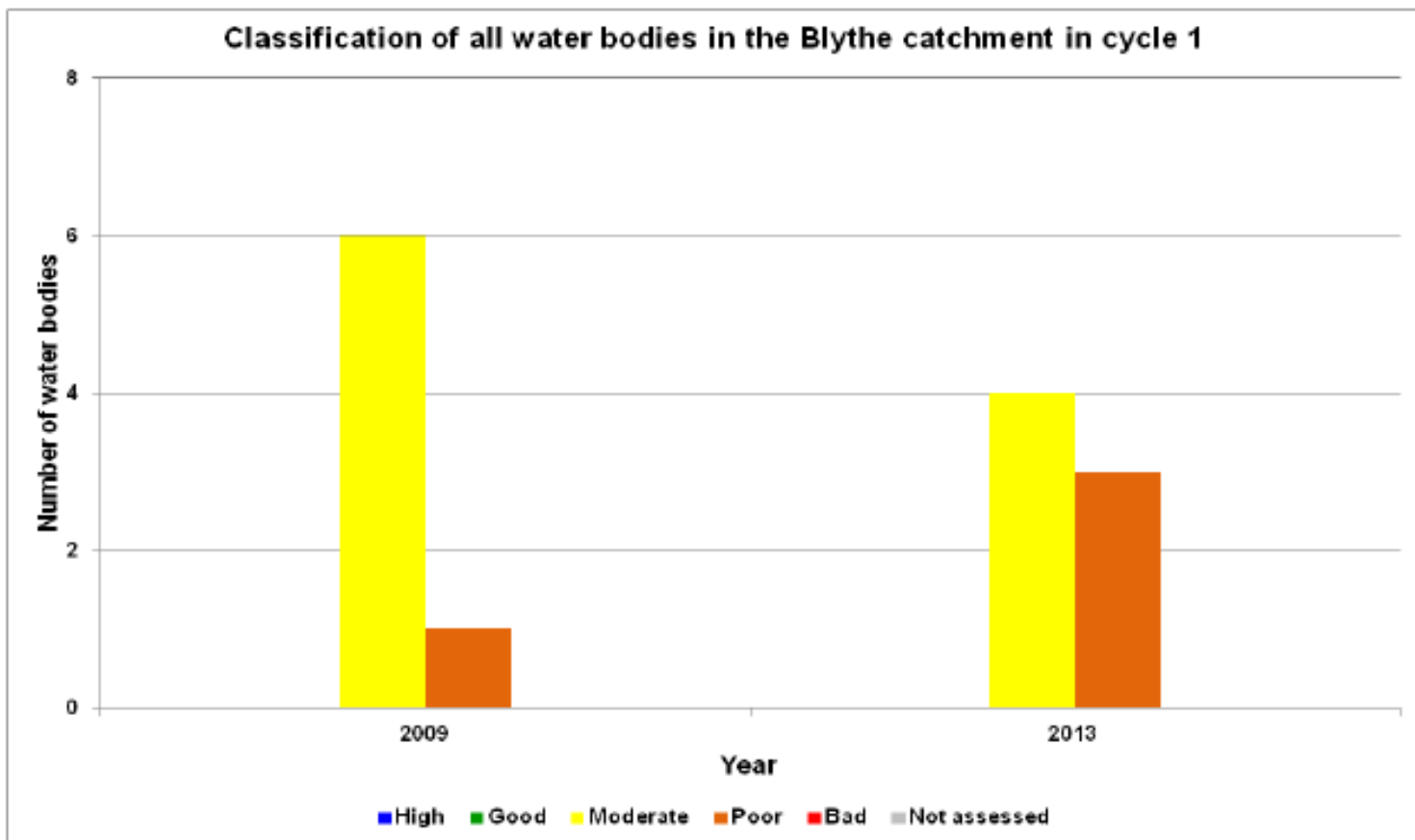


Figure 7: Classification of all water bodies in the Blythe Catchment during Cycle 1



Source: Environment Agency Warwickshire Management Catchment Report.

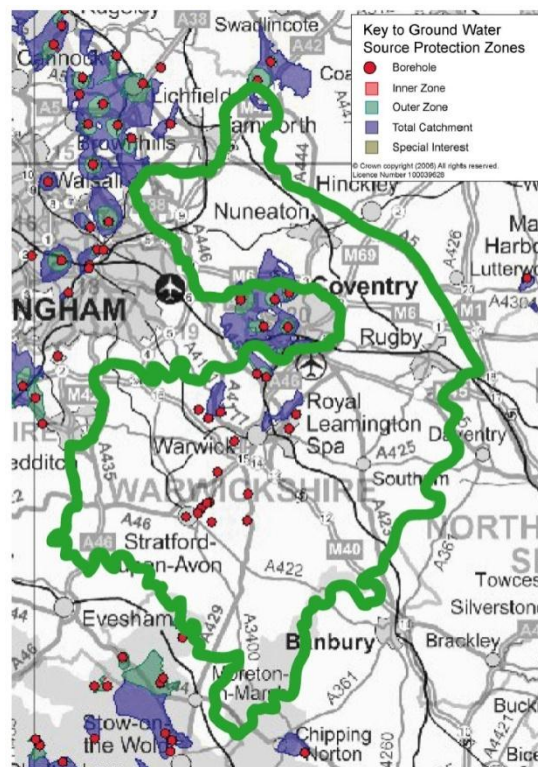
Cherwell Operational Catchment (Part of Thames Catchment).

- B.47 The Cherwell operational catchment extends south from the headwaters of the river at Charwelton in Northamptonshire to its confluence with the River Thames at New Hinksey. Only part of it lies in Warwickshire. In the overall catchment there are 32 rivers and 1 lake water body. The status (health) of the water environment in 2009 was assessed as being generally poor. In 2014, the status of the water environment had not deteriorated.
- B.48 In Warwickshire there is 1 canal (the Oxford Canal) and two rivers: Highfurlong Brook and the Cherwell (Source to Trafford Brook). Overall water quality for the Cherwell is assessed as being moderate in 2014, with good chemical and moderate ecological quality. Highfurlong Brook was assessed as having moderate overall water quality and ecological quality (a deterioration from having good quality in 2009). Its chemical quality is still good.
- B.49 The main reason that water bodies in the Cherwell operational catchment are not achieving a good status is pollution from waste water accounts. The main source of this pollution is sewage discharges that contain phosphate and ammonia and adversely affect the waters' oxygen levels and ability to support life. Further issues are related to rural pollution arising from land run-off and general land management. Physical modification is identified as a significant reason for not achieving good status in the catchment also. Water bodies in the upper Cherwell have low flows and invasive non-native invasive species are having an impact.

Groundwater and Source Protection Zones

- B.50 Groundwater in England and Wales provides up to a third of drinking water resources together with providing a major contribution to maintaining the natural flow of many surface waters and rivers. The Environment Agency has defined Source Protection Zones (SPZs) for 2,000 groundwater sources as wells, boreholes and springs used for public drinking water supply. These zones show areas where groundwater supplies are considered particularly vulnerable to contamination from pollution in the area and are divided into three main zones (inner, outer and total catchment), the spatial extent of which are determined through a combination of ground conditions, how the groundwater is removed, and other environmental factors.
- B.51 Any pollution that can travel to the borehole within 50 days from any point within the zone is classified as being inside the inner protection zone, a minimum of a 50 metre radius around the borehole to protect against the transmission of toxic chemicals and waterborne disease. An outer zone covers either a 400 days pollutant travel path or 25% of the total catchment area – whichever area is the biggest. This travel time is determined as the minimum amount of time considered necessary for pollutants to be diluted, reduced in strength or delayed by the time they reach the borehole. The total catchment is the total area needed to support removal of water from the borehole, and to support any discharge from the borehole.
- B.52 An extract of the Environment Agency Source Protection Zone map for Warwickshire is shown in Figure 5.6. Warwickshire is relatively free from Source Protection Zones which tend to concentrate in urban centres and more densely populated settlements. Environment Agency data records 24 groundwater abstraction boreholes centred on the County's urban settlements. Most southerly, six boreholes are located close to the centre of Stratford on Avon and a further two close to neighbouring Wellesbourne. More northerly, in Warwick District the closely situated settlements of Warwick and Leamington Spa are served by a further total of six boreholes, to the north of each is demarcated a protected catchment area.
- B.53 Towards the centre of the County lies the city of Coventry, and while not included within the scope of this report, the accumulation of water abstraction sources, together with densely populated settlement, causes much of the area to be protected as catchment zones and outer protection zones, some of which overlap into Warwickshire's local authority administered land. No further abstraction boreholes are demarcated in either of the three northern local authorities, although the most northerly North Warwickshire District borders of North Warwickshire District come under the influence of catchments of boreholes located in the Staffordshire settlement of Donisthorpe.

Figure 8: Source Protection Zones in Warwickshire



Source: <http://www.environment-agency.co.uk>

Climate Change and Flooding

- B.54 The UK Climate Impacts Change Programme (UKCIP) has predicted that the Midlands' climate will continue to get warmer and wetter, with more storms and flooding in the winter and more droughts in the summer. There is evidence to show that the climate of the West Midlands changed in the 20th Century. Most notably the annual average temperature rose by 0.6°C, the growing season lengthened by 30 days, summer rainfall decreased and winter rainfall increased. More intense rainfall events and more storms could cause damage to buildings, roads, rails, crops and drainage systems through flooding and storm damage. Higher temperatures in summer could increase the demand for water; reduce water availability and cause soils to dry, increasing the risk of building subsidence.
- B.55 There are three major Rivers in the Midlands, the River Severn, River Trent and River Avon, and many smaller tributaries. This makes the region particularly prone to flooding. The Avon catchment covers 2,900 square kilometres of central England and some 900,000 people live in the area. Coventry is the largest city in the catchment with a population of about 300,000. Other major urban areas are Rugby, Leamington and Warwick. The lower, western parts of the catchment are more rural with the main towns being Stratford-upon-Avon, Evesham, Redditch and Tewkesbury. The majority of flooding incidents are associated with the urban areas around the River Avon and its associated tributaries.
- B.56 The River Avon is a major tributary of the River Severn. It rises near Naseby, on the Northamptonshire and Leicestershire borders. From here, it flows south west and forms an important part of the landscape character of Rugby, Warwick, Stratford-upon-Avon, Evesham and finally Tewkesbury, where it joins the River Severn after a journey of 179km.

- B.57 The major tributaries of the River Avon are the Rivers Leam, the Stour, and the Arrow, and significant smaller tributaries are the Rivers Sowe, Isbourne and Dene and the Badsey and Bow Brooks. Other watercourses in the catchment are also important for water resources. In Warwickshire, the most common causes of flooding are river flooding, surface water flooding and sewer flooding
- B.58 Flooding records from 2007 to 2012 show a tendency for floods to result due to heavy rainfall and the resultant fluvial flooding. Surface water flooding is mainly associated with the river channels in the area. In urban areas, it is strongly influenced by presence of buildings and structures (e.g. bridges) that impede the flow of surface water.
- B.59 Groundwater flooding is less of an issue in the county because the bedrock is predominately mudstone, siltstone, limestone and sandstone which are associated with a lower risk of groundwater flooding. However, in some parts of the county, there have been instances of groundwater flooding associated with superficial deposits of till, sand and gravel, and alluvium near the major river channels. There is also always the threat of flooding of land and property that is near the canal network or a reservoir should there be a structural failure, with historic records showing 25 incidences of overtopping and 10 of breaches in embankments along canals, the majority of which have occurred along the Oxford Canal, primarily due to heavy rainfall.
- B.60 There is a minimal presence of formal flood defences in Warwickshire, although the County Council has identified seven areas in which flood alleviation schemes are considered beneficial to local communities including Polesworth, Broadwell and Pailton. Additionally, there are only four flood storage areas along the Upper Avon and Clifton Brook, which are concentrated in the Rugby urban area as part of the River Avon Flood Relief Scheme.
- B.61 The county of Warwickshire has experienced a number of significant flood events in recent times, often with complex flooding interactions from multiple sources. Notable events include January 1992, Easter 1998, August 1999, June 2005, summer 2007, December 2008 and November 2012. Warwickshire hasn't suffered from widespread flooding since 2007, however more localised problems have been experienced by households and businesses. Even some minor occurrences can have a devastating effect, both financially and emotionally.
- B.62 Following the 2007 floods, the Government commissioned an independent review and in addition to this the County Council commissioned consultants to produce a Level One Strategic Flood Risk Assessment. This mapped all forms of flood risk for use as an evidence base to locate new development, primarily in low flood risk areas.
- B.63 The key tasks for the Lead Local Flood Authorities (LLFA) are:
- To carry out a Preliminary Flood Risk Assessment (PFRA), which is a high level exercise based on existing and available information relating to areas with a history of flooding. Where flood situations have arisen from a combination of surface water with main river or coastal flooding, investigations in conjunction with the Environment Agency are to be carried out.
 - On the basis of this assessment, establish Flood Risk Areas. These are areas of significant risk as defined by European thresholds and Environment Agency Guidance, which take into account local sources of flood risk, density of population, and number of critical infrastructures. Prepare maps showing the level of hazard and risk in Flood Risk Areas by June 2013.
 - Prepare management plans for these Flood Risk Areas by June 2015.
- B.64 Since 2007, work with a total value of approximately £10m has been carried out in Warwickshire. Most of this has been jointly funded and in partnership with stakeholders

such as the Environment Agency, Severn Trent Water, Borough/District Councils and Town Councils. This has included major Flood Alleviation Schemes at Alcester and Delamere Road, Bedworth.

- B.65 Within Warwickshire there are a number of major towns and villages including Atherstone, Polesworth, Coleshill, Nuneaton, Bedworth, Bulkington, Rugby, Royal Leamington Spa, Warwick, Kenilworth, Stratford-upon-Avon, Alcester, Southam, Shipton-on-Stour, Studley and Wellsbourne that are at least partially contained within Flood Zone 2. The Environment Agency has prepared maps for Warwickshire County showing an indication of the locations at risk from flooding from fluvial sources within the County. These maps are found in Figures 9 to 25 below (from the Strategic Flood Risk Assessment produced for Warwickshire County Council unless otherwise stated).

Figure 9 – Environment Agency Flood Zones and Rivers (tile 1)

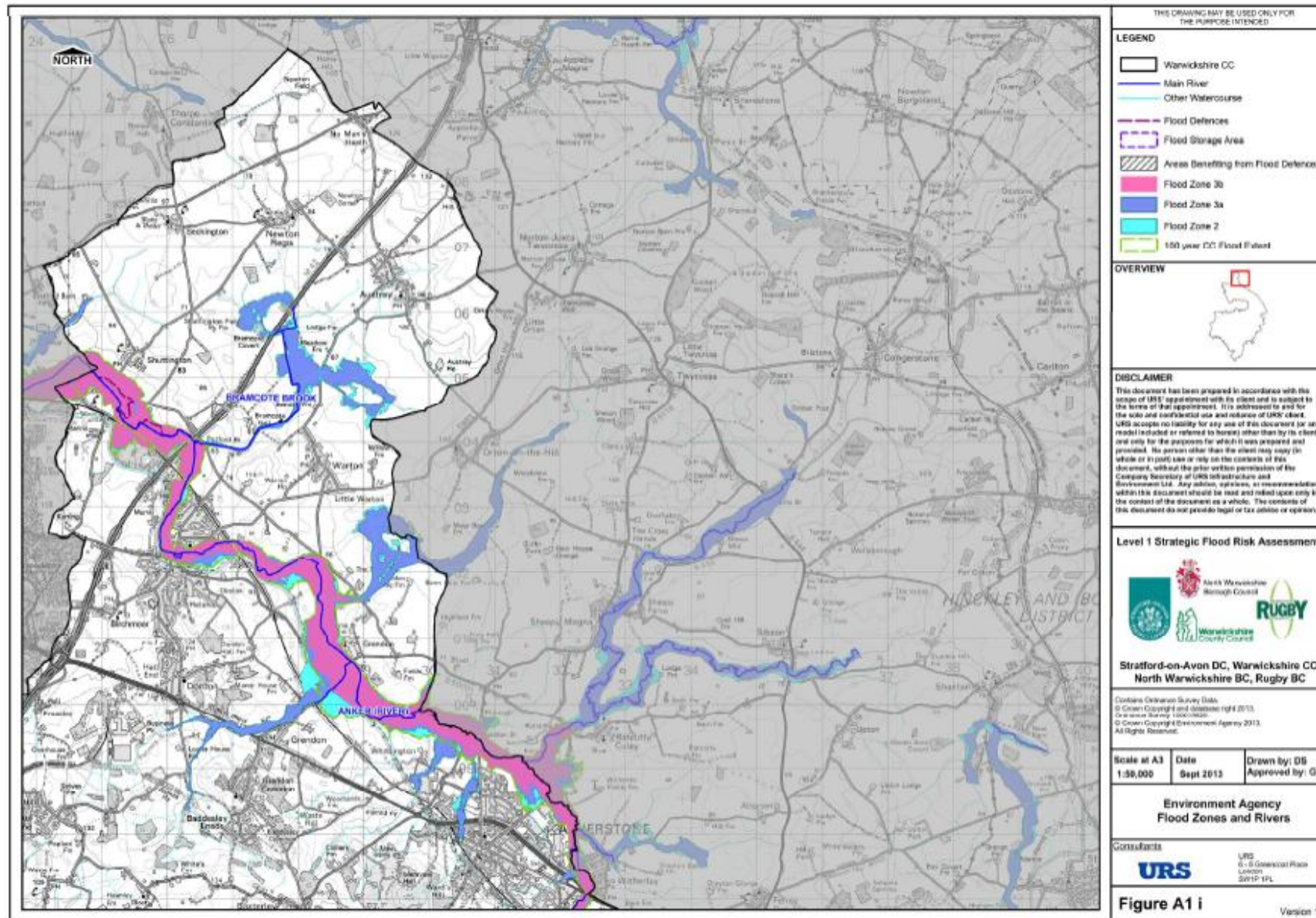


Figure 10 - Environment Agency Flood Zones and Rivers (tile 2)

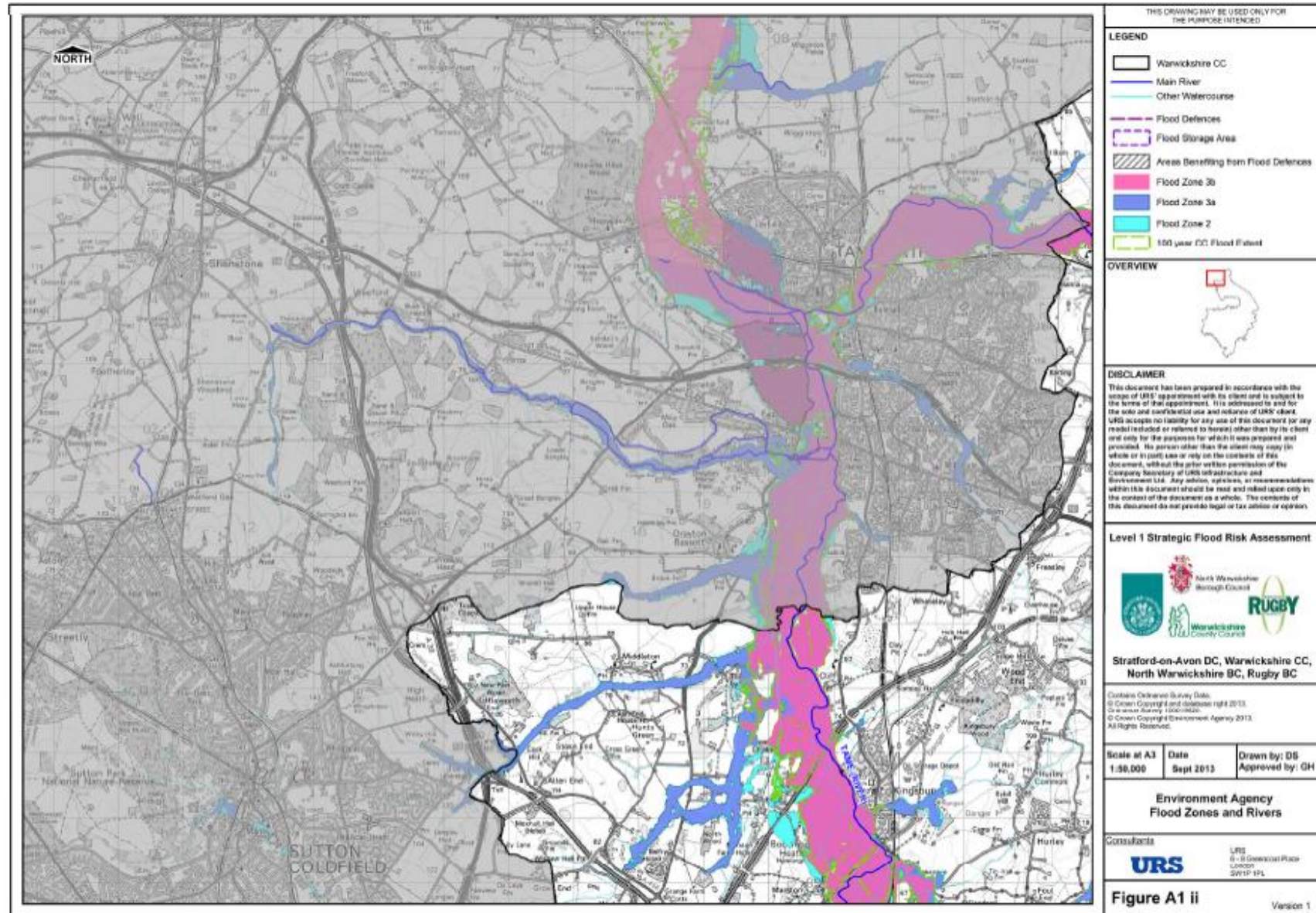


Figure 11 - Environment Agency Flood Zones and Rivers (tile 3)

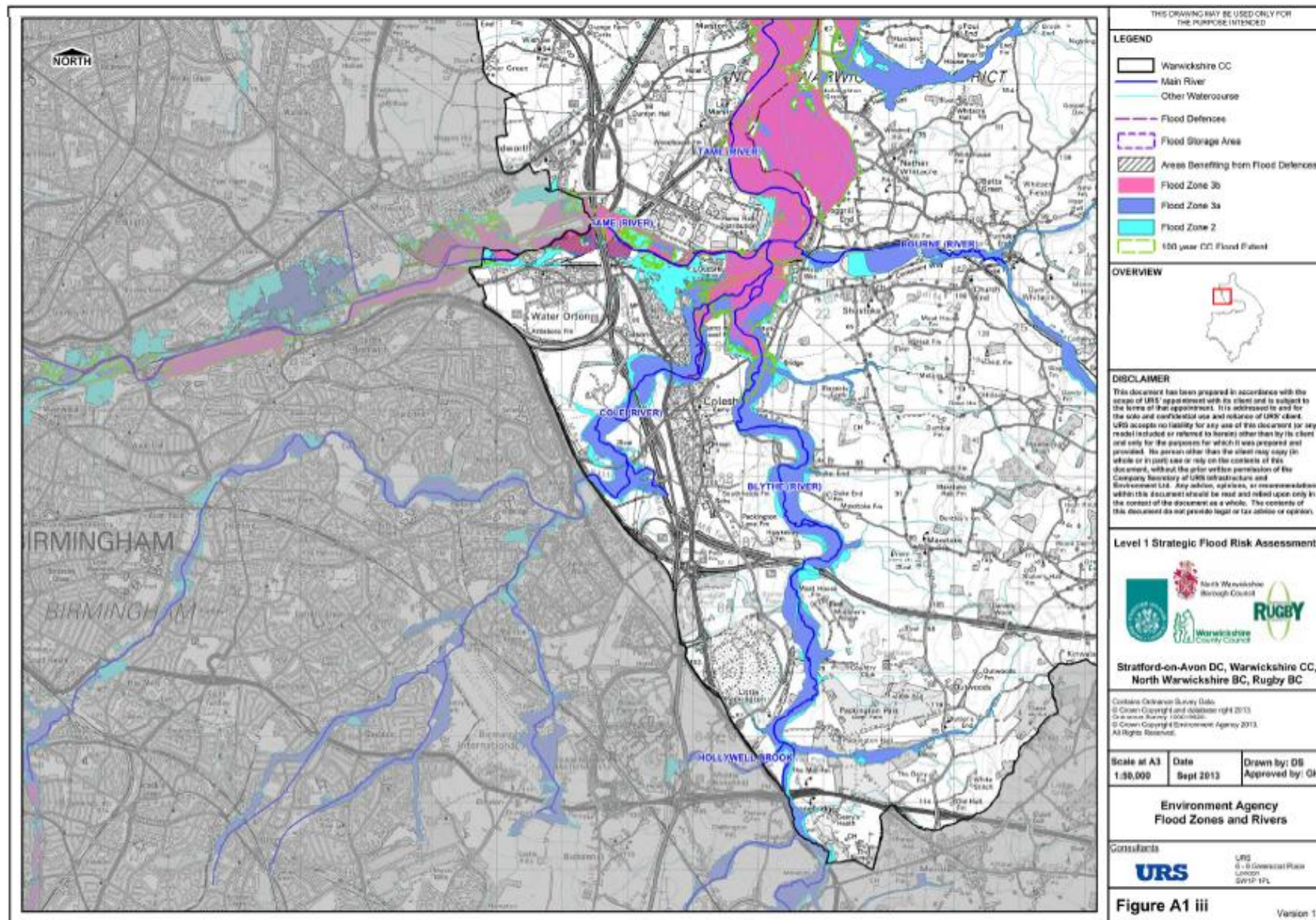


Figure 12 - Environment Agency Flood Zones and Rivers (tile 4)

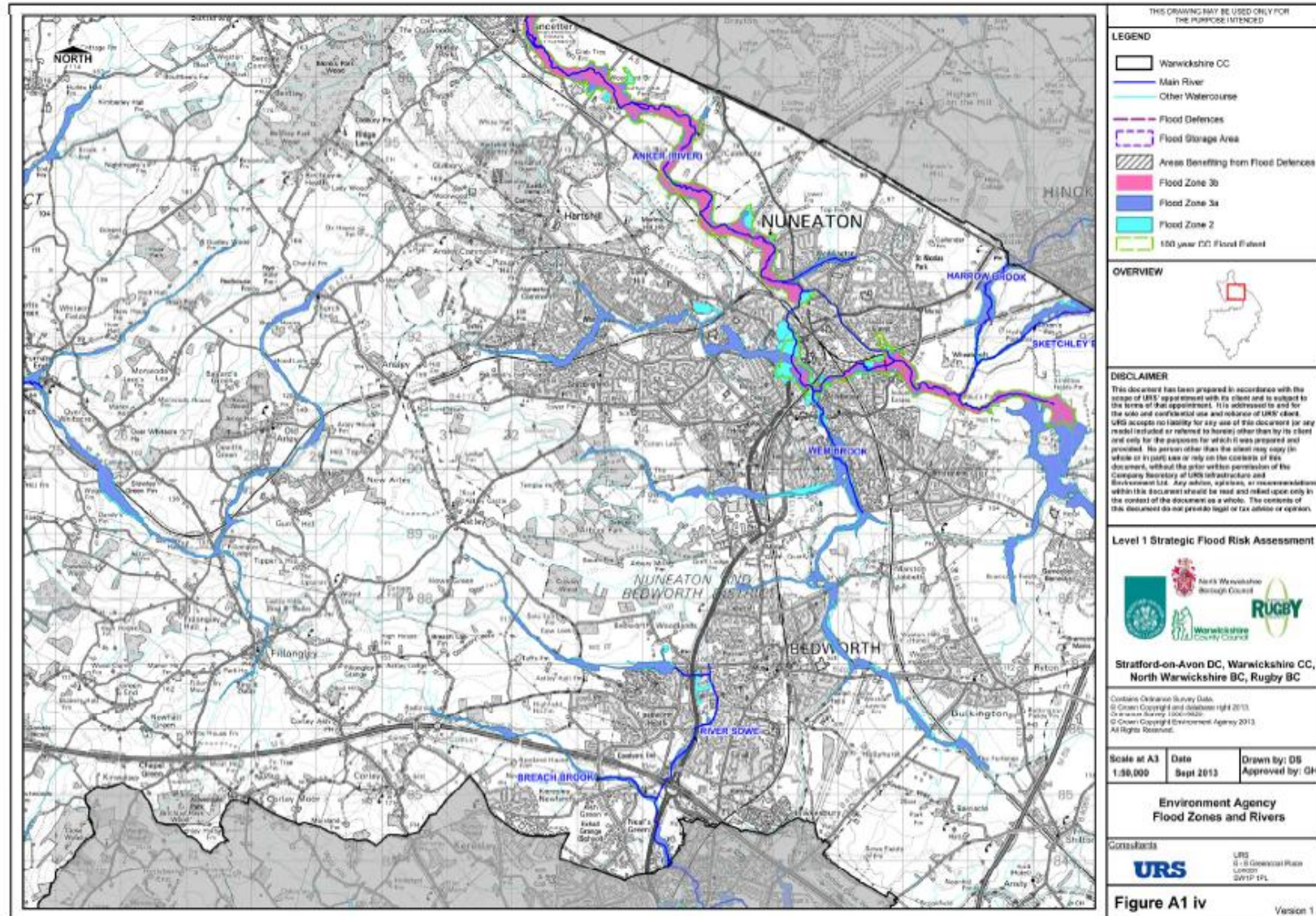


Figure 13 - Environment Agency Flood Zones and Rivers (tile 5)

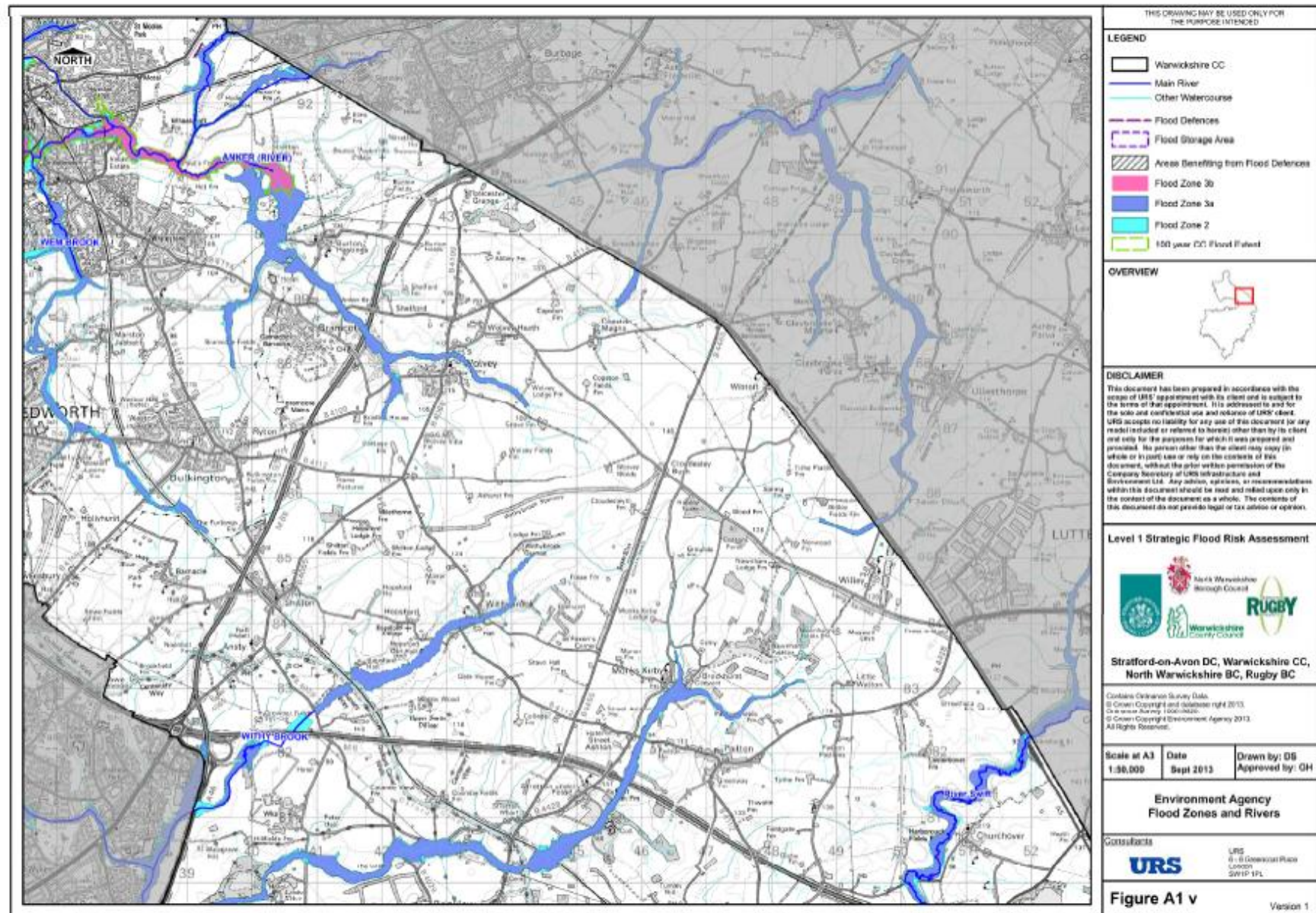


Figure 14 - Environment Agency Flood Zones and Rivers (tile 6)

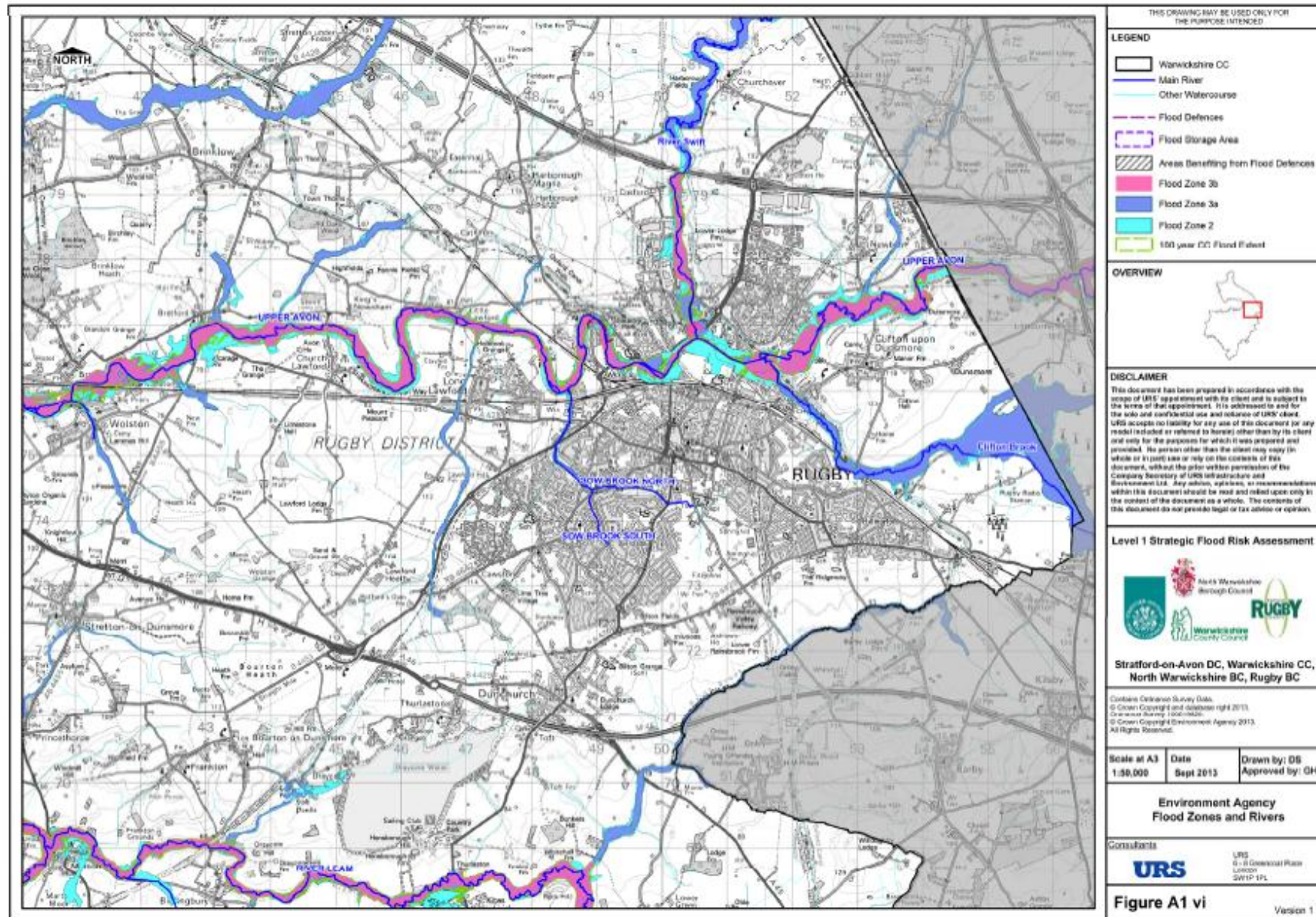


Figure 15 - Environment Agency Flood Zones and Rivers (tile 7)

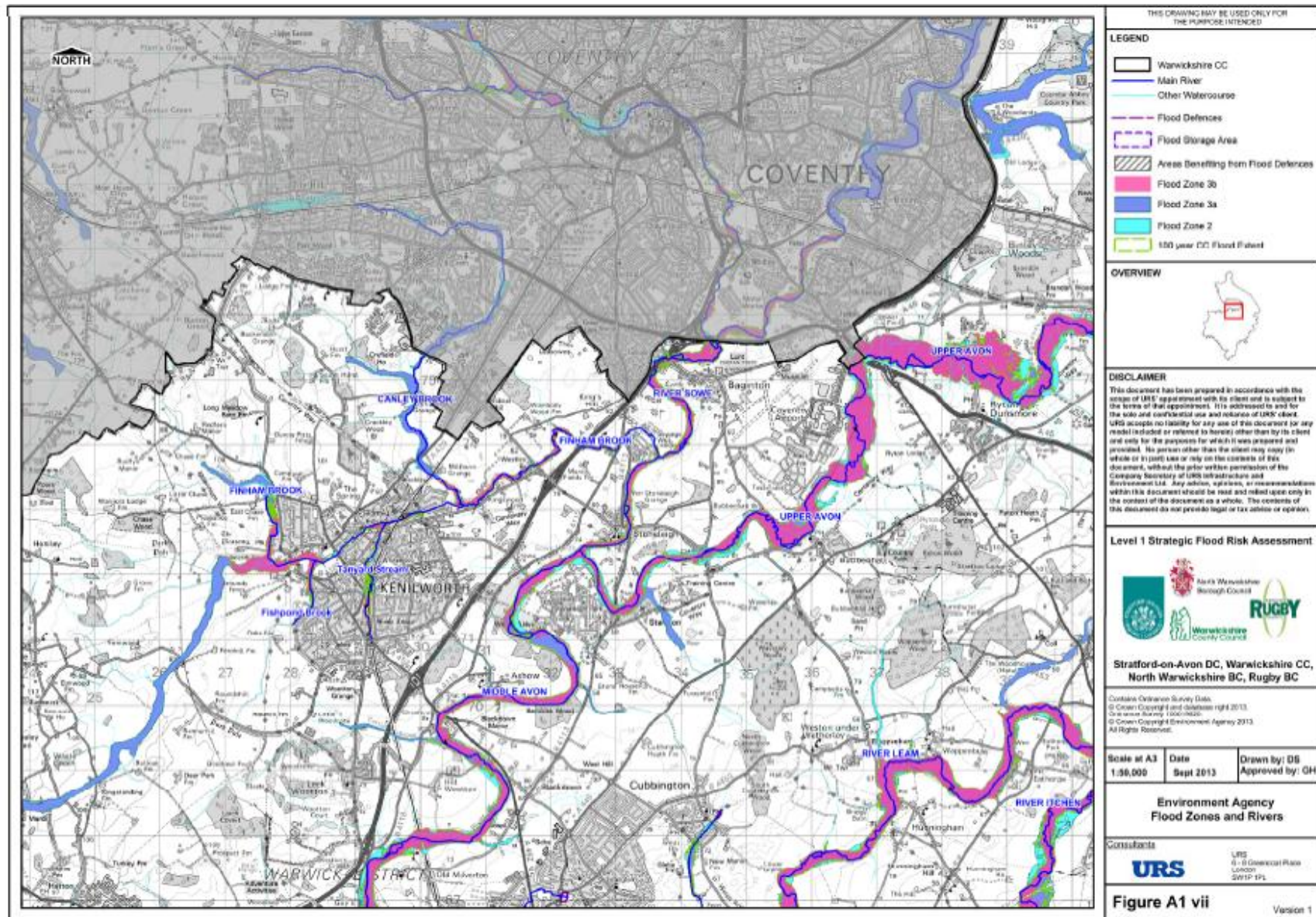


Figure 16 - Environment Agency Flood Zones and Rivers (tile 8)

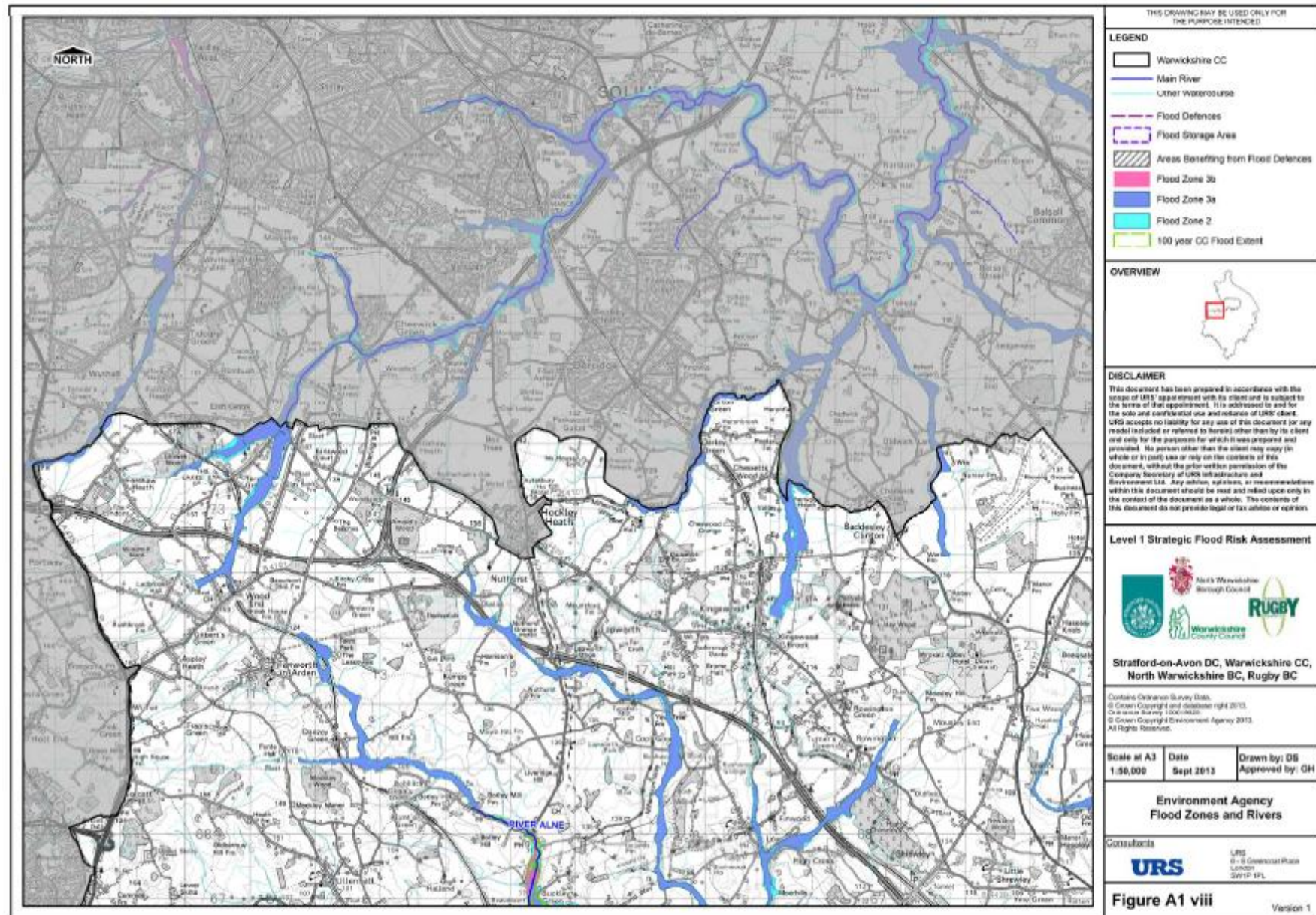


Figure 17 - Environment Agency Flood Zones and Rivers (tile 9)

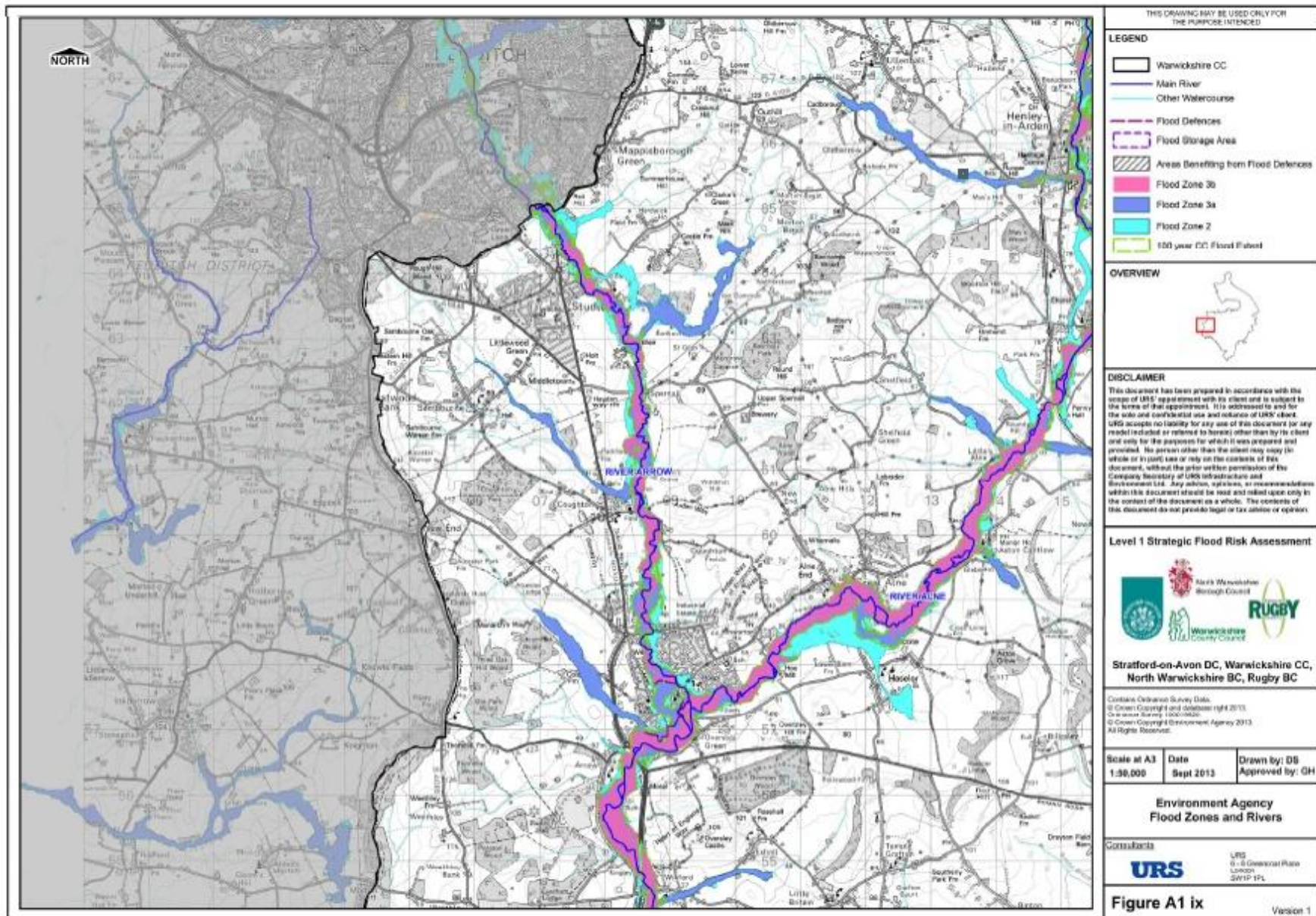
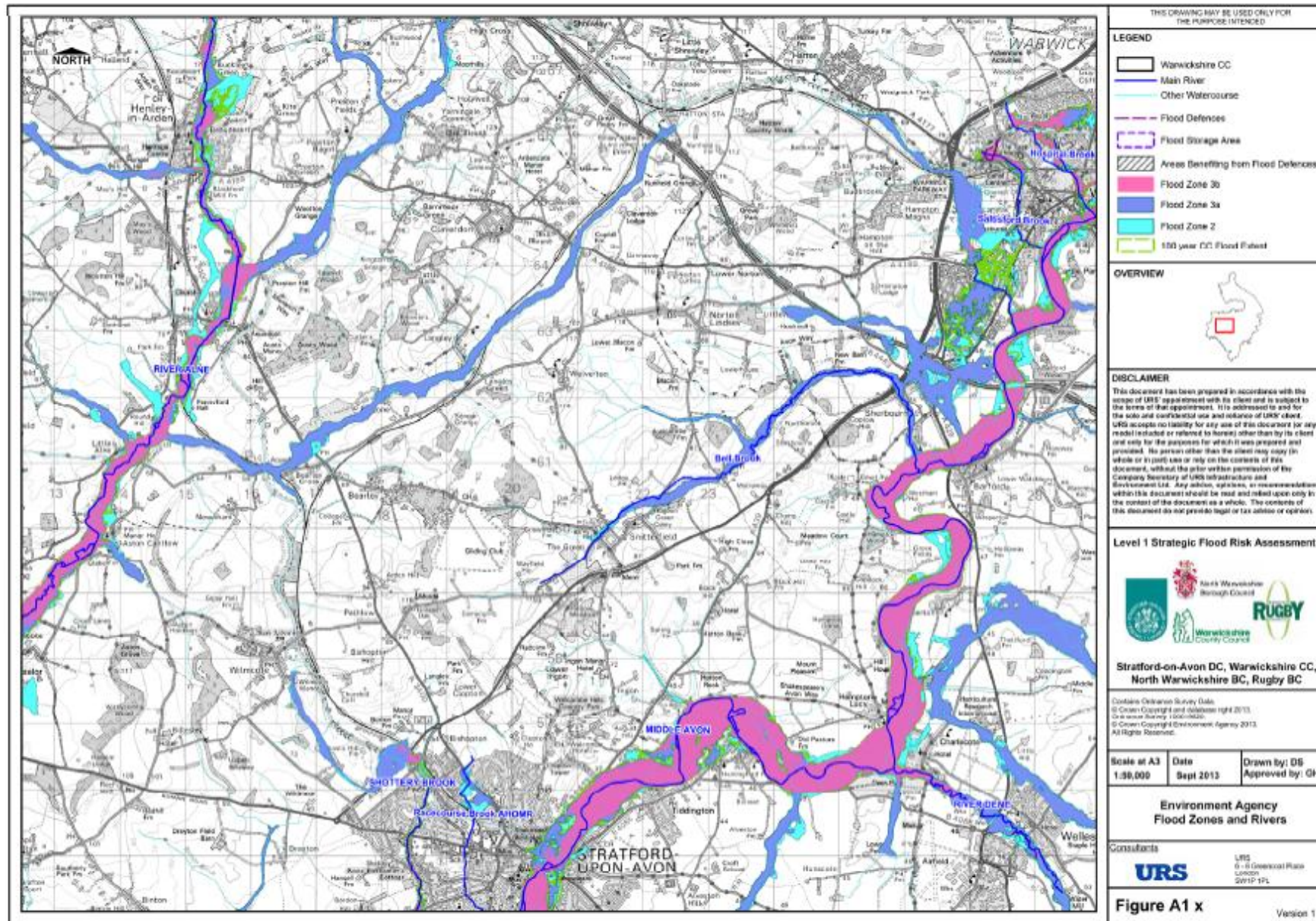


Figure 18 - Environment Agency Flood Zones and Rivers (tile 10)



• **Prevalence** = the proportion of a population that has a disease at a particular point in time



Figure 20 - Environment Agency Flood Zones and Rivers (tile 12)

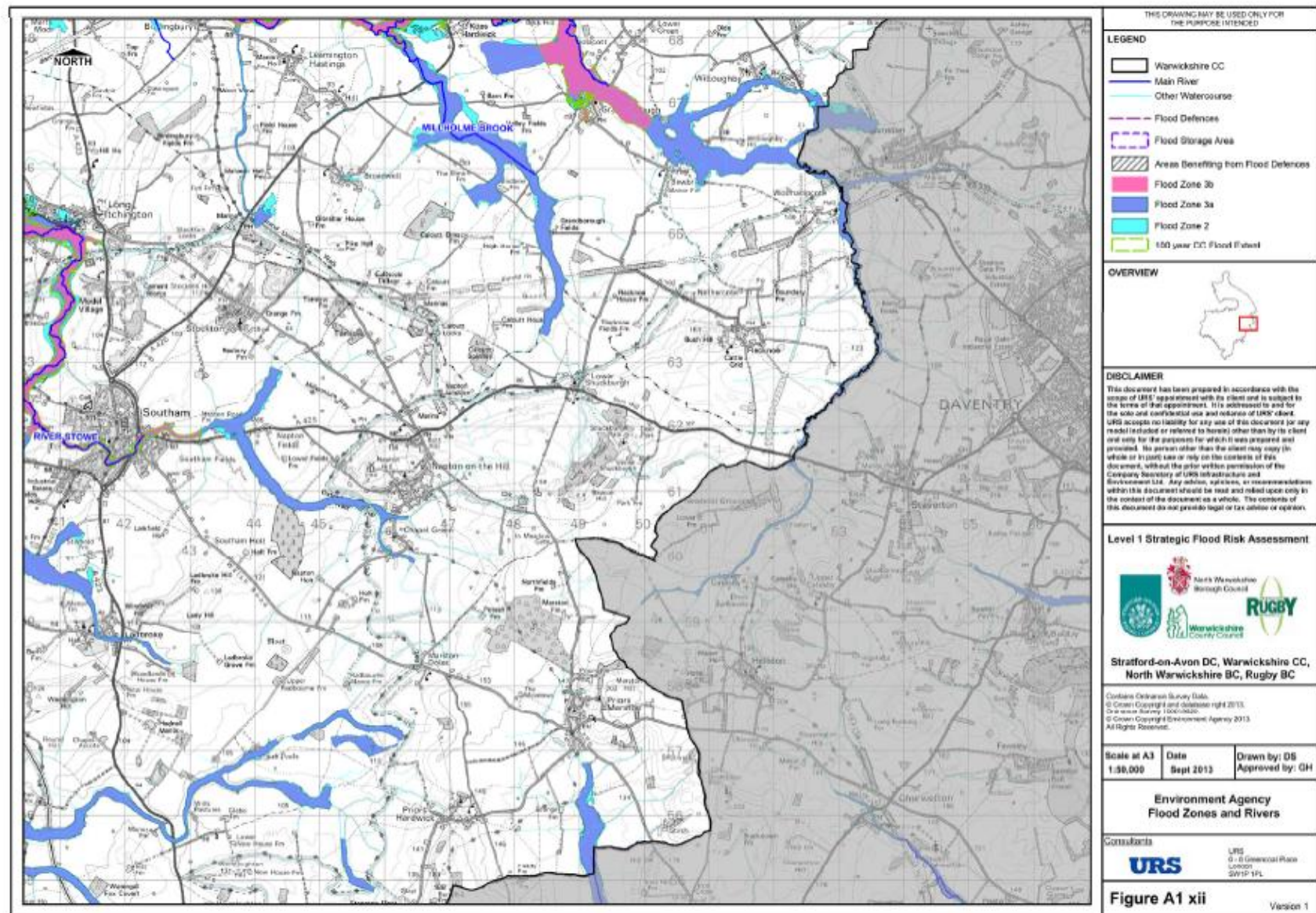


Figure 21 - Environment Agency Flood Zones and Rivers (tile 13)

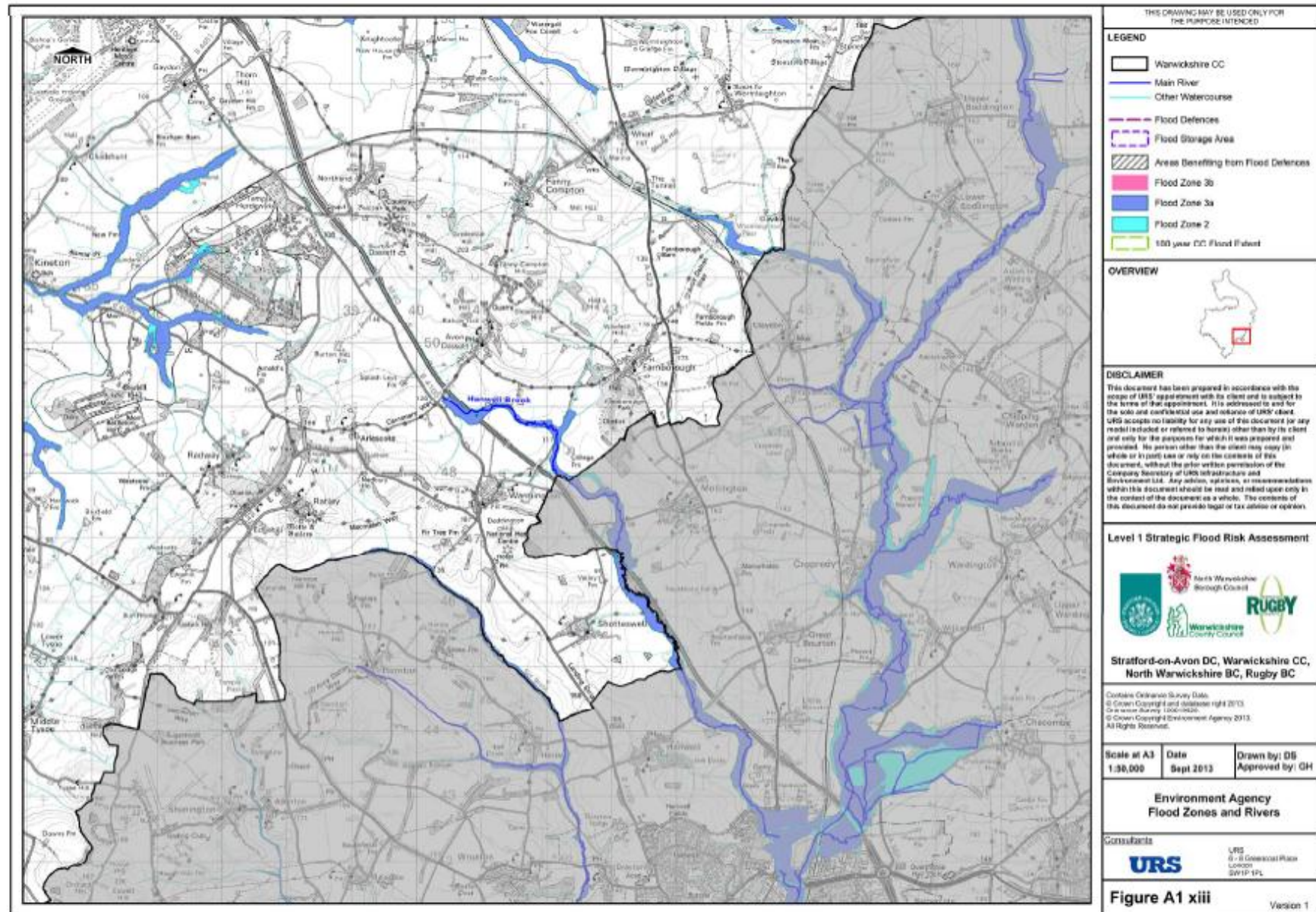


Figure 22 - Environment Agency Flood Zones and Rivers (tile 14)

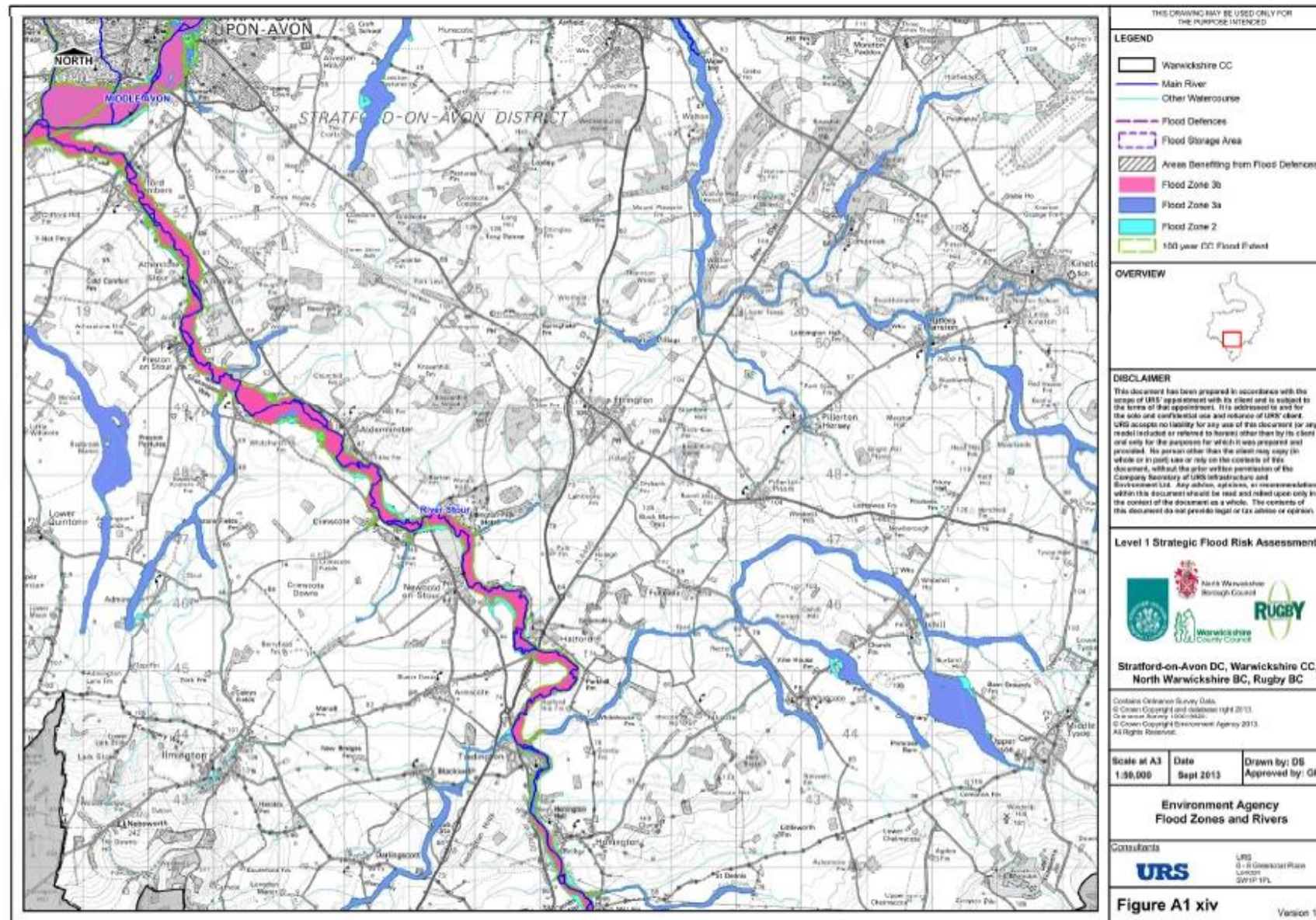


Figure 23 - Environment Agency Flood Zones and Rivers (tile 15)

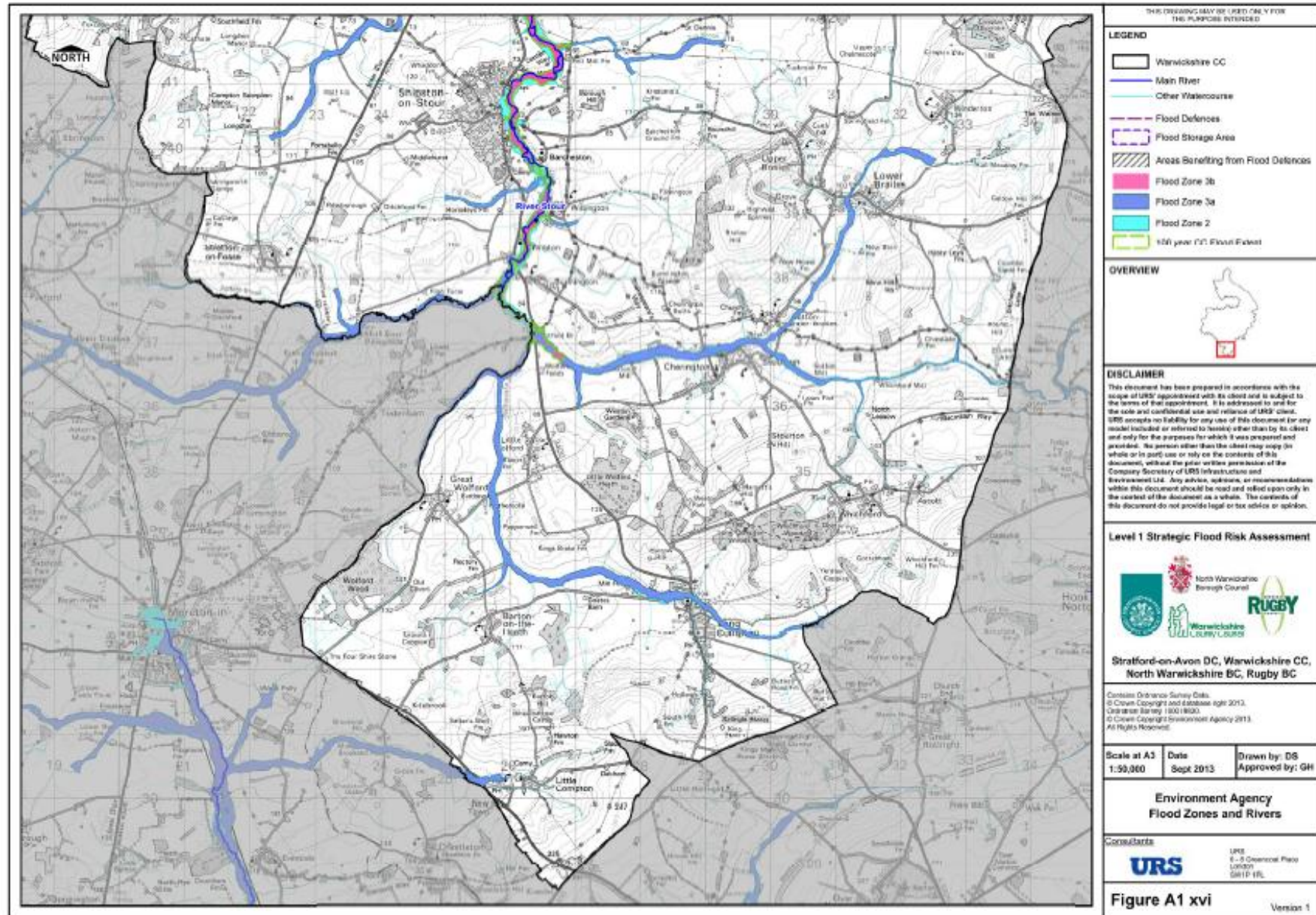
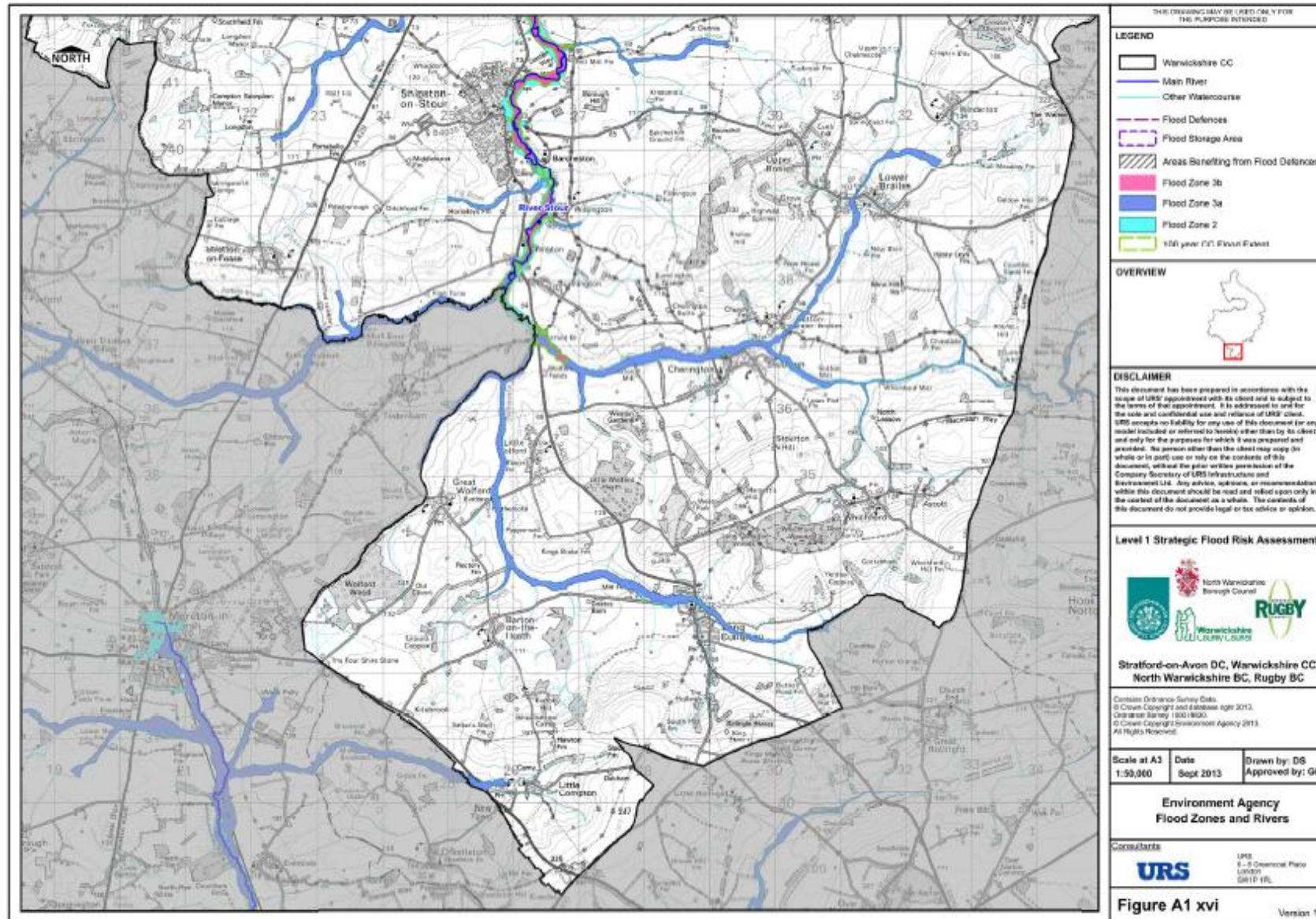


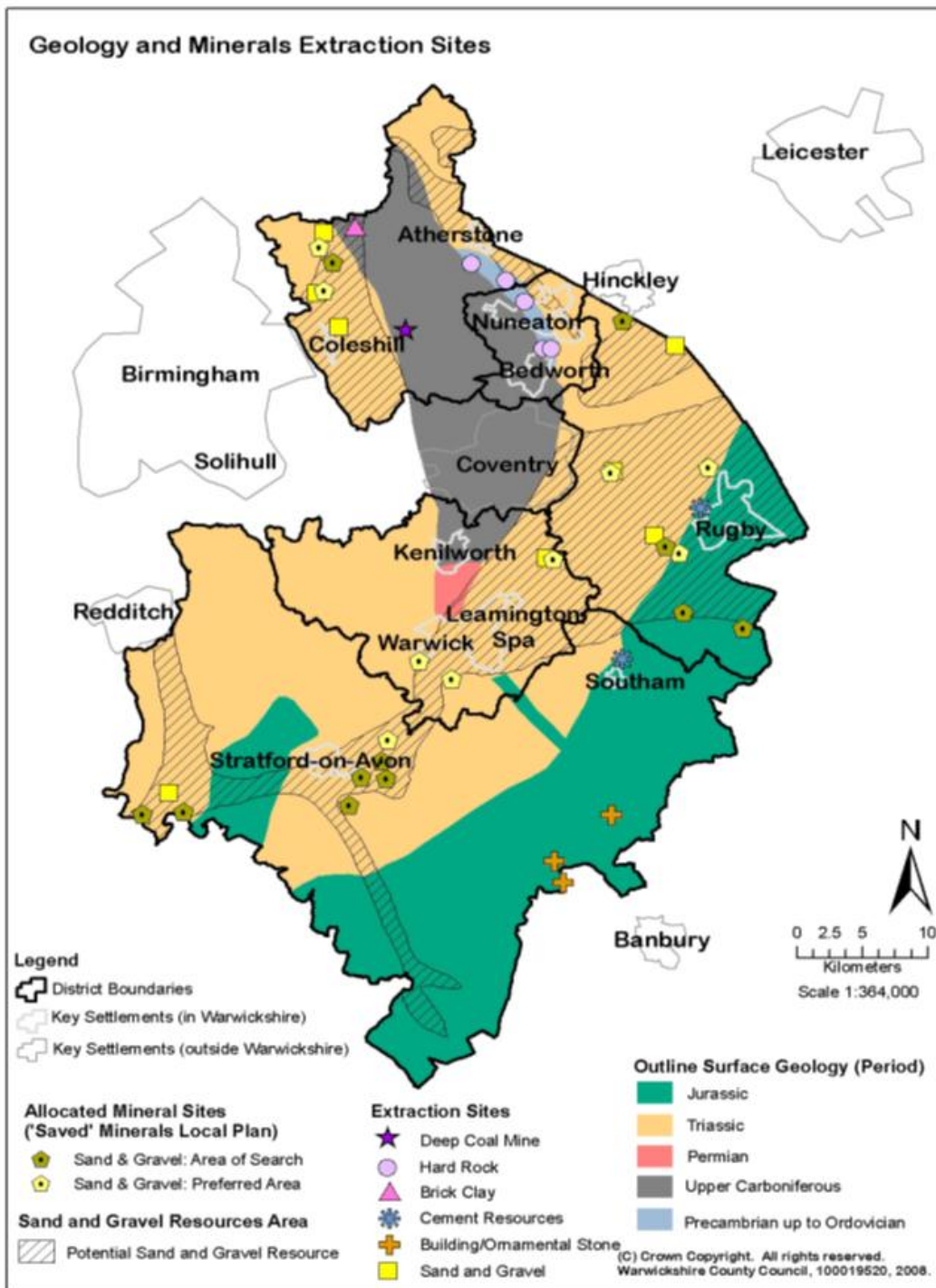
Figure 24 - Environment Agency Flood Zones and Rivers (tile 16)



Minerals in the County

- B.66 The diverse mineral resources of Warwickshire have been exploited since the first human settlements developed in the County. Today extraction of the coal, sand and gravel, crushed rock, brick clay and ironstone still occur and extensive reserves of these minerals still exist. A map of the County geology with all the existing mineral sites and allocations is shown in figure 5.5 below.
- B.67 Historically, bricks have been made across Warwickshire wherever suitable clay was found. The use of local clay for the production of bricks has ceased with the exception of the large scale brickworks at Kingsbury which extracts the high quality Etruria Marl which is part of the County's carboniferous sequences of rocks. However, this is a major plant of regional and national significance owing to the specialist brick types which are exported around the country.
- B.68 The use of local stone for building purposes has been widespread in Warwickshire with Warwick and Kenilworth Castles being obvious examples. Stately homes, churches and various settlements have been constructed from local materials such as Triassic sandstones and Jurassic Ironstones, reflecting the County's varied geology. However, the stone quarries supplying local materials have all but finished, which is creating a problem in repairing local buildings and retaining the local distinctiveness of many towns and villages. Coal from the Carboniferous Coal Measures which are exposed at the surface in the north of the County has been exploited since Roman Times. Small scale operations from shallow pits continued until the middle to late 19th century when numerous deep mines began operation in North Warwickshire reflecting an increase in the demand for coal and advances in mining technology. One deep mine remains in operation at Daw Mill, near Arley in North Warwickshire. Current coal extraction takes place in the Corley Moor area at a depth of around 800-900 metres.
- B.69 The production of cement has a long history in Warwickshire with extraction of the required minerals (Jurassic Lias limestones and shales) occurring around Southam and Rugby. Current production comes from the one cement kiln in Rugby, where locally extracted materials are mixed with chalk from Bedfordshire.
- B.70 Sand and Gravel is widespread around the County but is generally found in river terrace deposits along the floors of major river valleys such as the Tame and the Avon. Glacial deposits of sand and gravel are also widespread but are mainly centred around Dunchurch and Wolston, Coleshill and interspersed along the A5 from Hillmorton to Wolvey.
- B.71 The Precambrian and Ordovician igneous rocks which outcrop around Nuneaton up to Mancetter in North Warwickshire are a vital source of high specification roadstone and aggregates which supply the main road networks of the West Midlands and neighbouring regions.

Figure 25: Geology and Mineral Extraction Sites in Warwickshire 2010



Source – Warwickshire Minerals Core Strategy Revised Spatial Options 2010

Health

- B.72 Years of Life Lost (YLL) is an indicator that measures premature mortality. The average YLL rate for all persons in Warwickshire, of 390 per 10,000 populations, is statistically significantly lower than the rates for both England (422 per 10,000 populations) and the West Midlands (448 per 10,000 populations). The Warwickshire average YLL rate for males is 74 years below that for the West Midlands, whilst the average for females is 44 years less. At a district level, the only YLL rate which is statistically significantly higher than that of the equivalent England figure, is that, for all persons in Nuneaton & Bedworth Borough with a rate of 455 per 10,000 population. Within Warwickshire, Nuneaton & Bedworth Borough has the highest YLL average rate for both males and females.
- B.73 Warwick District is the only local authority area in the County where the YLL average rate is significantly lower, in statistical terms, than the England average, for males, females and total persons.
- B.74 For males, all districts in Warwickshire have improved their national rankings in terms of YLL per 10,000 population from 2007-09 to 2008-10. North Warwickshire Borough had the greatest improvement, moving up 68 places from 258th to 190th in the rankings, followed by Stratford-on-Avon District and Nuneaton and Bedworth Borough which both rose 50 places in the national rankings. Overall, Stratford-on-Avon District remained the district with the highest ranking of 61st position nationally.
- B.75 For females, the most improved area is North Warwickshire Borough, moving from 196th to 110th position in the national rankings.
- B.76 The ranges between the highest and lowest ranked districts for males and females in Warwickshire have remained fairly similar since the 2007-09 data. For males, there is a 176 place difference between Stratford-on-Avon District, the highest ranked district (61st) and Nuneaton & Bedworth Borough, the lowest (237th). For females, there are 145 places between Warwick District, the highest ranked district (59th) and Nuneaton & Bedworth Borough, the lowest (204th).
- B.77 In terms of absolute levels of premature mortality in the County, the difference between the best and worst performing districts has decreased for males and is unchanged for females since the last data set. The gap for males has reduced from 199 YLL per 10,000 populations in 2007-09 to 156 years in 2008-2010.
- B.78 According to the latest 2010/11 National Child Measurement Programme (NCMP) data, 8% of reception age and 16% of Year 6 children in Warwickshire are classed as being obese. Both these figures are statistically significantly lower than both the West Midlands Region and England equivalent figures.
- B.79 In 2010/11, Nuneaton & Bedworth Borough had the highest proportion of obese Reception aged children (10%) whilst North Warwickshire Borough had the highest proportion of obese Year 6 children (19%). However, neither of these figures was statistically different to the Regional and National proportions.
- B.80 In contrast, the proportions of obese children in Rugby Borough, Warwick District and Stratford-on-Avon District are statistically lower than the Regional and National figures for both Reception and Yr 6.
- B.81 For Warwickshire as a whole, just over one in ten reported participating in the recommended levels of physical activity, which was higher than the regional proportion but lower than the national proportion. In Warwickshire this proportion equates to 46,400 adults. There is some minor variation between the districts with the lowest participation levels being reported in North Warwickshire Borough at 9% and the highest reported in Stratford-on-Avon District with 13%. Stratford-on-Avon District is the only area where participation levels are significantly better than the national average in statistical terms.

- B.82 In 2010, a total of 43 Super Output Areas (SOAs) in Warwickshire feature within the top 30% most health deprived SOAs in England, compared to 41 on this measure in 2007. Of the SOAs within the top 30% most health deprived nationally, 29 are in Nuneaton & Bedworth Borough, 6 in Rugby Borough, 3 in North Warwickshire Borough, 3 in Stratford-on-Avon District and 2 are in Warwick District.
- B.83 Warwickshire has eight SOAs in the 10% most health deprived nationally. This compares with only five in the 2007 index. The concentration of health deprivation issues is emphasised when we see that seven of these eight SOAs are in Nuneaton and Bedworth Borough, with one in Rugby Borough. Rugby Town Centre SOA is a new entry into the 10% most deprived SOAs nationally along with Attleborough North West and Hill Top SOA; both in Nuneaton & Bedworth Borough. The five SOAs in the 10% most health deprived in 2007 remain in this group in 2010.

Table 4: Warwickshire SOAs in the 10% most health deprived SOAs nationally

County rank of Health Deprivation and Disability Score	LSOA Name	District	National Rank of Health Deprivation and Disability Score – figure in brackets indicates 2007 rank
1	Bar Pool North & Crescents	Nuneaton & Bedworth	594 (1,031)
2	Abbey Town Centre	Nuneaton & Bedworth	833 (1,078)
3	Camp Hill Village Centre	Nuneaton & Bedworth	1,378 (3,081)
4	Kingswood Grove Farm & Rural	Nuneaton & Bedworth	1,954 (2,639)
5	Hill Top	Nuneaton & Bedworth	2,962 (4,337)
6	Town Centre	Rugby	3,039 (4,163)
7	Attleborough North West	Nuneaton & Bedworth	3,121 (4,515)
8	Abbey Priory	Nuneaton & Bedworth	3,174 (2,792)
5 least deprived SOAs in Warwickshire			
329	Knowle Hill & Glasshouse	Warwick	31,163 (31,133)
330	Hatton & Hampton Magna	Warwick	31,380 (31,240)
331	Stoneleigh	Warwick	31,414 (31,303)
332	Cawston	Rugby	31,528 (31,381)
333	Glass House & Windy Arbour	Warwick	32,011 (32,146)

Source: Indices of Deprivation 2010

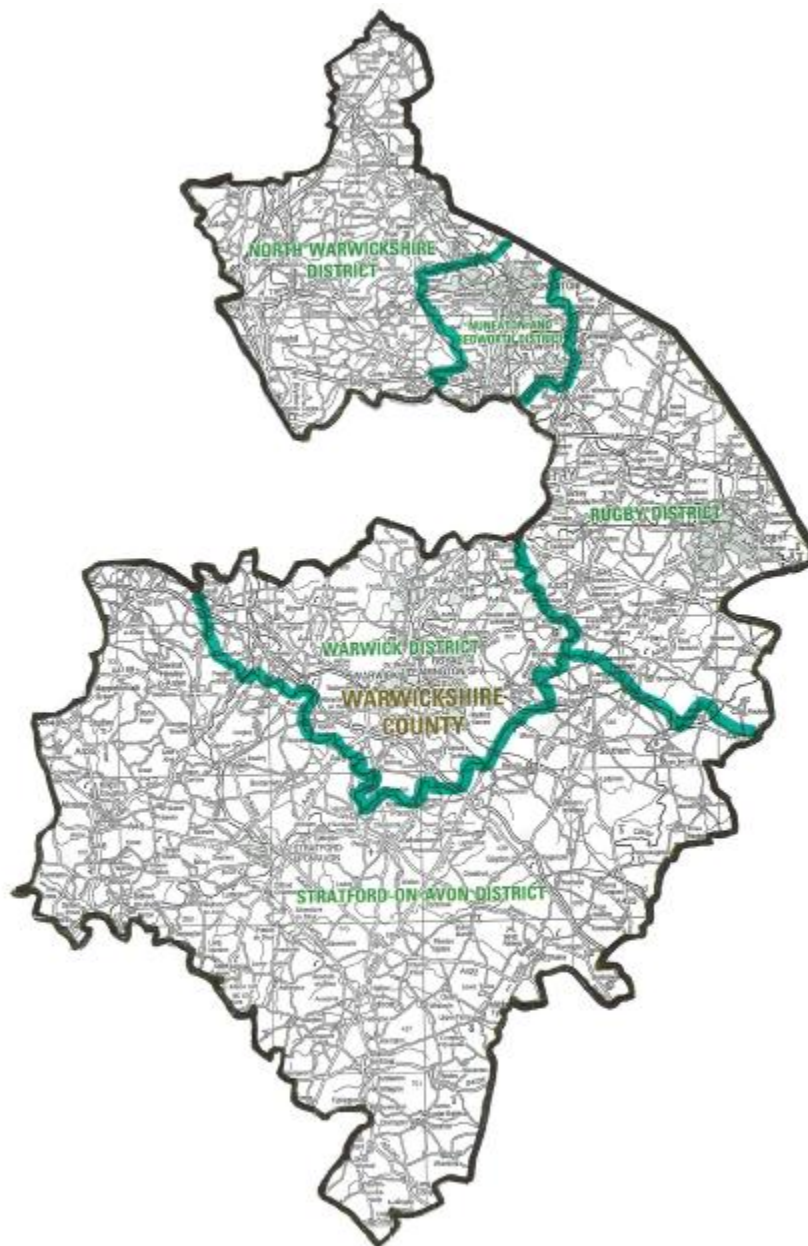
- B.84 The above table illustrates that the five most health deprived SOAs are all in Nuneaton and Bedworth Borough. Bar Pool North & Crescents remains Warwickshire's most health deprived SOA and its relative level of deprivation has increased since the 2007 index. All of the SOAs in the top five are relatively more deprived than in the 2007 index, moving up the national rankings.
- B.85 Hill Top SOA is the only new entry into the top five since 2007 when it was ranked 12th in the County, showing a marked decline in its relative level of health deprivation. It replaces Abbey Priory which has slightly improved its relative ranking to 8th although it is still in the 10% most health deprived in the country.
- B.86 By comparing the average national ranks of the five highest and lowest ranked SOAs, it is possible to see if the difference between them has increased or decreased between the 2007 and 2010 indices. In other words, have health inequalities been reduced?

Community Satisfaction and Cohesion

- B.87 The Warwickshire County Council Best Value User Satisfaction Survey is a survey of 4,000 randomly selected residents of the County. The purpose of this survey is to gauge levels of satisfaction with the Local Authority and the key services it provides.
- B.88 The survey is mandatory every three years, although the County Council carry out the survey every year to gather trend data as part of its consultation strategy.
- B.89 The last published version of the survey was in February 2008 and below are some of the key findings.
- B.90 The most important issue for residents continues to be the level of crime in making somewhere a good place to live. The number of activities available for teenagers continues to be a major issue, and in need of improvement. The residents of Nuneaton & Bedworth, however feel that the level of crime is in most need of improvement.
- B.91 The priorities for Warwickshire residents in terms of improvement include the level of crime, health services, affordable decent housing, clean streets and public transport.
- B.92 A large number of respondents (80%) revealed that they are satisfied with their local area as a place to live, although there are still variations across the County. There is the most satisfaction in Stratford District with 88% and just 68% of residents are satisfied in Nuneaton & Bedworth Borough.
- B.93 The level of satisfaction with general service areas of the County Council has remained fairly static. There was only one area that witnessed a significant difference and that was with the local authority education service, where satisfaction levels for users of the service had risen from 63% to 80%. Long-term trends indicate that satisfaction levels with environmental services and cultural and recreational services are declining.

Key Characteristics of Districts and Boroughs

Figure 26: Warwickshire County showing the District and Borough borders



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Warwick District

- B.94 The district has attracted a high share of knowledge workers that is supported by relatively low deprivation, a healthy population and reasonably low crime levels. Housing deprivation in Warwick is the highest in the region and affordable housing stands out as a key priority for the area's sustainable development. As well as the housing deprivation, there are some inequalities in terms of health, income and skills.
- B.95 Due to the rural and urban mix of Warwick, the area has below average levels of connectivity. There are a high proportion of people travelling to work by car and a lower proportion of workers using public transport. However, there is a high share of residents

who travel to work on foot or by bike, that is higher than the national or sub regional average. One of the measures for general transport stress is based on the measure of journeys per square km. On this measure, Warwick shows high levels of congestion that are well over the national, regional and sub-regional levels. This has a detrimental effect on the environmental quality of life due to poor air quality and pollution.

- B.96 Warwick District has identified four thematic priority areas within their Sustainable Community Strategy which represent a cross section of householders.
- B.97 The first of these is to ensure safer communities. By 2026, Warwick District hopes that local residents will feel safe going about their everyday lives with the main priorities being, to reduce serious violent crime, reduce anti-social behaviour including criminal damage and to reduce serious acquisitive crime including vehicle crime.
- B.98 The second aim is for everyone to be able to enjoy a healthy lifestyle and sense of wellbeing. The priorities here will be to, reduce obesity, particularly in children, increase opportunities for everyone to enjoy and participate in sport, the arts and cultural activities, support independent living, improve mental health provision, awareness and access to services, increase and improve preventative work on sexual health/teenage pregnancy, reduce smoking and drug and alcohol misuse and finally develop a joined up approach to tackling the causes of poverty.
- B.99 Thirdly, the aim is that by 2026 everyone's housing needs will be met. There will need to be an emphasis on making homes sustainable, supporting independent living for older and more vulnerable people and to reduce and prevent homelessness.
- B.100 Finally, there will be strong, diverse economy which provides jobs for all. Warwick will provide effective business support focusing on small and medium sized employers, delivering inward investment focusing on the knowledge, creative design and high value engineering sectors, vital and viable town centre regenerating strategic sites and intensifying development. Other priorities will also include continuous learning, protecting and sustaining a strong rural economy.
- B.101 Air quality is an issue for this area, with three Air Quality Management Areas (AQMAs) having been established in Warwick, Leamington Spa and Barford. All three areas have an exceedance of Nitrogen Atmospheric CO2 values.

Stratford Upon Avon District

- B.102 Stratford District is considered to be an attractive place to live, work and visit. There is much to be appreciated and valued and Stratford want to ensure that everything is preserved that makes the District one of the best places to be. However, there are still challenges that need to be tackled over the next ten years to maintain the quality of life as well as improve it.
- B.103 One of the main features of the District is its rural landscape and historic character. It is the only District in the County which is in Area of Outstanding Natural Beauty (the Cotswolds AONB) situated in the south of the District.
- B.104 Stratford District has one of the 'oldest' populations in the country with more over 65s than under 15s living there. In addition to this there are fewer births per 1,000 compared to most other districts. With the number of over 85s set to increase dramatically, the district will age faster and this will have considerable implications for services, particularly healthcare.
- B.105 Housing in the District is expensive which means that young couples, people on low incomes and key workers, are unable to rent or buy anywhere because the property prices and rents are beyond their reach. There is an increase in the demand for affordable housing for local needs which is in turn outstripping supply. This is causing a persistent

and ever-growing shortage of affordable housing across the District and is driving younger people away and preventing others from moving in.

- B.106 Most of the residents in the rural areas struggle and often fail to access services, facilities and activities that matter to their lives. This is mainly due to the distance that they live from them and the public transport being poor in many areas. This is a problem that does affect most rural areas.
- B.107 Economic growth has been low in the District and increases in jobs and pay have lagged behind other areas. Approximately four out of ten workers travel to jobs outside of the District that are often higher paid. It is difficult for people to work from home due to the poor broadband connections and tourist numbers have continued to fall. There appears to be a lot of competition from neighbouring areas for shoppers and many of the market towns are struggling to attract new investment and businesses.
- B.108 Healthcare across the District varies in quality and there are significant differences in life expectancy between some areas. Generally, the District benefits from high levels of qualifications yet many of the residents are fairly low skilled. Skills and qualifications are going to be key for economic resurgence within the District.
- B.109 Crime in the area is relatively low compared with other areas, but residents would still like to see further reductions. One of the major concerns is the lack of activities for youngsters, which is seen as a cause of anti-social and other misbehaviour. Young people feel frustrated about the lack of access to opportunities and facilities.
- B.110 There is a need to balance housing and new employment opportunities with protecting the character and heritage of the District.
- B.111 There is still a considerable amount of waste being sent to landfill and this has got to be addressed, not only for the sake of the environment but also to ensure that there is compliance with tough EU and national rules. There is still far too much waste being produced in the first place, but the District can help by significantly reducing its carbon footprint and ultimately becoming a carbon neutral district, through cutting energy use and using cars less.
- B.112 There has been considerable damage to homes and businesses across the District as a result of flooding. It is a recurring threat, and residents in the areas at risk live with the worry of it happening again. Residents expect the authorities to work together more closely and effectively to reduce the risk of future flooding, and where possible remove the threat altogether.
- B.113 Many of the issues identified above are linked in some way. The actions for Stratford District will be to tackle one challenge which will ultimately have a knock on effect on others too.
- B.114 There is currently one declared Air Quality Management Area (AQMA) within Stratford-on-Avon District that is at Studley. This relates directly to the high levels of traffic that is carried through the town by the A435. The A435 was, until recently part of the trunk road network, and carries high levels of HGV movements between the M42 (Junction 3), the A46 at Alcester and the M5 at Ashchurch. An Air Quality Management Plan is currently in the process of being prepared for the AQMA.

Rugby Borough

- B.115 Rugby Borough is already a good place to live, work or visit. Generally, it is an affluent Borough with earnings above the national average and it has an attractive environment with a mix between the urban area and rural settlements. The aim of Rugby Borough is to maintain that quality of life and improve it for everyone in the years to come. It is still faced with some key challenges though.

- B.116 Although, Rugby Borough would like to improve the area for everyone, there are some areas within the Borough that are in greater need of improvement than others. There is evidence to suggest that issues such as crime, higher unemployment, poorer health and a poorer local environment are higher in some communities than in others. There will be a great effort to ensure that a range of organisations will work with those communities to make the biggest improvements in those areas.
- B.117 Transport remains a significant challenge enabling people to travel and access services for both work and leisure purposes, but at the same time trying to minimize congestion and the environmental impacts.
- B.118 Even though there has been a national drop in house prices, housing continues to remain expensive, meaning that people and families are unable to access the type of housing they need. The Borough will find it hard over the coming years to ensure that suitable housing is provided at suitable prices to meet the varying needs of the community. It is likely that there will be significant levels of new development up to 2026. New development will need to ensure that it achieves a range of social, economic and environmental objectives which will require careful planning and delivery.
- B.119 The National targets for reducing carbon emissions are demanding. All of the community will need to contribute to reducing carbon emissions if Rugby Borough is set to achieve its share of those targets and at the same time, enable the freedom and quality of life that people are currently used to.
- B.120 The local voluntary and community sector has a major role to play in bringing communities together and improving the quality of life in the Borough.
- B.121 Due to the large number of busy road links in the region the main pollutant source in the Borough is road traffic. In addition, the Rugby Cement Works, located close to the centre of Rugby, are a notable source of Nitrogen Oxides (NOX), Sulphur Dioxides (SO₂) and Particulates (PM₁₀). An AQMA was declared for Nitrogen Dioxides (NO₂) in December 2004. The AQMA covers the whole urban area of Rugby, bounded by the southern boundary with Daventry District Council, A5, M6, minor roads to the west of Long Lawford, A45 and M45.

Nuneaton and Bedworth

- B.122 Nuneaton and Bedworth have identified themes within their Sustainable Community Strategy which have been developed taking into account what the Community feels is important and then outlining what will be done to address some of these issues.
- B.123 There is one site designated as of European importance for nature conservation - the Ensor's Pool Special Area of Conservation (SAC) in Nuneaton, which was designated because it is home to a colony of White Clawed Crayfish.
- B.124 Currently there are approximately 450 community and voluntary groups in the Borough. There are a number of wards within Nuneaton and Bedworth Borough which are within the 10% most deprived SOA's in England.
- B.125 The local community would like to be more involved in the areas in which they live. They would like to be able to promote projects that involve younger and older people, improve communication to the community, and encourage communities to respect and value each other and to ensure that every area has equal access to resources.
- B.126 The overall aim is to improve the wellbeing of communities by helping people work together, support and understand each other.
- B.127 There are around 4,000 people on the Council's housing register who are awaiting housing and vacancies are currently running at about 400 per year. It is thought that homelessness within the Borough is set to increase. One of the key issues for the Borough is to deliver affordable housing.

- B.128 The overall aim is to give everyone the opportunity of living in a decent, affordable home.
- B.129 The Borough would like to provide and support opportunities that help foster and support a learning culture across all age groups. The local residents would like to ensure that there are opportunities to be able to give everyone an equal chance of taking part in learning to improve the skills of people within the Borough, offer a wide range of learning opportunities for all, support schools to play a fuller role in their community and to better inform communities of learning and training opportunities in their local area.
- B.130 Nuneaton and Bedworth want to make it a safer place for everyone, where the day-to-day quality of life is not marred by the fear of crime. There are currently 560 Neighbourhood Watch schemes in the Borough and the Nuneaton and Bedworth Safer Communities Partnership works closely with Neighbourhood Watch groups, voluntary and statutory agencies to make communities safer.
- B.131 Currently the life expectancy in Nuneaton and Bedworth Borough is lower than the national average although it is improving. There are still a quarter of adults who are classed as obese with deaths from heart disease and stroke significantly higher than the rest of England.
- B.132 The Borough would like to improve access to health care and improve life expectancy, by promoting more healthier and active life-styles.
- B.133 The Borough has a relatively low rate of recycling currently and local residents have suggested widening out waste recycling to include plastics and cardboard. The Borough would like to have a high quality environment with increased biodiversity and a sustainable approach to waste and energy.
- B.134 Nuneaton and Bedworth Borough aim to improve the Borough's transport infrastructure in order to provide easier access to key services and facilities. One of the key issues for local residents is design and accessibility of public transport and roads which they would like to see as a priority.
- B.135 Finally, the Borough would like to create a supportive environment for businesses and develop a vibrant and varied economy that is reflected in the town centres and business areas.
- B.136 In December 2006, Nuneaton and Bedworth Borough Council declared an Air Quality Management Area on the A47 Old Hinckley Road/Leicester Road gyratory for a marginal exceedance of Nitrogen Oxide (NO₂). The AQMA affects a number of residential receptors and the Etone Comprehensive School. The order designating the AQMA came into place on 1st March 2007. The County Council is currently assisting the Borough Council with the preparation of an Air Quality Action Plan to address the AQMA.

North Warwickshire

- B.137 North Warwickshire includes Coleshill, Polesworth, Atherstone, Kingsbury and their rural hinterlands.
- B.138 North Warwickshire has produced a Sustainable Community Strategy and Vision that sets out the three key priorities for improving the overall quality of life in North Warwickshire from 2009 – 2026:
- Raising aspirations, educational attainment and skills
 - Developing healthier communities
 - Improving access to services
- B.139 The challenge is to put in place the appropriate tools and infrastructure to deliver sustained improvement for all our communities so that people can enjoy life and reach their full potential.

- B.140 The first of the priorities is to raise aspirations, educational attainment and skills. Information to date shows that there are too many children who are not reaching their full potential. North Warwickshire believes that every young person in their Borough deserves the best possible support and encouragement to achieve this.
- B.141 Families play a key role in influencing the aspirations of young people, encouraging personal and academic development and fostering a good work ethic. Everyone has a part to play and North Warwickshire would like to see everyone in the area working together to make sure that young people are inspired to achieve.
- B.142 There are significant challenges ahead in order to achieve this. North Warwickshire has significantly lower educational attainment and skills compared to the rest of the county. There are low levels or a lack of formal qualifications and fewer young people gaining five or more A* to C GCSE grades (including Maths and English). There are also low levels of aspiration and expectation.
- B.143 The second priority is Developing Healthier Communities. Most of the key determinants of health lie outside of their direct influence. These include factors such as the local environment of individuals, living and working conditions, income, genetic factors and choices made, as well as opportunities taken about lifestyle. Housing in good condition and that is affordable, is linked to good health and well-being.
- B.144 All of the issues mentioned above will present a challenge which will be exacerbated by an ageing population. When looking at longer term planning for the Borough it will be necessary to ensure that provision is made for future demographic changes.
- B.145 North Warwickshire believes they have a responsibility to enable local people to have their say, provide good quality health care and advice and encourage healthier lifestyles. The ability to be able to have a say and influence the environment in which people live is a key determinant of mental health and well-being.
- B.146 There is a low life expectancy in North Warwickshire, lower than the Warwickshire average. There are higher levels of people who classify themselves as not being in good health and there are above average death rates from strokes and heart disease. Pressures of an ageing population who will require support to live independently, ensuring the availability of sufficient affordable housing and the properties are in a decent condition and despite a decrease in recorded crime, the fear of crime and disorder remain high as a community concern. There are also rising levels of obesity. These will all present significant challenges for the Borough.
- B.147 Finally, the third priority is Improving Access to Services. North Warwickshire Borough is a rural area which means that some people face a number of problems accessing everyday services such as jobs, GP surgeries, shops and Post Offices. In addition to this, there are some services which are situated outside of the area such as the George Eliot Hospital. This is a significant problem for those who do not have their own transport.
- B.148 There is public transport across the Borough; however the frequency and routes of these services are not able to meet everyone's needs. There are still concerns over access to information about public transport, the cost and frequency of these services.
- B.149 There are many challenges over communication within North Warwickshire. The Borough does not have a single newspaper or radio station that covers the whole area and the broadband coverage and speed of the connection are not always that good.
- B.150 There are a large number of people in North Warwickshire, especially those who are on low incomes that find it hard to access mainstream financial services such as bank accounts and low cost loans. This can lead to financial exclusion and poverty. Having access to affordable financial services is seen as central to improving families' economic wellbeing.

- B.151 Some of the challenges for the Borough to deal with include, the provision of a greater range of access to services, transport links and communication and tackling financial exclusion.
- B.152 Air quality has been identified as an issue within this area, with an AQMA having been established near Coleshill.

C. Consultation Responses to Scoping Report

Responses to the SEA Scoping Report

Question	Representation	Response	Action
Respondent: Natural England (25 March 2015)			
Comments on the Warwickshire Local FRM Strategy (with interest for the SEA)	<p>None of the 5 objectives identified for the LFRMS would appear to demonstrate a positive approach to contribution to wider environmental objectives. Objective 2 aspires to adopt an environmentally sustainable approach but further explanation of this objective makes little reference to environmental issues. We would draw your attention to Section 40 of the Natural Environment and Rural Communities Act (2006) which states that <i>'Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'</i>. Section 40(3) of the same Act also states that <i>'conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat'</i>.</p> <p>We would encourage the use of some flood risk management options, such as upstream flood storage, as these can have significant biodiversity enhancements and contribute to green infrastructure (GI).</p> <p>We also welcome retrofitting sustainable urban drainage systems (SUDS), which can reduce or in some cases replace the need for a whole new scheme, in some built up areas.</p> <p>The LFRMS is a "strategic matter" in that flooding doesn't respect local authority boundaries and as such would need to be considered on a wider scale with adjoining authorities responsible for flood strategy preparation and management. Liaison with other authorities in the area would be encouraged in order to ensure cross boundary consistency of approach and more efficient use of resources in times of budgetary constraint; thus ensuring the Duty to Co-operate was effectively met.</p>		The SEA has taken the comment about the need to demonstrate a positive approach to the contribution to the wider environment into account and has recommended that a new objective is added to the LFRMS as part of the Compatibility Assessment in Chapter 7 of the Environmental Report.
Comments on Scoping Report			
Q1. Have there been any significant omissions of plans, programmes or	<p>Countryside and Rights of way Act 2010.</p> <p>Additionally in appendix 4 there is no reference made to underlying legislation.</p>		Included in review of plans in Appendix A of the Environmental Report.

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environmental protection objectives relevant to the scoping of this report?			Underlying legislation is referenced in Appendix A of the Environmental Report.
Q2. Do you agree with the selection of key environmental issues for Warwickshire?	Yes.	N/A	N/A
Q3. Do you agree that the baseline data that have been, or will be collected, are relevant and of sufficient detail to support the assessment?	<p>Appendix 3 section 3.6.2 Wildlife Habitats, refers to data regarding the favourable conservation status of SSSI's in Warwickshire, from 1st June 2011. This information is updated regularly, therefore results may differ now.</p> <p>Appendix 3 section A3.6.1 states that 'there are <u>approximately</u> 62 nationally designated Sites of Special Scientific Interest (SSSIs) in Warwickshire'. There are 62 SSSI's in Warwickshire. The use of the word 'approximately' is unnecessary.</p> <p>Section A3.6.2 identifies Ensor's Pool Special Area of Conservation (SAC) as a candidate SAC, which is incorrect. Ensor's pool has been formally designated as a SAC. However, on page 19 section 5.3 it is acknowledged that while the White-clawed crayfish of the SAC have been lost, it is still under designation. On page 71 section A3.6.1 it is also correctly identified as a site designated at European level.</p>	Comments welcomed	<p>Most recent conservation status of SSSIs reviewed in Appendix B of the Environmental Report.</p> <p>Removed word 'approximately' in Appendix B of the Environmental Report.</p> <p>Text to corrected to remove 'candidate' SAC status in Appendix B of the Environmental Report.</p>
Q4. Are there any key baseline data available that are	NE has a range of data sources that may be useful in the production of an SA. Our datasets are now all downloadable and responsible authorities should be referred to the website at http://www.naturalengland.org.uk/publications/data/	References provided are welcomed.	Due to the high level nature of the LFRMS (in that no physical

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<p>or could be used in support of the issues that have not been identified? Are you aware of any appropriate targets that the report should cite?</p>	<p>Other useful sources of data include:</p> <ul style="list-style-type: none"> • MAGIC (Defra's GIS package for environmental assets) • SSSI/European Sites condition assessments • National Character Areas <p>Natural England does not hold locally specific information relating to:</p> <ul style="list-style-type: none"> • local sites (biodiversity and geodiversity) • local landscape character • local or national biodiversity priority habitats and species. <p>We recommend that you seek further information from the appropriate bodies (which may include the local records centre, your local wildlife trust, local geoconservation group or other recording society and a local landscape characterisation document). A more comprehensive list of local groups can be found at Wildlife and Countryside link.</p> <p>Soil Soil is a finite resource that fulfils many important functions and services (ecosystem services) for society, for example as a growing medium for food, timber and other crops, as a store for carbon and water, as a reservoir of biodiversity and as a buffer against pollution. It is therefore important that the soil resources are protected and used sustainably. For guidance on how adverse impacts on soils can be minimised please refer to Defra's Good practice guide for handling soils and Defra Construction Code of Practice for the Sustainable Use of Soil on Development Sites.</p> <p>Agricultural Land Classification and Best and most versatile (BMV) land Copies of the Provisional Agricultural Land Classification map for your area are available on the Natural England Website or alternatively the data is available to view and download from the 'MAGIC' website. Further information is also available in the ALC Technical Information Note.</p>		<p>interventions are proposed) baseline data presented in the Environmental Report is commensurate with this high level.</p> <p>Once physical interventions are identified through the Surface Water Management Plan at a later stage, they will be assessed as part of the SEA to be undertaken of the Plan.</p>
<p>Q5. Do the SEA objectives provide a sound framework against which to</p>	<p>We consider that the SEA objectives cover the key environmental issues that are relevant to the emerging LFRMS.</p>	<p>N/A</p>	<p>N/A</p>

Question	Representation	Response	Action
assess the environmental credentials of the emerging LFRMS?			
Q6. Do you agree with the decision-making criteria?	The report has identified the landscape importance of the Cotswold's Area of Outstanding Natural Beauty (AONB) located at the south of the county. However the Indicators and Decision Making Criteria, make no reference to the Cotswold's AONB.	Comment welcomed.	The safeguard the Cotswolds Area of Outstanding Natural Beauty has been added to the decision-making criteria for SEA objective 5 Safeguard and strengthen landscape character and quality in Chapter 6 of the Environmental Report.
Habitats Regulations Assessment	Natural England notes that a HRA has been prepared and considers that this should be submitted to us for comment as soon as is practicable.		HRA to be sent by WCC to Natural England for consultation.
Respondent: Environment Agency (25 March 2015)			

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<p>General Comments on the Warwickshire Local FRM Strategy (with interest for the SEA)</p>	<p>We are satisfied that the Project Brief/draft strategy meets the statutory requirements.</p> <p>The LFRMS rightly states that it should cover local flood risk (surface water, ordinary watercourses and groundwater flooding) but it should also consider interactions with Main River flooding too.</p> <p>To ensure that the local strategy is consistent with the national FCERM strategy, we have reviewed the content against the 6 guiding principles i.e.</p> <ol style="list-style-type: none"> 1) Community focus and partnership working 2) Catchment cell approach 3) Sustainability 4) Proportionate, risk based approaches 5) Multiple benefits 6) Beneficiaries should be encouraged to invest in risk management <p>... The objectives are consistent with the guiding principles of the national FCERM Strategy. However, we feel that more could be done to encourage a catchment cell approach and deliver multiple benefits, particularly meeting wider environmental objectives e.g. working with natural process and the specific water-body objectives and measures set out in the River Basin Management Plan.</p> <p>... We suggest that Objective 5 is re-worded to make it clearer, something along the lines of "Ensure all development takes into account local flood risk and seeks a</p>		<p>The decision making criteria for SEA objective 2 (Reduce the risk of surface, groundwater and sewer flooding taking account of climate change) and SEA objective 9 (Protect and improve the water environment) include the need to work with natural processes in delivering the SEA objectives (see Chapter 6 of the Environmental Report).</p>

Question	Representation	Response	Action
	reduction overall” this objective should include the policy requirements of the emerging / adopted Local Plans that may include specific targets such as a reduction in run-off to the QBAR rate (Warwick Local Plan).		The SEA has recommended the re-wording of Objective 5 to take account this comment (see Chapter 7 of the Environmental Report).
Comments on Scoping Report			
	<ul style="list-style-type: none"> 2.30 – This section should be updated in light of the DCLG consultation on 18 December 2014. Appendix 2 – The National FCERM Strategy is repeated twice (on page 39 and 46). The report should be updated to consider the information within our River Basin Management Plan Catchment Summaries that are relevant for your Authority. <p>The information can be accessed by following the hyperlinks below:</p> <p>River Severn / Avon Catchments https://consult.environment-agency.gov.uk/portal/ho/wfd/draft_plans/consult?pointId=s1406201384425#section-s1406201384425</p> <p>River Humber / Tame Catchments https://consult.environment-agency.gov.uk/portal/ho/wfd/draft_plans/consult?pointId=s1406201320330#section-s1406201320330</p>	Comments noted.	<p>Update made</p> <p>Repetition removed</p> <p>Updates made to Baseline in Appendix A of the Environmental Report.</p>

Question	Representation	Response	Action
	Thames Catchment Summary https://consult.environment-agency.gov.uk/portal/ho/wfd/draft_plans/consult?pointId=s1406201448406#section-s1406201448406		



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