

# Shropshire and Staffordshire Local Flood Risk Management Strategy

## Part 2: Policies and Procedures Specific to Staffordshire

December 2015



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## 1. Introduction

As a Lead Local Flood Authority (LLFA), Staffordshire County Council has a number of statutory duties to address local flood risk under the Flood and Water Management Act 2010 and the Land Drainage Act 1991. The production of a Local Flood Risk Management Strategy is one of these duties. The Flood and Water Management Act 2010 encourages collaborative working between Risk Management Authorities (RMAs) and, accordingly, Shropshire Council and Staffordshire County Council have agreed to work together to deliver the LLFA responsibilities for both counties. We have developed the Strategy as a suite of documents and assessments that provide the overall strategic direction for the management of local flood risk in both counties. Part 1 of the Strategy sets out our combined approach to managing flood risk from local sources whereas this document details the policies and action plan, specific to Staffordshire, that outline how Staffordshire County Council intends to fulfil its responsibilities under this legislation. Shropshire Council has also produced a similar document, detailing policies and procedure specific to Shropshire.

In developing the Local Flood Risk Management Strategy we have identified seven key objectives. These are explained in more detail in Part 1, Section 4.2 of the Strategy. They are aligned with the National Strategy for Flood and Coastal Erosion Risk Management (FCERM) and the corporate priorities of both Shropshire Council and Staffordshire County Council's strategic plans. They are summarised below.

- 1) Develop a strategic understanding of flood risk from all sources;
- 2) Promote effective management of drainage and flood defence systems;
- 3) Support communities to understand flood risk and become more resilient to flooding;
- 4) Manage local flood risk and new development in a sustainable manner;
- 5) Achieve results through partnership and collaboration;
- 6) Be better prepared for flood events, and;
- 7) Secure and manage funding for flood risk management in a challenging financial climate.

These objectives have helped to inform the development of an action plan, detailing how we intend to deliver the Local Flood Risk Management Strategy. The Action Plan is included in Section 6 of this document. The Action Plan brings together the actions and priorities set out in our Strategy and plans for investment in flood alleviation from all partners across Staffordshire and Shropshire. Progress will be monitored by the Staffordshire and Shropshire Flood Risk Management Service Delivery Group. This will be published on our website once complete and reviewed on a regular basis.

It will not be possible to deliver all potential flood risk management measures in the short term. We will, therefore, take a proportionate approach to focus effort and investment to deliver actions where they will be most effective. Section 7 covers how we will prioritise our actions.

Whilst a Strategic Environmental Assessment (SEA) was undertaken as part of the Local Flood Risk Management Strategy there is considerable uncertainty involved in strategic assessments at this level. More detailed studies where necessary will be undertaken at a project level. This will help to assess any potential environmental and social impacts (including to internationally important sites) and identify any mitigation or enhancement opportunities. This may also include the need to carry out specific Habitats Regulations Assessments (HRAs).

## 2. Policies in Relation to the Flood and Water Management Act

The *Flood and Water Management Act 2010* provides a regulatory framework for the effective management of flood risk. It outlines the duties and powers for a number of Risk Management Authorities (RMAs), including LLFAs, the Environment Agency, Water Companies and Internal Drainage Boards (IDBs).

This section contains specific policies in relation to Staffordshire County Council's responsibilities, under the Flood and Water Management Act 2010, as LLFA. Each of the following sub-sections contains an extract from the relevant part of the Flood and Water Management Act 2010 where relevant, followed by policy information explaining our approach to fulfilling our Flood Risk Management responsibilities.

### 2.1. Policy 1: Investigation and Reporting of Flood Events

***When Staffordshire County Council becomes aware of internal property flooding, it will endeavour to investigate the source of the flooding and notify the relevant organisations which have specific roles and responsibilities. After a major flood event the council will prioritise its approach based on the number of properties, businesses and infrastructure affected.***

***This policy relates to Section 19 of the Flood and Water Management Act 2010, which states:***

*On becoming aware of a flood in its area, a Lead Local Flood Authority (LLFA) must, to the extent that it considers it necessary or appropriate, investigate:*

- *Which Risk Management Authorities (RMAs) have relevant flood risk management functions, and;*
- *Whether each of those Risk Management Authorities (RMAs) has exercised, or is proposing to exercise, those functions in response to the instance(s) of flooding.*

*Where an authority carries out an investigation it must:*

- *Publish the results of the investigation, and;*
- *Notify any relevant Risk Management Authorities (RMAs).*

Following major flood events, it can often be difficult to identify the source of the flooding and with whom actions to help resolve flooding issues may lie. The purpose of Section 19 of the Flood and Water Management Act 2010 is to ensure that, where this uncertainty occurs, LLFAs assist with identifying the source(s) of flooding and notifying those Risk Management Authorities (RMAs) which have responsibilities.

When Staffordshire County Council becomes aware of internal property flooding, (classed as ‘over the doorstep’ level in line with other RMAs), it will endeavour to investigate the source of the flooding and notify the relevant RMAs which have specific responsibilities.

Appropriate records will be kept to monitor the frequency of these problems. These actions will support the justification for flood risk management schemes and other relevant flood risk management actions.

Following major flood events, when the Council is likely to have received a large volume of enquiries, it may not be possible to carry out an investigation in to every reported flooding incident. On these occasions we will prioritise our response based on the associated risk to properties and infrastructure.

We will undertake a formal investigation for locally significant flood events when one or more of the following criteria are met:

- Five or more residential properties are reported to have been internally flooded during a single flood event in one location;
- Two or more business properties are reported to have been internally flooded during a single flood event in one location, or;
- One or more items of critical infrastructure are reported to have been adversely affected during a single flood event in one location.

In addition, to meet our statutory duties for reporting the above occurrences, the following information will be published on our website, <http://www.staffordshire.gov.uk/environment/Flood-Risk-Management/Flood-investigations/Flood-Investigations.aspx>.

Flooding Incident		Flood Risk Management Authorities	
Date	Location	With functions	Functions exercised or planned to be exercised

**Figure 2-1: Example of Section 19 Flood Investigations Register**



## 2.2. Policy 2: Register of Structures and Features (Asset Register)

*The council will take a risk based approach to prioritise the collection of data and will use asset information to help raise awareness of the assets that exist to improve community resilience.*

***This policy relates to Section 21 of the Flood and Water Management Act 2010, which states:***

*A LLFA must establish and maintain-*

- A register of structures or features which, in the opinion of the authority, are likely to have a significant effect on a flood risk in its area, and;*
- A record of information about each of those structures or features, including information about ownership and state of repair.*

Central to Staffordshire County Council's improved management of local flood risk is a better understanding of the location and condition of important flood defence and drainage assets, both on the surface and below ground. The age and condition of drainage infrastructure varies greatly, from culverts originally constructed more than 100 years ago, to purpose built sewers and flood defence systems designed to modern day standards. The availability of records for much of the older drainage assets is limited, particularly with regard to culverted watercourses. Given the size of Staffordshire County Council's operational area, the lack of available records poses a major challenge in relation to the management of flood risk.

It should be recognised that it may take many years to populate the asset register with this missing information and, as a consequence, we will need to take a risk-based approach. To help with this task we have undertaken an assessment of communities at risk of flooding across Staffordshire (included in Section 7 of this document) and this will be used to help prioritise future data collection work. In addition, when undertaking an investigation after a flood event or drainage problem, we will obtain information in relation to any important flood risk assets that have not previously been recorded within the asset register. We will also update the asset register with details of any flood defence schemes undertaken by the council as LLFA and any drainage schemes undertaken by the council as Highway Authority.

In situations where asset information is required to determine suitable drainage outfalls for new development we may require the prospective developer to undertake appropriate survey work and supply this information to us so that our records can be updated.

To assist with planning for flood events, it is crucial that RMAs, emergency responders and communities fully understand the interactions and associated responsibilities of the drainage systems and flood defences in their area. The asset register will be used to inform operational response giving specific information on the location of important drainage and flood defence assets in a particular area and maintenance responsibilities.

It is important that we engage with communities to raise awareness of drainage and flood risk assets which are local to them. With a better understanding of the flood risk and the location of important drainage assets, we can help communities to be better prepared for future flood events. This may also encourage communities to take a pro-active role in the monitoring and maintenance of drainage and flood risk management assets.

For the above reasons, we will obtain and share all available flood defence and drainage asset information from other RMAs and organisations whenever we can with community groups. We will also set in place a process for updating this information on a regular basis.

Where Sustainable Drainage Systems (SuDS) form part of new developments, we will include this data in the Asset Register.

Currently, our Asset Register is held within Geographical Information Systems (GIS). This means that it can also be viewed in the context of a wide range of other information, such as environmental and land ownership data. Given that much of the Asset Register will be made up from third party data, which may not always be up to date, we will not be making the information available online. However, we will make the Asset Register available for public viewing, at all reasonable times, on request.



### 2.3. Policy 3: Designation of Structures and Features

***The council will consider the need to designate structures or features on a case by case basis taking the implications of property flood risk in to account.***

***This policy relates to Schedule 1 of the Flood and Water Management Act 2010, which includes:***

*Subject to conditions, a designating authority may designate a structure or a natural or man-made feature of the environment where it thinks the existence or location of the structure or feature affects flood risk.*

*A person may not alter, remove or replace a designated structure or feature without the consent of the responsible authority.*

As part of the review of the 2007 floods it was identified that certain structures or features have the ability to affect flood risk. This can be either intended or coincidental depending on the nature or location of the asset. An example of this is a boundary wall acting as an informal flood defence by redirecting surface water away from properties which would otherwise flood. In this example, whilst the presence of the wall would clearly have an unintended but beneficial purpose in terms of flood risk, there has historically been no legal means through which to prevent its removal or alteration by its owner in the future.

To address this issue, Schedule 1 of the Flood and Water Management Act 2010 has introduced new powers that enable us to formally designate structures or features which can affect flood risk. By designating these assets, any alteration or removal by existing or future owners will require our formal consent. We will consider the need to designate existing structures or features on a case by case basis taking the implications of flood risk in to account.

### 3. Policies in relation to the National Planning Policy Framework (NPPF)

#### 3.1. Policy 4 the Role of the Lead Local Flood Authority in the Consideration of Proposals for Sustainable Development

*The council will seek to deliver sustainable drainage systems (SuDS) as part of new development in its roles as statutory consultee for major planning applications and non-statutory consultee for non-major planning applications.*

***This policy relates to House of Commons: Written Statement (HCWS161) made by The Secretary of State for Communities and Local Government (Mr Eric Pickles) on 18 Dec 2014.***

*...we expect local planning policies and decisions on planning applications relating to major development... to ensure that sustainable drainage systems for the management of run-off are put in place, unless demonstrated to be inappropriate.*

Working together with Shropshire Council and a number of other LLFAs we have produced local guidance on the use of Sustainable Drainage Systems (SuDS) by means of the Local SuDS Handbook. The Handbook supports, and should be read in conjunction with, the Non-Statutory Technical Standards for SuDS document that was published by Defra in March 2015.

The Handbook sets out when SuDS should be considered as development proposals progress and what information is required in order for us to advise the Local Planning Authority as consultees. It also sets out Local Standards for SuDS that we expect developers to meet.

Preference will always be given to truly sustainable drainage systems which have been considered from the outset and which demonstrate how the management train approach has been used to manage surface water and pollutants at source. The adequate provision for ongoing maintenance for the lifetime of a development will also be closely scrutinised.

The Local SuDS Handbook is available via the council's website.

#### 4. Policies in Relation to the Land Drainage Act

The *Land Drainage Act 1991* provides the regulatory framework for the effective management of land drainage. It outlines the duties and powers for a number of bodies, including LLFAs, the Environment Agency and Internal Drainage Boards (IDBs) and Borough and District Councils (although there are none in Shropshire) in relation to overseeing the responsibilities of riparian landowners.

The Environment Agency's regulatory functions relate only to the Main River network and IDBs have similar responsibilities for the ordinary watercourses within their operational areas. The regulation of all other land drainage systems within Staffordshire rests with Staffordshire County Council.

This section contains specific policies in relation to Staffordshire County Council's responsibilities, under the Land Drainage Act 1991, as LLFA. Each sub-section contains an extract from the relevant part of the Land Drainage Act 1991, followed by policy information explaining our intended approach to fulfil our regulatory responsibilities.

#### 4.1. **Policy 5: Maintaining, Improving or Constructing Works to Ordinary Watercourses**

*Where appropriate, the council will use its permissive powers to construct flood alleviation schemes that reduce the risk of flooding to properties. The council will work with partner organisations, community groups and landowners to look for innovative cost-effective solutions and seek funding for schemes wherever possible.*

**This policy relates to** Section 14 of the Land Drainage Act 1991

*...every local authority acting so far as may be necessary for the purpose of preventing flooding or mitigating any damage caused by flooding in their area... shall have powers to:*

- *Maintain existing works;*
- *Improve any existing works;*
- *Construct new works.*

The Land Drainage Act 1991 gives Staffordshire County Council the permissive powers it requires in order to carry out improvement and construction works, on request from the District Council for Ordinary Watercourse works. Primarily, and where appropriate, we will use these powers to assist in the undertaking of flood alleviation schemes to reduce the risk of flooding to properties.

The successful delivery of these projects will require innovative ways of working and funding, based on teamwork and trust. Collaborative working and joint funding across partner organisations will be key to maximising the return on investment in flood risk management.

Defra's introduction, in 2011, of the partnership funding approach means that the ability of LLFAs to leverage contributions (both financial and in kind) from local partners or developers could make the difference between locally important projects going ahead or not.

It may be possible to fully fund some projects using only the mainstream dedicated flood risk funding sources such as Flood and Coastal Erosion Risk Management Grant in Aid (FCERM-GiA) or Local Levy. However there

will be other projects which require a range of funding sources to make up the total sum required.

We will prioritise where funding is directed based on a number of factors and aim to attract additional funding in line with this prioritisation. For further information on current funding arrangements refer to Part 1, Section 5 of the Strategy.

In the delivery of flood risk management schemes, we aim to work collaboratively with landowners and community groups to deliver the most cost effective solutions. However in some cases, it may become necessary for us to use these powers in order to deliver schemes that will provide benefit, in flood risk terms, to properties and infrastructure, should landowners be uncooperative.

#### 4.2. Policy 6: Consenting Activities relating to Ordinary Watercourses

***The council will seek to preserve the natural state of land drainage systems and minimise the number of man-made alterations to watercourses. Any activity which may affect the flow of an ordinary watercourse will require the council's formal consent.***

***This policy relates to [Section 23 of the Land Drainage Act 1991](#)***

*No person shall:*

- Erect any mill dam, weir or other like obstruction to the flow of any ordinary watercourse or raise or otherwise alter any such obstruction, or;*
- Erect any culvert that would be likely to affect the flow of any ordinary watercourse or alter any culvert in a manner that would be likely to affect any such flow,*

*Without the consent of the drainage authority concerned.*

Based upon our experience to date we have found that unregulated work affecting watercourses has, in many cases, been carried out in a manner which has resulted in increased flood risk. Typical issues include:

- Flooding due to inappropriately sized, or poorly constructed, culverts;
- The inability to carry out maintenance due to access restrictions;
- Increased likelihood of blockage due to poor design (e.g. blockage of trash screens, build-up of silt);
- A lack of understanding of riparian landownership responsibilities;
- A lack of records leading to accidental damage by third parties;
- A lack of inspection and monitoring of condition, or;
- Adverse effects to habitat, biodiversity and environment.

In view of this we will seek to preserve the natural state of land drainage systems and minimise the number of man-made alterations to watercourses. Any activity which may affect the flow of an ordinary



watercourse will require our formal consent. This applies to both temporary and permanent works.

We will, therefore, generally be opposed to the culverting of watercourses and the construction of in channel structures unless there is no reasonable alternative, e.g. where a new road or railway embankment is to cross a watercourse, the use of a culvert may be approved.

We would advise anybody intending to carry out works to an ordinary watercourse to contact the Staffordshire County Council's Flood Risk Management Team for advice. Further details regarding the consenting procedure are available on our website, <http://www.staffordshire.gov.uk/environment/Flood-Risk-Management/risk-management.aspx>.

### 4.3. Policy 7: Enforcement Activities relating to Ordinary Watercourses

*When an issue is raised, the council will take a risk based approach to determine if enforcement action should be taken.*

***This policy relates to*** Sections 21, 24 and 25 of the Land Drainage Act 1991

- ***Section 21:*** Enforcement of obligations to repair watercourses, bridges, etc;
- ***Section 24:*** Contraventions of prohibition on obstructions etc. (powers to remove unconsented works;
- ***Section 25:*** Powers to require works for maintaining flow of watercourse.

Under common law, riparian land ownership is a legal term given to a landowner who owns land adjacent to a watercourse (river, stream, ditch etc.). To reduce the risk of flooding, riparian landowners are responsible for maintaining the normal flow of water through their land and obtaining prior approval before carrying out any alterations which may affect the normal flow of water.

The Land Drainage Act 1991 provides Staffordshire County Council with permissive powers to carry out regulatory activities on ordinary watercourses. The Council may undertake enforcement action where there is a:

- requirement to carry out repairs;
- requirement to remove or modify unconsented works, or;
- requirement to undertake routine maintenance to maintain the normal flow of water.

Due to the permissive nature of our powers under the Land Drainage Act 1991 we will, when an issue is brought to our attention, take a risk based approach when determining whether enforcement action should be taken. There are many factors that may influence our decision, but key issues include:

- The potential for internal flooding of residential / commercial buildings;
- The potential for flooding of important infrastructure, and;

- The potential for adverse environmental effects.

We will endeavour to resolve the majority of issues through cooperation with riparian landowners, avoiding the need for enforcement procedures to be taken.

In addition to powers under the Land Drainage Act 1991, Staffordshire County Council as Highway Authority, has powers under the Highways Act 1980 in relation to flooding and drainage affecting the public highway. There are also common law responsibilities for landowners to maintain roadside ditches and watercourses. See Part 1, Section 2.6 of the Strategy for further information.

## 5. Policies in Relation to Environmental Opportunities

### 5.1. Policy 8: Environmental Opportunities

*The council will seek to improve the local environment when delivering flood alleviation schemes, work with natural processes and take a catchment based approach when considering suitable options for flood mitigation. The council will also seek to secure flood risk management benefits through ongoing and future programmes of work primarily aimed at improving our natural environment, enhancing our landscape and the wildlife it supports, improving water quality and securing our cultural heritage assets for the future.*

The implementation of the Local Flood Risk Management Strategy provides a significant opportunity to improve the natural, rural and built environment (including earthworks and other archaeological remains). This includes helping to provide better environments for residents and businesses as well as improving biodiversity, water quality and local habitats for wildlife and enhancing our landscape. This means ensuring that proposals:

- are sympathetic to local landscape character;
- preserve and enhance the habitat networks that support wildlife species;
- preserve our cultural and historical assets for the future, and;
- can adapt to future changes in climate and land use.

Environmental impacts will be considered as part of any flood risk management activity. An appropriate level of assessment will be made at every stage, starting with a strategic level of assessment for the Strategy through to environmental considerations during scheme design and whilst considering sustainable drainage systems proposed for new developments.

A catchment-based approach will be adopted when we are looking at how best to manage flood risk in an area. This includes considering how flooding can be reduced:

- at source e.g. through capturing and storing water upstream and/ or increasing cover of woodland or other habitats which hold water and reduce run-off;
- at the pathway for flooding e.g. by building flood defences along a river or restoring a river to a more natural state to slow down flood flows, and;

- at the receptors themselves e.g. through direct works to protect people, properties, businesses and agricultural land.

Historic approaches to water level management may also need to be considered e.g. through reintroduction of historic water meadows.

In taking a catchment-based approach we will also seek to work with others such as Parish and Town Councils, Staffordshire Wildlife Trust, The Trent Rivers Trust, Woodland Trust, Environment Agency, Natural England, English Heritage etc. and through the Local Nature Partnership as well as community groups to secure a sustainable natural environment.

## 6. Action Plan

This action plan sets out both county wide measures and specific actions which we will pursue to mitigate and reduce the risk of flooding within Staffordshire.

Our ability to deliver these actions will be influenced by the availability of funding from government and other sources. To mitigate this risk we will continue to explore opportunities for further collaborative working with Staffordshire County Council and other organisations.

We have taken a proportionate approach to focus effort and investment to deliver actions where they will be most effective. Some measures will be most effective where they are developed over the long term and delivered across the whole county. For example, policy or education measures work best at this scale. Some measures, however, may be location specific and will work best when delivered at a ward, parish or community scale.

Table 6-1, describes the general, long term or policy measures that we have put in place to achieve our objectives. There are a number of measures already being delivered that will reduce or manage flood risk and these have been included in the table. The Action Plan sets out how and when we will deliver these actions and an annual monitoring report will be produced by the Shropshire and Staffordshire Service Delivery Group.

The Action Plan includes:

- Objective: the relevant LFRMS objective
- Actions to be taken to deliver our objective
- Partners to deliver the action
- Status:
  - **Continue** to carry out existing role in the future
  - **Develop** and expand upon existing roles or increase existing service area
  - **Establish** a new role or service area
  - **Achieved**: action is already achieved
- Timescale for delivering the action



Objective	Actions to be taken to deliver our objective	Partners	Status	Timescale
<b>1. Develop a strategic understanding of flood risk from all sources</b>	<p>Manage local flood risk using a risk-based and evidence-based programme, incorporating proportionate and practical measures taking into account the effects of climate change. Ensure shared information on flood risk and drainage systems is regularly updated and shared as appropriate.</p> <p>Identify High Risk Surface Water catchments and following actions for development planning, prioritising actions and emergency planning and operational response.</p>	LLFAs to lead	Develop	<p>Ongoing to deliver this Strategy</p> <p>High Risk Surface Water Catchments to be identified in the short term</p>
	Investigate flooding incidents, working with all RMAs and local communities. Keep flood incident data up to date and share this information with other Risk Management Authorities	LLFAs to lead	Develop	Following flood incidents, Develop processes and procedures on the short-term.
	Produce local flood risk management plans for high priority locations. These will identify who the key partners are, the levels of flood risk and what actions can be taken at a local level.	LLFAs to lead	Establish	To be developed based on a rolling programme and dependent on available funding
	Improve evidence, information, and mapping and modelling tools to understand better the risks of	Environment Agency to	Establish	Ongoing

Objective	Actions to be taken to deliver our objective	Partners	Status	Timescale
	flooding and to support better decisions and greater resilience. Make flood risk information more accessible, taking account of social and technological change and opportunities, such as the increasingly widespread use of social media.	lead for Main River  LLFAs to lead for surface water, Ordinary Watercourses and groundwater		
	Support the Environment Agency to implement the Humber Flood Risk Management Plan and update the Staffordshire Preliminary Flood Risk Assessment	LLFA to lead	Develop	PFRAs to be updated in 2017  Humber Flood Risk Management Plan to be delivered 2015-2040
<b>2. Promote effective management of drainage and flood defence systems</b>	Use permissive powers to manage the watercourse network, by consenting to works, taking a risk based approach to enforcing landowner responsibilities and raising awareness about these responsibilities	LLFAs for Ordinary Watercourses  Environment Agency for Main Rivers  IDBs for Ordinary Watercourses within their area	Continue	Ongoing
	Update and improve the Asset Register, establish regimes to share information with other Risk Management Authorities. Gain an improved understanding of the interactions between the various drainage systems and the condition and	LLFAs to lead	Develop	Develop system and linkages in the short terms, with a longer term programme for populating the

Objective	Actions to be taken to deliver our objective	Partners	Status	Timescale
	<p>location of historic assets, particularly culverted watercourses.</p> <p>The register should integrate into existing Council systems and be used to work with local communities and other RMAs to inform future inspections, maintenance and investment needs.</p>			Register and sharing information
	<p>Minimise the risk of flooding to properties by maintaining current levels of flood risk management within areas at risk of flooding from Main Rivers that already benefit from river flood defences, subject to available funding. Continue appropriate levels of river and watercourse maintenance, subject to available funding.</p>	Environment Agency	Continue	Ongoing
	<p>Maintain the public sewer network. The water companies maintain their system on a planned and cyclical basis and also respond reactively where there are issues, such as blocked sewers. Water Companies are also investing in real time monitoring of their assets to better understand how they perform during storm events.</p>	United Utilities, Severn Trent Water	Continue	Ongoing
	<p>Maintain the Ordinary Watercourse network in the Sow and Penk IDB area around Stafford as appropriate.</p> <p>The IDB maintenance plan is dynamic and may</p>	Sow and Penk IDB	Continue	Ongoing

Objective	Actions to be taken to deliver our objective	Partners	Status	Timescale
	<p>change from year to year but may normally be to de-weed the channel and mow the appropriate bank to improve the line of sight for de-weeding machine operations. Circumstances may arise where the IDB consider de-silting is required to maintain flow. At present, there are no identified water level or flood risk management works</p>			
<p><b>3. Support communities to understand flood risk and become more resilient to flooding.</b></p> <p>(see also Objective 6, “Be better prepared for flood events” below)</p>	<p>Support communities at risk of flooding to take action to increase their resilience.</p> <p>This will be undertaken on a case by case basis and also through delivering a joint Community Flood Resilience Project with Shropshire Council, leaning from best practise elsewhere and seeking to bring together funds for local flood resilience measures, such as Property Level Protection, flood resilience stores and telemetry to monitor vulnerable assets.</p>	<p>LLFAs, Staffordshire Civil Contingencies Unit, National Flood Forum, Environment Agency, United Utilities, Severn Trent Water, local communities</p>	<p>Develop</p>	<p>Three year project from 2015-2018</p>
	<p>Engage openly with local communities to improve understanding of the risks from flooding and coastal erosion, provide flood warnings, and help develop and promote solutions that make them more resilient to flood events.</p> <p>Target resources towards communities with the highest flood risk. Promote a greater awareness and understanding of the risks of flooding, particularly in those communities at high risk, and</p>	<p>Environment Agency</p>	<p>Continue</p>	<p>Ongoing</p>

Objective	Actions to be taken to deliver our objective	Partners	Status	Timescale
	encourage and enable householders, businesses and communities to take action to manage the risks.			
	Support communities at risk in fast responding catchments prone to flash flooding through identification of Rapid Response High Risk Surface Water Catchments and rapid response catchments for river flooding and follow up actions	Rapid Response High Risk Surface Water Catchments led by LLFAs  Rapid Response River catchments led by Environment Agency	Develop	Ongoing
	Support the development of sustainable rural communities by helping to make businesses more resilient to flooding and supporting the Staffordshire Rural Strategy.	LLFA	Establish	Ongoing
	Engage with communities so as to raise awareness of the drainage assets in their area to assist those communities to be better prepared for future flood events.  Encourage communities to take a more pro-active role in flood monitoring and maintenance works;	LLFA	Establish	Ongoing
	Work with flood risk partners to engage local communities on sewer misuse (which causes many sewer flooding issues) and to deliver a joined up programme of Property Level Protection.	United Utilities, Severn Trent Water, LLFAs	Establish	Ongoing

Objective	Actions to be taken to deliver our objective	Partners	Status	Timescale
<b>4. Manage local flood risk and new development in a sustainable manner</b>	Seek the inclusion of Sustainable Drainage Systems wherever possible within new developments, by developing the resources, processes, systems, guidance and documents needed as Statutory Consultees on surface water drainage, working collaboratively with Shropshire Council.	LLFAs to lead, working with Local Planning Authorities and other consultees including the Environment Agency, IDB and water companies	Develop	Ongoing
	Prepare a Sustainable Drainage System (SuDS) handbook collaboratively with other LLFAs which will provide guidance for developers on the design process and supplement the National Standards with Local Standards.  Seek to have this adopted as a Supplementary Planning Document by Local Planning Authorities	LLFA	Develop	Short term
	Regarding Sustainable Drainage Systems, respond to planning applications within 21 days as Statutory Consultee and encourage developers, statutory consultees and local planning teams to work closely with the LLFA from the outset since sustainable drainage systems will have a bearing on site layout.	LLFA	Continue	Ongoing
	Regarding river flood risk, respond to planning applications within 21 days as Statutory Consultee to avoid inappropriate development in areas of flood and coastal erosion risk and seek opportunities to reduce existing and future flood risk through new	Environment Agency	Continue	Ongoing



Objective	Actions to be taken to deliver our objective	Partners	Status	Timescale
	and future development plans.			
	Work with Local Planning Authorities to assist with the development of planning policies, site allocations and identification of future infrastructure needs	LLFA, Environment Agency, United Utilities, Severn Trent Water, IDBs	Continue	Ongoing, Local Planning Authorities in Staffordshire are at different stages in developing these
	Work with local communities to support the development of Neighbourhood Plans	LLFA, Environment Agency	Continue	Ongoing
	Work with developers and Local Planning Authorities to secure appropriate connections to the sewer network, taking account of sewer flooding issues	Severn Trent Water, United Utilities	Continue	Ongoing
	Respond as a non statutory consultee to planning applications where relevant and where resources allow	Sow and Penk IDB	Continue	Ongoing
<b>5. Achieve results through partnership and collaboration</b>  (see also Objective 7, "Secure and manage funding for flood risk	Raise awareness of the roles of all Risk Management Authorities and work in partnership with others to take a joined up and risk based approach to flood risk management  This will be achieved through the Shropshire and Staffordshire joint meetings framework and the	LLFA, Environment Agency, Severn Trent Water, United Utilities, Sow and Penk IDB, District and Borough Councils, Highways Authorities	Develop	Ongoing

Objective	Actions to be taken to deliver our objective	Partners	Status	Timescale
management in a challenging financial climate” below)	Staffordshire Flood Network.			
	Work collaboratively with Shropshire Council to develop a consistent approach to systems and procedures, through regular meetings and annual updates to the shared Project Plan	LLFA	Continue	Annual updates to Project Plan
	Support the delivery of the County Council’s Climate Change Strategy and work with other Risk Management Authorities to support the delivery of their climate change objectives	LLFA	Develop	Ongoing
	Work with Infrastructure Plus, the Councils Highways Delivery Partnership to integrate programmes of work	LLFA	Develop	Ongoing and monitored through a joint work plan with regular meetings
	Work with landowners, communities, Parish Councils, Wildlife Trusts, the National Farmers Union (NFU), Country Land and Business Association (CLA) and other similar organisations to promote changes in agricultural land management practices, which can improve water quality, reduce the impact of flooding and provide opportunities to incorporate ecological benefits.  This can be undertaken on a case by case basis, through specific Risk Management Authority work programmes and through seeking to deliver a	LLFA, Environment Agency, Severn Trent Water, United Utilities	Develop	Ongoing

Objective	Actions to be taken to deliver our objective	Partners	Status	Timescale
	Staffordshire Natural Flood Management Project.			
<b>6. Be better prepared for flood events</b>	<p>Work with the Staffordshire Local Flood Resilience Forum to inform flood preparedness, response and recovery planning, including the delivery of strategic and operational flood exercises where practical</p> <p>This also includes working with partners to improve communications and advice given during a flood event.</p>	LLFA, Environment Agency, Severn Trent Water, United Utilities	Continue	Ongoing and monitored through a joint LLFA work plan with regular meetings
	<p>Support the Local Resilience Forum to plan for, respond to and recover from flood events.</p> <p>The Staffordshire Civil Contingencies Unit co-ordinates all partners that have a role in preparing for, responding to and recovery from emergencies, including flooding. Their work includes:</p> <ul style="list-style-type: none"> <li>• Maintaining the Multi-agency Flood Plan (MAFP) – next review due 2018</li> <li>• Using flood risk data from LLFA and EA to risk assess flooding in Staffordshire and publicise on Staffordshire Community Risk Register (reviewed quarterly)</li> <li>• Multi-agency exercising of response to flood events – currently biannual</li> <li>• Supporting actions of LRF partners to prepare for and respond to flood events (ongoing) and</li> </ul>	Staffordshire Local Resilience Forum	Continue	Ongoing

Objective	Actions to be taken to deliver our objective	Partners	Status	Timescale
	<ul style="list-style-type: none"> <li>Providing warning and informing to the public (as and when appropriate)</li> </ul>			
	<p>Work with local communities to develop Local Flood Action Plans, seeking community involvement in local monitoring and maintenance of assets.</p> <p>This includes engaging with communities to raise awareness of the drainage assets in their area to ensure they are better prepared for future flood events.</p>	LLFA	Establish	Timescales, linked to the Community Flood Resilience Project and the Asset Register.
	<p>Maintain, and where possible, seek to improve accuracy of flood forecasting and warning where these services currently exist. Investigate the feasibility of expanding the forecasting and warning service in communities at high fluvial flood risk where no service currently exists.</p>	Environment Agency	Establish	Long term
<b>7. Secure and manage funding for flood risk management in a challenging financial climate</b>	<p>Work in partnership with other Risk Management Authorities to deliver flood alleviation schemes on a six year rolling programme.</p>	LLFA, Environment Agency lead	Continue	Ongoing
	<p>Maximise external fundraising opportunities for all projects such that more flood risk management projects can be delivered in the long term. This includes contributing to local strategic growth initiatives such as Local Enterprise Partnerships</p>	LLFA, Environment Agency	Establish	Ongoing relating to scheme progress in the six year programme

Objective	Actions to be taken to deliver our objective	Partners	Status	Timescale
	<p>(LEPs).</p> <p>This can be developed through a funding strategy for each scheme</p>			
	<p>Work with local communities to develop Flood Alleviation Schemes, where feasible, that meet local needs and integrate wider benefits where possible for the community e.g. environmental enhancements, supporting the rural economy. This will be developed through a Communication Plan for each Flood Alleviation Scheme.</p>	<p>LLFA, Environment Agency</p>	<p>Continue</p>	<p>Ongoing relating to scheme progress in the six year programme</p>
	<p>Work with other RMAs in partnership where there are interactions with the sewer network to deliver schemes on a five year rolling programme through the Asset Management Plan cycle (currently AMP6 2015-2020).</p> <p>United Utilities has a target to reduce the number of properties experiencing internal flooding by over 40% by 2020. To meet the proposed AMP6 targets, United Utilities are focussing on flooding from sewer collapse and blockage and mitigation of hydraulic inadequacy. With a particular focus on reducing repeat flooding incidents, interventions may include increasing the extent or frequency of cyclic cleaning, root cutting or lining, structural repairs,</p>	<p>Severn Trent Water, United Utilities lead</p>	<p>Continue</p>	<p>Ongoing</p>

Objective	Actions to be taken to deliver our objective	Partners	Status	Timescale
	<p>customer education and flow monitoring.</p> <p>Severn Trent Water have a target to reduce incidents of internal sewer flooding by 13% and external sewer flooding by 6% and will be focussing on managing low severity sewer flooding through property level protection, whilst also increasing their investment in schemes to increase the capacity of the network. Severn Trent Water are seeking to deliver more sustainable solutions to flooding and work in partnership with other Risk Management Authorities to deliver integrated flood risk management schemes.</p>			

**Table 6-1: Action Plan.**

## 7. Prioritising our flood risk management actions

There will always be limited resources for managing flood risk. So that we can spend the money that is there to greatest effect we need to take a proportionate and risk based approach. The National Flood and Coastal Erosion Risk Management Strategy supports taking such an approach.

We will need to prioritise both on the locations for further investment and investigation and the flood risk management actions that we and others will take going forward. This means taking appropriate action in terms of being proportionate to the level of flood risk and considering the actions that are likely to have the most deliverable and demonstrable effect on reducing flood risk.

We will prioritise our activities based on:

- where there is risk to life e.g. in rapidly reacting catchments;
- historic and predicted flood risk (using flood mapping) to properties, communities, businesses and/or infrastructure. Where flooding is known to have happened before then scheme priority will be increased;
- where there are frequent flooding issues affecting a small number of properties or cutting off access to rural settlements;
- availability of funding and external contributions, including local funding which could 'unlock' a project's potential for moving forward by enabling national Flood and Coastal Risk Management Grant in Aid and / or regional Local Levy funding to be secured for a project;
- where there are known failing assets or health and safety concerns (either through an asset failing or difficulties involved in its operation);
- where there is strong community engagement;
- where there are opportunities to support economic growth;
- where there are opportunities to work collaboratively with other Risk Management Authorities, and;
- the delivery of multiple benefits, including wider environmental benefits.

To help inform prioritisation, we have undertaken an assessment of the top 10 communities in urban and rural locations at risk of flooding from surface water and small watercourses in Staffordshire using flood mapping. These



are based on clusters of residential properties at risk and are listed in Tables 7-1 and 7-2 and shown on e Maps in Appendix A.

This information is not intended to focus all our activities in a limited area. Instead, it will act as a guide when making decisions on priorities in relation to the other considerations listed above.

On a day to day basis and wherever they occur, small scale issues arising will be dealt with through operational response as appropriate. Where this affects roads we will act in accordance with our responsibilities as Highways Authority to prioritise drainage works with consideration of flood risk, road safety and network connectivity. Where this is a land drainage issue we will take a risk based approach to enforcement work, in line with the policy set out in this Strategy. In the event of a large scale flood event affecting the County, it may be necessary to review the Action Plan or the entire Strategy, depending on the severity of the event and whether this has shown the need to revise the flood risk information we use to prioritise our work.

<b>Rural Settlement</b>	<b>Properties at Risk</b>	<b>District/ Borough</b>
Barton under Needwood	150	East Staffordshire
Armitage	129	Lichfield
Gnosall	97	Stafford
Whittington near Lichfield	79	Lichfield
Tutbury	69	East Staffordshire
Brewood	66	South Staffordshire
Endon	58	Staffordshire Moorlands
Leekbrook	53	Staffordshire Moorlands
Waterhouses	49	Staffordshire Moorlands
Forsbrook	45	Staffordshire Moorlands/Stafford

**Table 7-1: Top 10 Communities at risk of flooding in rural areas from surface water and small watercourses**

<b>Urban Settlement</b>	<b>Properties at Risk</b>	<b>District/ Borough</b>
Cannock	1292	Cannock Chase
Burton upon Trent	1021	East Staffordshire
Tamworth	920	Tamworth
Lichfield	760	Lichfield
Rugeley	729	Cannock Chase
Stafford	643	Stafford
Newcastle under Lyme and	632	Newcastle-under-Lyme

Silverdale		
Burntwood	620	Lichfield
Perton	336	South Staffordshire
Biddulph	229	Staffordshire Moorlands

**Table 7-2: Top 10 Communities at risk of flooding in urban areas from surface water and small watercourses**

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## Appendix A – Informative Maps

LFRRMS A9 Top 10 Rural Communities at Risk
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LFRRMS A10 Top 10 Urban Communities at Risk
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