



LOCAL FLOOD RISK MANAGEMENT STRATEGY SUMMARY

Warwickshire County Council



LOCAL FLOOD RISK MANAGEMENT STRATEGY SUMMARY

Warwickshire County Council

April 2016

Key Contact

Michael Green, Flood Risk and Water Management
Manager, Warwickshire County Council

Warwickshire County Council
PO Box 43
Shire Hall
Warwick
CV34 4RL

flooding@warwickshire.gov.uk

Authors

Michael Green
Richard Stevens
Andy Smith

**If you would like this information in a different format, please contact Marketing and Communications
on 01926 413727**

Table of Contents

Executive Summary.....	5
1 Introduction.....	10
1.1 Aims of the Strategy	11
1.2 What is the area covered by this Strategy?	13
1.3 Who is the Strategy relevant for?	13
1.4 Who has been involved in developing this Strategy?	14
1.5 Period covered by the Strategy	14
2 Strategy for Local Flood Risk Management.....	15
2.1 Objectives of the Strategy.....	15
2.2 Measures.....	21

Executive Summary

Significant areas in Warwickshire are subject to flood risk, with around one in seven commercial properties and one in ten residential properties being at risk of flooding from rivers or surface water. Recent flooding events, particularly Easter 1998 and summer 2007, as well as near misses in the winters of 2012/13 and 2013/14, and very recent flooding in February and March 2016, as well as many localised extreme events, indicate flooding is a significant ongoing risk in Warwickshire. Increased flood risk poses the most significant and specific climate change challenge to the UK economy. It is estimated that flood damages in England have risen by around 60% over the past 25 years and already exceed £1 billion per year in direct costs to communities and business. A significant number of the top risks for business with respect to climate change relate to the impacts of flooding.

Under the Flood and Water Management Act (2010) ('the Act') Warwickshire County Council (WCC) became a Lead Local Flood Authority (LLFA), responsible for managing local flood risk from surface water, groundwater and ordinary watercourses in Warwickshire. One of the new duties placed upon WCC as the LLFA, to assist in the management of local flood risk, is to 'develop, maintain, apply and monitor' a Local Flood Risk Management Strategy.

This Local Flood Risk Management Strategy ('the Strategy') provides an overview and assessment of local flood risk in Warwickshire, setting out objectives and measures for how WCC will manage and reduce local flood risk. It covers the county of Warwickshire comprising the five local authorities of North Warwickshire, Nuneaton and Bedworth, Rugby, Stratford upon Avon and Warwick.

The Strategy is relevant for anyone who lives in, works in or visits Warwickshire to assist them in understanding and managing flood risk. It is also of relevance to all authorities with flood risk management responsibilities to ensure there is a common understanding of roles and responsibilities. This summary document is comprised of the Executive Summary and Sections 1 and 2 of the Local Flood Risk Management Strategy. Alongside this Strategy we have produced the required Strategic Environmental Assessment (SEA) and Habitats Regulation Assessment (HRA).

To ensure that the Strategy remains relevant and fit for purpose it will be regularly reviewed and updated as necessary. It is important that the information contained within it is the best available and it is in line with national policy on the management of local flood risk.

Our Objectives

A key aspect of this Strategy is the objectives it sets for the management of local flood risk in Warwickshire. These objectives aim to cover all aspects of local flood risk management and are consistent with the national flood risk management strategy.

Table A – Warwickshire Local Flood Risk Management Strategy Objectives

Objective	
O1	Develop a better understanding of local flood risk in Warwickshire to better manage flood risk to people, property, infrastructure and the natural environment
O2	Seek to reduce local flood risk in Warwickshire in an economically, socially and environmentally sustainable way
O3	Adopt a collaborative approach to local flood risk management
O4	Promote community preparedness and resilience to local flood risk
O5	Enable planning decisions to take full account of local flood risk and seek to reduce local flood risk through development

Our Measures

To achieve these objectives, WCC has identified the necessary measures that are presented in the action plan contained within Appendix D of this Strategy. These measures address the various aspects of local flood risk management, including educating communities, raising public awareness, improving our understanding of the risks and implementing measures to manage and reduce flood risk where it is unacceptable. These actions will be led by WCC with support from its partners in local flood risk management where appropriate.

Assessment of Local Flood Risk

The Surface Water Management Plan (SWMP) given in Appendix C is tasked with providing a prioritisation process for future flood risk management work. The SWMP will also form the risk assessment for the WCC's Local Flood Risk Management Strategy (the Strategy).

The SWMP objectives are defined as the following.

1. Develop a robust understanding of surface water flood risk across the county of Warwickshire, including a prioritised list of locations at risk of flooding, taking into account the importance of both urban and rural communities, the challenges of population and demographic change and increasing pressures on urban fringes.
2. Develop holistic and multifunctional recommendations for surface water management which improve emergency and land use planning, and enable better flood risk and drainage infrastructure investments.
3. Establish new and consolidate existing partnerships between key drainage stakeholders to facilitate a collaborative culture of data, skills, resource and learning

sharing and exchange, and closer coordination to utilise cross boundary working opportunities.

4. Undertake engagement with stakeholders to raise awareness of surface water flooding, identify flood risks and assets, and agree mitigation measures and actions.
5. Develop a robust Action Plan and guidance to deliver change where partners and stakeholders take ownership of their flood risk and commit to delivery and maintenance of the recommended measures and actions.

Understanding the different sources of flooding and potential interactions and responsibilities between different organisations is important for the study to ensure that a comprehensive understanding of flood risk is obtained, and to identify the most appropriate measures for flood risk reduction. Flood history information was obtained from the following sources:

- Districts and Boroughs, and Parish and Town Councils and community groups; and
- stakeholders and organisations:
 - Environment Agency;
 - Severn Trent Water;
 - Network Rail; and
 - Canal and River Trust.

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, and 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 'receptors' (those who experience flooding) are at greater risk, or where there are greater consequences, a series of standardised quantitative metrics have been established in the SWMP to enable an assessment across the entire study area. Thresholds were developed to understand where there are areas of flood risk and consequences, and analysis of these locations was undertaken in a bespoke project matrix which allowed the scoring, weighting, comparison and ranking of sites. The matrix was developed to identify surface water flooding hotspots (historic and future) that met the following threshold requirements as defined in the Strategy.

1. Flooding that poses a threat to the safety of the public or may directly result in serious injury or death.
2. Five or more residential properties internally flooded.
3. Two or more commercial properties internally flooded.
4. One or more piece of critical infrastructure affected that impact on the wider area.

-
5. Flooding that places vulnerable individuals or vulnerable communities at risk e.g. hospitals, care and nursing homes, schools, secure units, etc.
 6. Where one or more residential property has flooded internally from the same source on five or more occasions within the last five years.

Draft outputs were tested through sensitivity analysis and have been discussed with project stakeholders. Feedback from these workshops was combined with that from the public consultation (January to March 2015), and a ranking of sites across the study area was created, in addition to supporting thematic maps for:

- Historic surface water flood risk;
- Predictive surface water flood risk; and
- Combined (Historic and Predictive) surface water flood risk.

The matrix has been developed to enable both historic and potential future flooding hotspot reporting. For this overall summary, a combined approach has been undertaken (combining both the historic and potential future flooding scores) for each OS tile or combination of OS tiles to provide a top 40 ranking which is given in Appendix C. Note that large locations such as Leamington Spa will have a number of communities at risk of surface water flooding from different sources - these are therefore ranked separately as different flooding locations with different OS tile references. Large towns could therefore be named in the list more than once, but it is the specific area or community within the town which is being ranked.

The highest ranked locations will not necessarily have funded flood alleviation schemes. This stage of the SWMP is the risk assessment. The viability of flood alleviation schemes depends not only on the risk, but also on the nature of the flood risk and financial viability of a scheme relative to other areas in England and Wales (since it is necessary to compete with other locations to bid for funding from the national 'pot' of Flood Defence Grant in Aid available).

Subsequent stages of the SWMP process will further investigate the top ranking sites including discussions with project partners and other Risk Management Authorities (RMAs) such as the Environment Agency and Severn Trent Water to identify areas of risk overlap and develop partnership schemes. Following stakeholder engagement a prioritised list will be developed with conceptual flood risk mitigation options, supporting action plans and investment strategies.

Funding the implementation of the Strategy

To implement the measures outlined by this Strategy, funding will need to be sought from a variety of sources. In consultation with its partners in local flood risk management, WCC has identified the following potential funding sources (not exhaustive):

-
- Flood and Coastal Erosion Risk Management (FCERM) Grant in Aid;
 - Local Levy;
 - Section 106 developer contributions;
 - Community Infrastructure Levy (CIL);
 - WCC contributions;
 - other Local Authority contributions;
 - other partner contributions; and
 - Local Enterprise Partnership (LEP) contributions.

1 Introduction

The aims of Warwickshire County Council (WCC) with respect to the management of local flood risk within the county are embodied within the following vision statement. This vision provides the overriding direction for the Strategy.

Warwickshire Flood Risk Management Vision Statement

To reduce and mitigate flood risk to communities within Warwickshire through partnership working, by adopting a prioritised, economic and environmentally sustainable approach.

WCC is using its statutory duties and powers to help it achieve its vision. A key aspect of this is partnership working, and an overarching aim of this Strategy is to further clarify and develop good practice across the county.

This summary document is comprised of the Executive Summary and Sections 1 and 2 of the Local Flood Risk Management Strategy.

The introductory section (**Section 1**) looks in more detail at why we are producing a Strategy for managing local flood risk and what it aims to achieve. Following this introductory section the Local Flood Risk Management Strategy document is structured as follows.

- **Section 2** sets out our strategy for local flood risk management in Warwickshire, with objectives and measures to achieve this.
- **Section 3** outlines our current understanding of local flood risk in Warwickshire and how it may change in the future.
- **Section 4** sets out legislation and policy documents that are relevant to the Strategy.
- **Section 5** summarises the roles and responsibilities of key partners and other organisations involved in flood risk management in Warwickshire.
- **Section 6** sets out the potential sources of funding for implementation of the measures set out in this Strategy.
- **Section 7** explains what will happen next, setting out how the Strategy will be in monitored and reviewed.

The Local Flood Risk Management Strategy is supported by the following appendices.

- **Appendix A** lists a glossary of key terms and abbreviations used within the LFRMS.
- **Appendix B** gives details of the full range of legislation and policy that are of relevance to the LFRMS.

-
- **Appendix C** is the Surface Water Management Plan for Warwickshire which sets out an assessment of flood risk across the county.
 - **Appendix D** sets out the action plan for implementation of the LFRMS.
 - **Appendix E** gives full details of Warwickshire County Council's flood investigation policy.
 - **Appendix F** gives details of Warwickshire County Council's sandbag policy.
 - **Appendix G** sets out Warwickshire County Council's draft advice for drainage in new developments.

1.1 Aims of the Strategy

The Strategy provides an overview and assessment of local flood risk, setting out objectives and measures for how WCC will manage and reduce local flood risk.

The Strategy must be consistent with the national Flood and Coastal Erosion Risk Management (FCERM) strategy, produced by the Environment Agency in September 2011. The Flood and Water Management Act ('the Act') also requires that the Strategy must specify the following.

- The risk management authorities within the county.
- The flood and coastal erosion risk management functions that may be exercised by those authorities in relation to the county.
- The assessment of local flood risk for the purpose of the Strategy.
- The objectives for managing local flood risk.
- The measures proposed to achieve those objectives.
- How and when the measures are expected to be implemented.
- The costs and benefits of those measures, and how they are to be paid for.
- How and when the Strategy is to be reviewed.
- How the Strategy contributes to the achievement of wider environmental objectives.

The Strategy must conform to the findings of the Habitat Regulations Screening report: to ensure that any works or schemes proposed by the Strategy will not lead to any negative effects on the qualifying features of any European Natura 2000 sites, specifically Ensor's Pool Special Area of Conservation (SAC) and the River Mease SAC.

Figure 1.1 illustrates how the Strategy relates to other plans and policies.

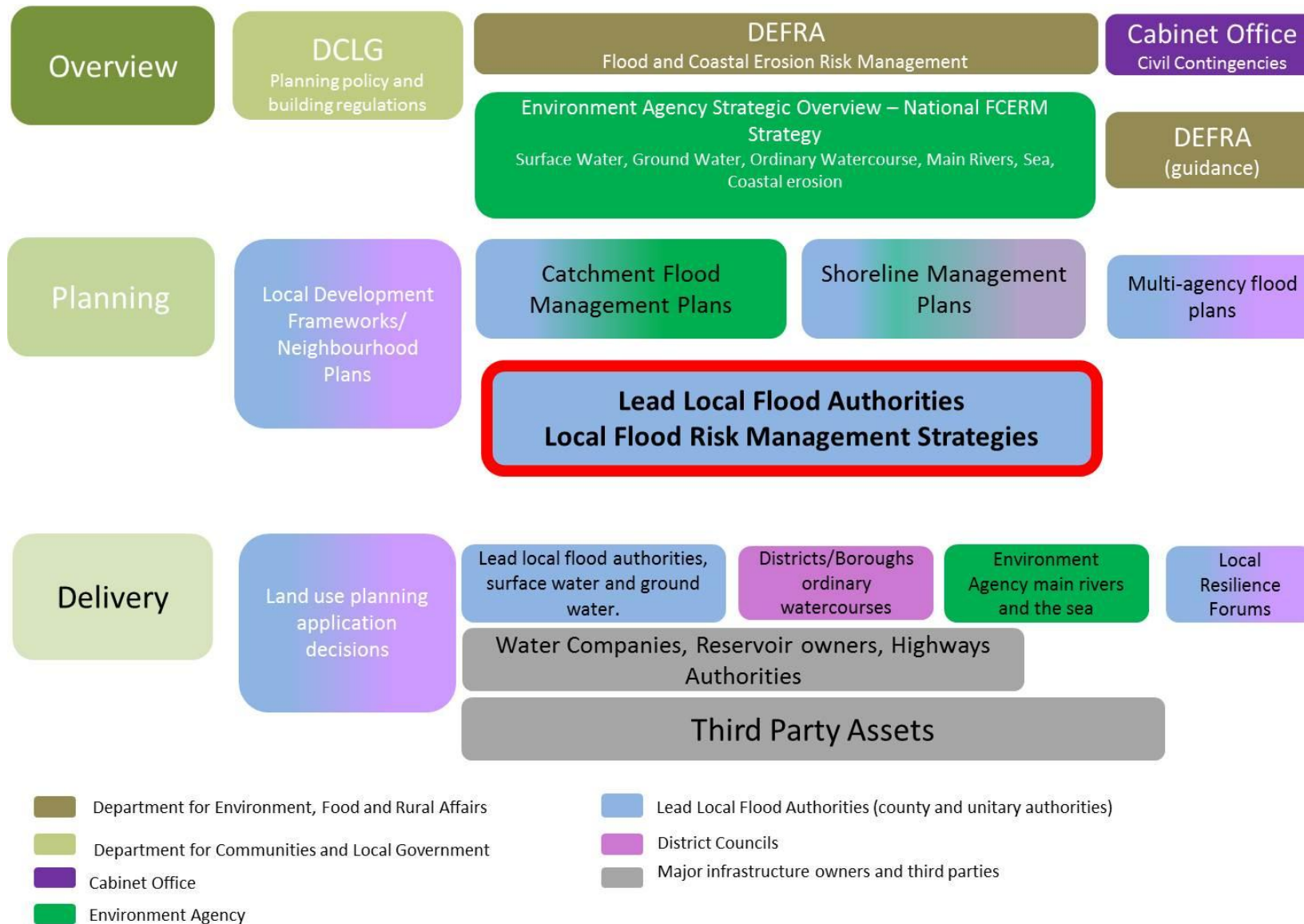


Figure 1.1: Flood Risk Management Plans and Policies

1.2 What is the area covered by this Strategy?

The Strategy covers the county of Warwickshire, comprising the five local authorities of North Warwickshire, Nuneaton and Bedworth, Rugby, Stratford upon Avon and Warwick. Figure 1.2 shows the county of Warwickshire with the five local authority areas.

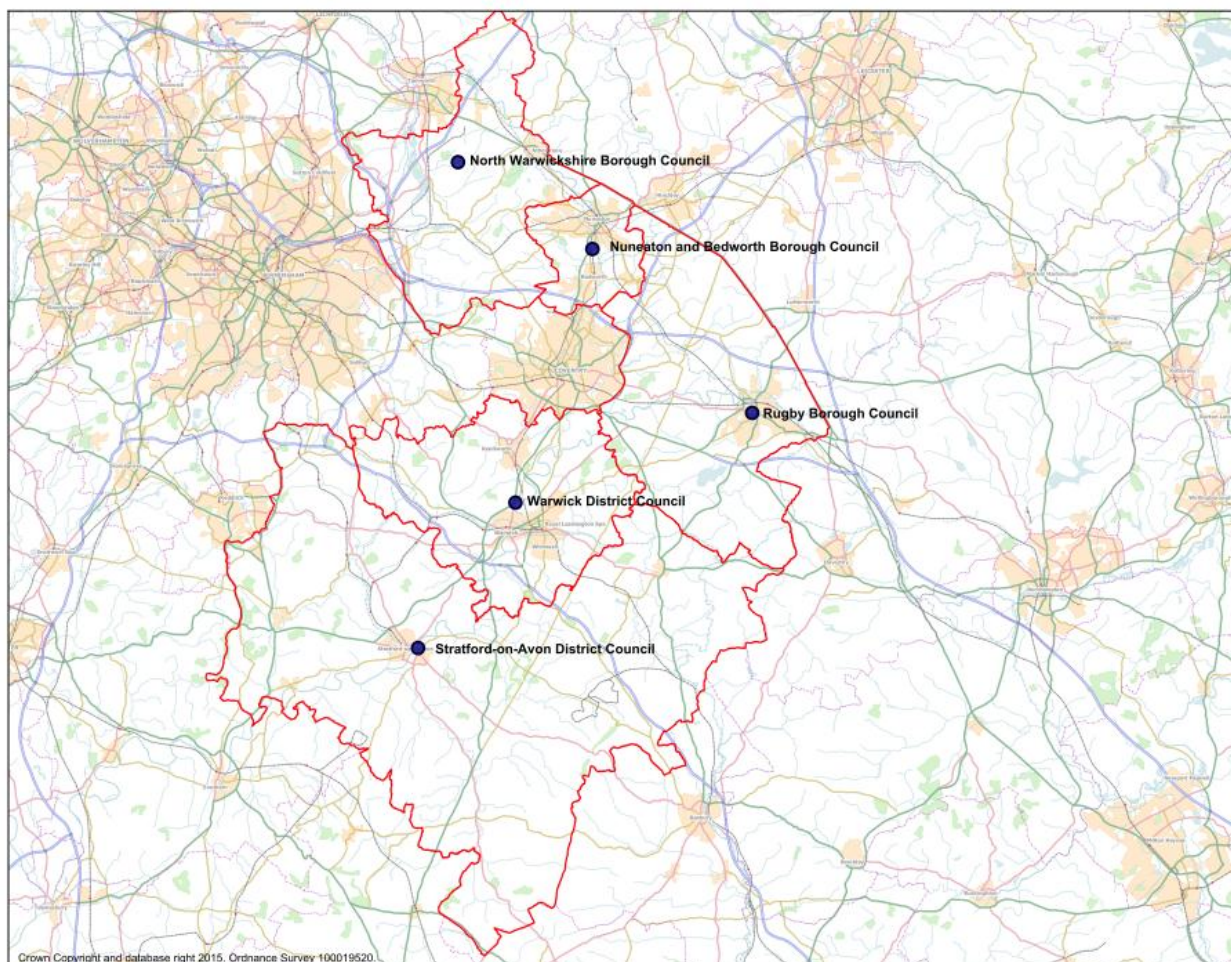


Figure 1.2: Warwickshire County Council Administrative Area

1.3 Who is the Strategy relevant for?

The Strategy is relevant for anyone who lives in, works in or visits Warwickshire to assist them in understanding and managing flood risk. It is of relevance to all authorities with flood risk management responsibilities in Warwickshire to ensure there is a common understanding of roles and responsibilities within Warwickshire. They must take due regard of this Strategy when delivering their own flood risk management services.

1.4 Who has been involved in developing this Strategy?

To assist in the development of the Strategy, WCC has undertaken county-wide engagement meetings. These have involved district and borough councils, town and parish councils and community groups. Their aim was to gather local information on flood risk and encourage local communities to take an active role in managing local flood risk at a local level. In addition assistance has been provided by neighbouring LLFAs, sharing best practice where they have already developed their strategies.

1.5 Period covered by the Strategy

To ensure that the Strategy remains relevant and fit for purpose, it will remain a live document with ongoing monitoring by officers along with a full review every five years, or sooner subject to the occurrence of one of the following triggers:

- significant flood events that alter our understanding of flood risk in Warwickshire;
- significant policy changes that affect the role of Flood Risk Management Authorities;
- publication of significant new flood risk information and mapping.

2 Strategy for Local Flood Risk Management

2.1 Objectives of the Strategy

To support the strategic vision for the management of local flood risk in Warwickshire, the following five objectives have been developed to support the delivery of the Strategy (see Table 2.1). These are based on the objectives and measures originally presented at the January 2013 Warwickshire Strategic Flood Forum, and have been developed to be consistent with the objectives of the national FCERM strategy and to drive local flood risk management in Warwickshire. They are discussed in detail in the following sections.

Table 2.1 – Warwickshire Local Flood Risk Management Strategy Objectives

Objective	
O1	Develop a better understanding of local flood risk in Warwickshire to better manage flood risk to people, property, infrastructure and the natural environment
O2	Seek to reduce local flood risk in Warwickshire in an economically, socially and environmentally sustainable way
O3	Adopt a collaborative approach to local flood risk management
O4	Promote community preparedness and resilience to local flood risk
O5	Enable planning decisions to take full account of local flood risk and seek to reduce local flood risk through development

2.1.1 Objective 1 - Develop a better understanding of local flood risk in Warwickshire to better manage flood risk to people, property, infrastructure and the natural environment

A clear understanding of local flood risk is crucial to ensuring that it can be effectively managed. This involves understanding where flooding may occur, how frequently it may happen and what impact it may have.

Developing this understanding is an ongoing process, whereby information is recorded about flooding events and these events are then investigated. WCC have developed an approach for the prioritisation of flood investigations to ensure that flooding events which have had the most significant impact are assessed first (see Box 1 – further detail is provided in Appendix E).

In addition, knowledge will be increased through improved modelling of flooding from local sources. The ongoing Surface Water Management Plan (SWMP) will make a significant contribution to this objective.

As part of the county-wide SWMP, local intelligence on flooding locations across the

county has been gathered through county-wide engagement meetings so that these flooding locations can be prioritised on the basis of historic flooding, as well as using surface water flood risk modelling outputs to ascertain potential future flooding.

With local flood risk expected to increase due to climate change, greater understanding will enable Warwickshire to plan for the future, mitigating against potential problems and advising strategic development plans.

Box 1 – Warwickshire County Council Flood Investigation Prioritisation

Through careful consideration and consultation with fellow LLFAs, WCC have developed the following thresholds for prioritisation of flooding events and as such, the order in which we will investigate. These thresholds follow closely the areas of locally significant flood risk outlined in the WCC Preliminary Flood Risk Assessment (PFRA) of 2011, and these thresholds determine what will be termed historic flooding ‘hotspots’ in the SWMP (see Appendix C).

- Flooding that poses a threat to the safety of the public or may directly result in serious injury or death.
- Five or more residential properties internally flooded¹.
- Two or more commercial properties internally flooded.
- One or more piece of critical infrastructure affected that, impacts on the wider area.
- Flooding that places vulnerable individuals or vulnerable communities at risk e.g. hospitals, care and nursing homes, schools, secure units, etc.
- Additionally, where one or more residential property has flooded internally from the same source on five or more occasions within the last five years.

The WCC FRM (flood risk management) team, which undertakes the LLFA function on behalf of WCC, may investigate flooding outside these categories, but only when all outstanding issues with a higher priority have been considered. These investigations will be prioritised based on the same six criteria listed above. Flooding on public land outside of the above categories will be addressed before flooding to residential gardens and on private land. Although inconvenient and possibly distressing to the individual, flooding to private land that does not affect any buildings is a lower priority that will be dealt with by the FRM team on an advice basis only. Where flooding is caused by the actions of neighbouring landowners, the First-tier Tribunal (Property Chamber) Agricultural Land and Drainage can be used to settle disputes over, amongst other matters, land drainage (see Appendix E). Smaller scale flooding affecting the highway or coming from the highway will continue to be investigated primarily by WCC Highways, with support from the WCC FRM team and Districts and Boroughs where land drainage issues exist.

These guidelines set numerical thresholds. However, in recognition of the fact that all floods will be different, a certain amount of discretion will be required in order to implement this policy effectively.

This policy only relates to how flood investigations will be prioritised and does not guarantee that any flood risk mitigation works will be installed at the locations where investigation are undertaken.

¹Internal flooding is defined in Appendix A

2.1.2 Objective 2 - Seek to reduce local flood risk in Warwickshire in an economically, socially and environmentally sustainable way

Where opportunities are available to implement measures to reduce local flood risk these will be explored to establish if they are economically viable and can form part of a sustainable approach to local flood risk management in Warwickshire. These will be prioritised to ensure that the most beneficial measures are implemented first. This is especially important where budgetary constraints mean that not all viable measures can be implemented. In addition this will include the protection of all Natura 2000 sites.

In the current economic climate quick wins will be sought to make best use of the available budgets to give the best value for money in actions taken to reduce local flood risk. These will be prioritised on the same basis as Flood Investigations that is set out in Box 1.

Where local flood risk issues are identified, all available funding sources will be explored to progress potential solutions in partnership with other authorities. In developing measures to tackle local flood risk, it is important to involve all relevant partners, both risk management authorities and others, including members of the public.

Another key aspect of local flood risk management is working with riparian landowners to ensure they act on their responsibilities for watercourse maintenance. WCC Highways have produced a leaflet entitled 'Farming and the Public Highway' which is freely available on the WCC website¹ and gives advice to rural landowners regarding their responsibility for maintenance of drainage ditches and watercourses adjacent to the highway.

Management of local flood risk includes actions taken when flooding is occurring. WCC has a sandbag policy which sets out the principles and procedures for the distribution of sandbags across Warwickshire during flood events (Appendix F).

2.1.3 Objective 3 - Adopt a collaborative approach to local flood risk management

Collaboration between professional partners and stakeholders is a key aspect of the Flood and Water Management Act 2010 and the national strategy. Similarly, it is a vital part of local flood risk management; the Warwickshire Strategic Flood Forum for example brings together all the relevant authorities and some other key partners to ensure collaborative flood risk management across the county.

In 2014 the first annual Flood Summit was held in Warwickshire to allow partners and stakeholders to review the progress made towards delivery of the recommendations of the Pitt review (see Box 2).

¹ <http://apps.warwickshire.gov.uk/api/documents/WCCC-899-17>

Box 2 - Warwickshire Flood Summit

The first Flood Summit was held on the 16th October 2014, in Benn Hall in Rugby. It was attended by more than 100 delegates, representing partners and stakeholders in Warwickshire to 'take a step back' and consider to what extent the recommendations of Pitt Review have been implemented in Warwickshire, and which direction WCC should be taking in the future in terms of flooding. The event was a great success and is being undertaken with more regularity as a forum for engaging with partners on flood risk management issues. A second flood summit was held on the 23rd October 2015.

Communication of local flood risk and raising awareness with local communities is another important element of local flood risk management. An example of this is the Defra-funded Community Flood Resilience Pathfinder Project recently undertaken by WCC in partnership with the National Flood Forum. This project has allowed WCC to work closely with local communities: nine flood action groups have been created, seven county-wide engagement workshops have been held, and local flood risk management and flood resilience has been promoted at a number of schools in areas affected by flooding.

2.1.4 Objective 4 - Promote community preparedness and resilience to local flood risk

While WCC as the LLFA has a big role to play in the management of local flood risk, it is important that communities are prepared to deal with flood events if they happen and are best placed to recover as quickly as possible.

An improved understanding of local flood risk from the measures outlined under Objective 1 will allow Warwickshire to advise local communities, ensuring they are aware of the risks they face and enabling them to take appropriate action when necessary. Increased awareness can be achieved through public consultation events, newsletters and online resources. Box 3 describes some of the work WCC has already undertaken to improve understanding in local communities.

Community resilience and preparedness needs to be supported by the plans and arrangements of the relevant authorities to respond to flooding. The Warwickshire Multi-Agency Flood Plan (MAFP) has been developed by the Coventry, Solihull & Warwickshire Resilience Team (CSWRT) in liaison with the Environment Agency, Police, Warwickshire Fire and Rescue Service, and Ambulance services. It sets out appropriate multi-agency arrangements to facilitate an effective, coordinated response to flooding in Warwickshire.

Box 3 - Community Engagement in Warwickshire

Seven county-wide engagement meetings with Parish and Town Councils and community groups took place in Baddesley Ensor, Nuneaton, Lapworth, Kenilworth, Stratford, Aston Cantlow and Warwick in 2014, to discuss community flood resilience and encourage local communities to take an active role in managing local flood risk at a local level with support from Warwickshire County Council and the Districts and Boroughs of the county. The meetings were for community leaders and members of Parish and Town Councils across the county.

The Defra-funded Flood Resilience Community Pathfinder project has helped to develop a truly community-led approach to flood resilience. The Warwickshire County Council Flood Risk and Water Management (FRM) team, in association with the Coventry, Solihull and Warwickshire Resilience Team (CSWRT) have also been working with schools in Bedworth and Shipston-on-Stour as part of the ongoing Community Flood Resilience Pathfinder project. A weather station has recently been installed at both schools, and further installations are planned at other school sites within the county. This will help in monitoring local rainfall and assist in early warning of potential flooding in these communities. This project has also helped to raise awareness of potential flooding in these communities and to raise awareness of the need for individuals and communities to be prepared for unexpected extreme rainfall events.

2.1.5 Objective 5 - Enable planning decisions to take full account of local flood risk and seek to reduce local flood risk through development

The planning process has a significant role to play in ensuring that new developments do not increase flood risk and ensuring that they are not at risk from flooding. In order to ensure new development is safe and does not have detrimental impacts on local flood risk, particularly in areas of known flood risk, it should ideally be considered at the pre-application stage and the relevant flood risk management authorities should be involved in these discussions.

The National Planning Policy Framework (NPPF) is the key piece of legislation that sets out the requirements for managing flood risk in new development. This sets out the requirement that the planning process should be informed by the Strategic Flood Risk Assessment (SFRA) at all stages.

Following a key recommendation of the 2008 Pitt Review, Schedule 3 of the Flood and Water Management Act (2010) would have designated WCC as the SuDS Approval Body (SAB). However this schedule has not been fully enacted. Defra and the Department for Communities and Local Government (CLG) released a consultation on 12th September 2014 which outlined an alternative way of delivering SuDS through amendments to existing planning system. This was implemented on 15th April 2015 and The Town and Country Planning (Development Management

Procedure) (England) Order 2015 – Schedule 4 - Consultations before the grant of permission has made LLFAs statutory consultees for major development planning applications with surface water drainage. Assessment of surface water drainage provision for all other types of development is now the responsibility for local planning authorities.

WCC actively seeks to secure and use Section 106 contributions from developers to fund flood risk management measures in the communities affected by the development.

Draft Planning Advice has been included in Appendix G of this document for comment and feedback.

2.2 Measures

To enable the objectives of this Strategy to be met, this section details a range of measures that will be undertaken. Measures to manage flood risk comprise more than building flood alleviation schemes, and the maintenance and management of watercourses and drainage assets. They include educating communities to be prepared for flooding, effective partnership working between the various agencies that hold flood risk management responsibilities, and effective use of the planning system, among others.

2.2.1 ‘No Regrets’ Measures

While this Strategy has developed a range of measures for the management of local flood risk in Warwickshire, the development and implementation of such measures is an integral part of the work of WCC through its role as the LLFA.

The WCC FRM team have developed a range of ‘no regrets’ measures that comprise actions that WCC and our partners have already undertaken, are currently doing, and should continue to do to effectively manage local flood risk in Warwickshire. While these measures could have been delayed until the completion of this Strategy, doing so would have jeopardised the WCC’s chances of accessing some sources of funding and progressing flood alleviation schemes in what are known to be areas of high flood risk. These have been prioritised on the basis of the number of properties at risk of flooding and the likelihood of a scheme receiving funding. These will be funded through existing revenue and capital grant funding, subject to available resources and funds.

The completion of the countywide SWMP and this Strategy may alter some of the existing priority locations and this will be reflected in bids for funding allocations and the progression of flood alleviation schemes in the future.

The ‘no regrets’ measures that have already been undertaken and how they have contributed to the achievement of the Strategy objectives is shown in Table 2.2

below.

Table 2.2 – How the ‘no regrets’ measures already undertaken contribute to the Strategy objectives

‘No Regret’ Measure	Relationship with LFRMS objective
Leading on and assisting in the completion of flood alleviation schemes where there are clearly identified flood risk management issues (such as in Aston Cantlow, Nuneaton, Gaydon, etc.).	Objective 2
Managing flood risk through the development process through supporting local authorities in reviewing planning applications and consenting work that impacts on ordinary watercourses.	Objective 5
Continuing to improve knowledge on local flood risk through flood investigations and development of a Surface Water Management Plan (SWMP).	Repeated under Objective 1
Quick win small-scale flood risk management schemes such as minor highway works.	Objective 2
Bidding for funding allocations for flood alleviation schemes (such as in Snitterfield, Fenny Compton, Ladbroke, Cherington, etc.).	Objective 2
Engagement with flooded communities, in particular through the Community Flood Resilience Pathfinder project and its successor.	Objective 4
Solving minor drainage systems blockages during investigative work.	Objective 1

2.2.2 Measures to Achieve Strategy Objectives

In order to meet the objectives of the Strategy a range of longer term measures will be undertaken by the LLFA, working with our partners. More details of the partners involved in the delivery of these measures are given in the LFRMS Action Plan (Appendix D). These are set out for each of the five objectives in the following sections and further details of how these measures will be implemented are given in the Action Plan which supports the Strategy in Appendix D.

Objective 1: Develop a better understanding of local flood risk in Warwickshire to better manage flood risk to people, property, infrastructure and the natural environment

- Measure 1A: Further develop the Surface Water Management Plan for the county to gain a better understanding of key flooding hotspots, risks and associated economic, social and environmental consequences.
- Measure 1B: Work with partners to investigate locally significant flooding incidents and identify sources, pathways and receptors of flooding.
- Measure 1C: Further develop and continue to maintain a register of flood risk management assets with a record of the significant structures

with respect to flood risk.

Measure 1D: Review the Preliminary Flood Risk Assessment as required by the EU Floods Directive and Flood Risk Regulations 2009 and contribute to the other requirements.

Objective 2: Seek to reduce local flood risk in Warwickshire in an economically, socially and environmentally sustainable way

Measure 2A: The actions of the emerging SWMP to be progressed and, where suitable, flood risk management schemes are identified and funding to be sought.

Measure 2B: Warwickshire County Council to work with partners to encourage flood management and maintenance activities by riparian landowners on ordinary watercourses, and flood defence and drainage structures, as well as limiting the development of constrictions on ordinary watercourses through consenting and, if necessary, enforcement.

Measure 2C: WCC to work collaboratively with partners, including those in the Warwickshire Strategic Flood Forum (WSFF), to encourage flood schemes by third parties, riparian landowners and stakeholders and to ensure that Natura 2000 sites and Sites of Special Scientific Interest (SSSIs) are not adversely affected by flood risk management activities.

Measure 2D: To lead on the implementation of local flood risk management schemes and to work with partners to best utilise funding streams through a prioritised risk-based approach and through promoting schemes with the most multiple benefits.

Measure 2E: To ensure environmentally sustainable solutions are fully considered in WCC led and in all other flood risk management measures, using a catchment based approach where applicable.

Measure 2F: Aim to ensure a no net loss of biodiversity, particularly in Local Wildlife Sites, and where possible look to provide a net gain through habitat creation and enhancement, contributing to wider environmental objectives.

Measure 2G: To ensure no deterioration in Water Framework Directive (WFD) waterbody status as a result of flood risk management activities. and where possible look to enhance status through implementation of the recommendations of the River Basin Management Plans (RBMPs).

Objective 3: Adopt a collaborative approach to local flood risk management

Measure 3A: To continue to develop the Warwickshire Strategic Flood Forum

(WSFF) and relations with other partners.

- Measure 3B: To share knowledge and training opportunities with partners.
- Measure 3C: Continue to work with and support community flood action groups, Town and Parish Councils and other community groups.
- Measure 3D: Continue to engage local communities, building on the progress made by the Community Flood Resilience Pathfinder Project.
- Measure 3E: To work with neighbouring Lead Local Flood Authorities to ensure a catchment-based approach to local flood risk management.

Objective 4: Promote community preparedness and resilience to local flood risk

- Measure 4A: To work with partners to reduce the impacts of flooding by enabling an efficient response to, and recovery from, flooding incidents by partners and stakeholders.
- Measure 4B: To work with partners to reduce the harmful consequences of local flooding to communities and human health through proactive actions, community activities and education programmes that enhance preparedness and resilience to local flood risk, thereby promoting community cohesion and minimising community disruption.
- Measure 4C: Continue the work of the Warwickshire Community Flood Resilience Pathfinder project in supporting local groups to manage local flood risk and increase the resilience of their communities to flooding.
- Measure 4D: Continue to work with partners to improve communications and advice given during flooding events.
- Measure 4E: To work with partners to establish a co-ordinated approach to the provision of temporary flood risk management measures.

Objective 5: Enable planning decisions to take full account of local flood risk and seek to reduce local flood risk through development

- Measure 5A: To work with partners to produce local policies and guidance, and set standards to promote a positive impact on flood risk from new development, and to prevent any increase in flood risk, including the possible impacts of climate change.
- Measure 5B: To maximise opportunities for contributions towards existing and proposed flood risk management from new development to address local flood risk.

-
- Measure 5C: Develop byelaws, where beneficial, to control development.
- Measure 5D: Work with relevant partners to promote SuDS measures for new developments through the role as a statutory consultee on major planning applications.