

Essex Flood Risk Management Strategy



EXECUTIVE SUMMARY

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Foreword



This is the first Essex Strategy for Flood Risk Management and it is a key step in making sure that the risk of flooding in Essex is dealt with as whole, joining up the work done by councils, government bodies and water companies with that of communities and individual households. It will consider how all sorts of activities can help manage flood risk, from better planning which makes sure new developments decrease rather than increase flood risk for its neighbours, to ensuring that emergency responses have a good understanding of where flood risk is greatest.

However the activities identified in this strategy can only manage flood risk. It would not be possible, even if we were not in an era of austerity, to protect all households from any flood risk. Instead efforts need to be made by all involved, organisations and householders, alike to reduce flood risk in practical ways. Sometimes this involves focussing not just on decreasing the probability of flooding but also its impact, making sure that properties and households can cope in the event of a serious flood.

We recognise that, in the past, the different organisations involved in risk management have not always worked together effectively enough in tackling the difficult problems that flood risk often creates. It is vital that organisations work better not just with each other but crucially with the public. This is why the strategy details the roles and responsibilities of all major stakeholders, including households and community groups, so that there is better clarity and understanding about when different stakeholders should be involved.

This strategy focuses on 'local flood risk' that is flooding caused by surface runoff, groundwater and ordinary watercourses (streams, ditches etc.) These types of flooding were the cause of most of the terrible damage of the 2007 floods and need to be taken as seriously as flooding from rivers or the coast. However it's not the source of flooding but the effects that matter and we are keen to make sure that all forms are managed together and tackled according to level of risk rather than by what caused it or who shouts loudest.

Assessing levels of risk from flooding is a difficult task. With greater development and increasingly uncertain weather patterns, houses that have never been flooded in living memory may be at risk. We recognise householders may have concerns about using models to determine areas of flood risk, but they are crucial to making sure that limited resources are used most effectively to reduce the impact and probability of properties being flooded.

This strategy is our statement of intent as to what needs to be done to tackle flooding in Essex. We hope it will help you become better informed of everyone's responsibilities, how to find out your flood risk and what we can do to help you become safer.

**Cllr Tracey Chapman
Cabinet Member for Highways and Transportation**

Introduction

The Essex Local Flood Risk Management Strategy is an important new tool to help understand and manage flood risk within the county.

Flood risk management in Essex is beginning a new stage which will be marked by better knowledge of the risks in the county, better co-operation between organisations involved in flood risk management and better communication with the public about those risks and what can be done. This strategy will highlight the steps that are to be taken to ensure this happens.

It principally looks to tackle 'local flood risk', i.e. flooding from surface water, groundwater and ordinary watercourses such as ditches and streams. More households are at risk from this form of flooding than any other but until now there has been little co-ordinated work to address these forms of risk. The strategy will look to address this.

However, for those who suffer from flooding, it doesn't matter what type of flooding it is, and this strategy will also look to provide information about other forms of flooding and the organisations involved. It will explain the powers and responsibilities of all the major organisations involved in flood risk and provide advice on what householders and businesses need to do. It will highlight and summarise the information available on flooding in Essex so that this information is more easily accessible for those trying to understand more about flood risk in Essex.

It will not however state all the actions that will be taking place to tackle flood risk over the next two years. Decisions about that will depend on information that is not currently available: information about where the risk is greatest and what funding can be attained. The strategy will identify some strategic actions that will need to take place over the next two years and the underlying principles that future decisions will be based on. It will be supplemented by annual action plans which will be approved by the Essex Partnership for Flood Management.

Review of the Strategy

As has been stated, this is the beginning of a new stage in flood risk management for Essex. There are going to be substantial changes in the next few years with changes to the planning system, sustainable drainage requirements and the provision of flood insurance as well as innovations in the funding and design of flood prevention schemes and improvements in the knowledge of where the greatest flood risk is.

Consequently it makes sense for the first review of the Local Flood Risk Management Strategy to be relatively soon. It is proposed that a review should take place in 2015 to tie in with the delivery of a Flood Risk Management Plans as part of the Flood Risk Regulations. After that the strategy should continue to be reviewed in line with the Flood Risk Regulations, at 6 yearly intervals, with the next review in 2021.

Guiding Principles

The following are the guiding principles which flood risk management in Essex will be based on:

- 1) Flooding is a natural event that will occur despite all efforts to prevent it. Hence it is important to focus as much on reducing the disruption that flooding causes as on measures to prevent it.
- 2) Flood damage from surface runoff, groundwater and ordinary watercourses creates both public and private financial costs. Effective flood risk management can reduce long-term flood damage costs
- 3) Decisions on where local resources are focused should be evidence-based and made against clear criteria.
- 4) Improving the level of knowledge about flood risk across all stakeholders is a vital process which needs to be improved.
- 5) No organisation is able to ensure that all households and businesses are safe from flooding. Household and business holders have responsibility for protecting their households, but the relevant public organisation has a duty to inform households of their risk and advise what steps they can take to make their property more resilient
- 6) No single organisation can effectively manage flood risk across the whole of Essex, so co-operation among relevant public agencies is essential for the success of long-term comprehensive flood risk management.
- 7) New developments should look not only to ensure that there is no increase in flood risk but that it improves the flood risk that was already there.
- 8) The cumulative impact of small developments on flood risk is as significant as the impact of major developments, and so both must be managed in order to ensure the threat of flood risk doesn't grow.

Objectives of the Strategy

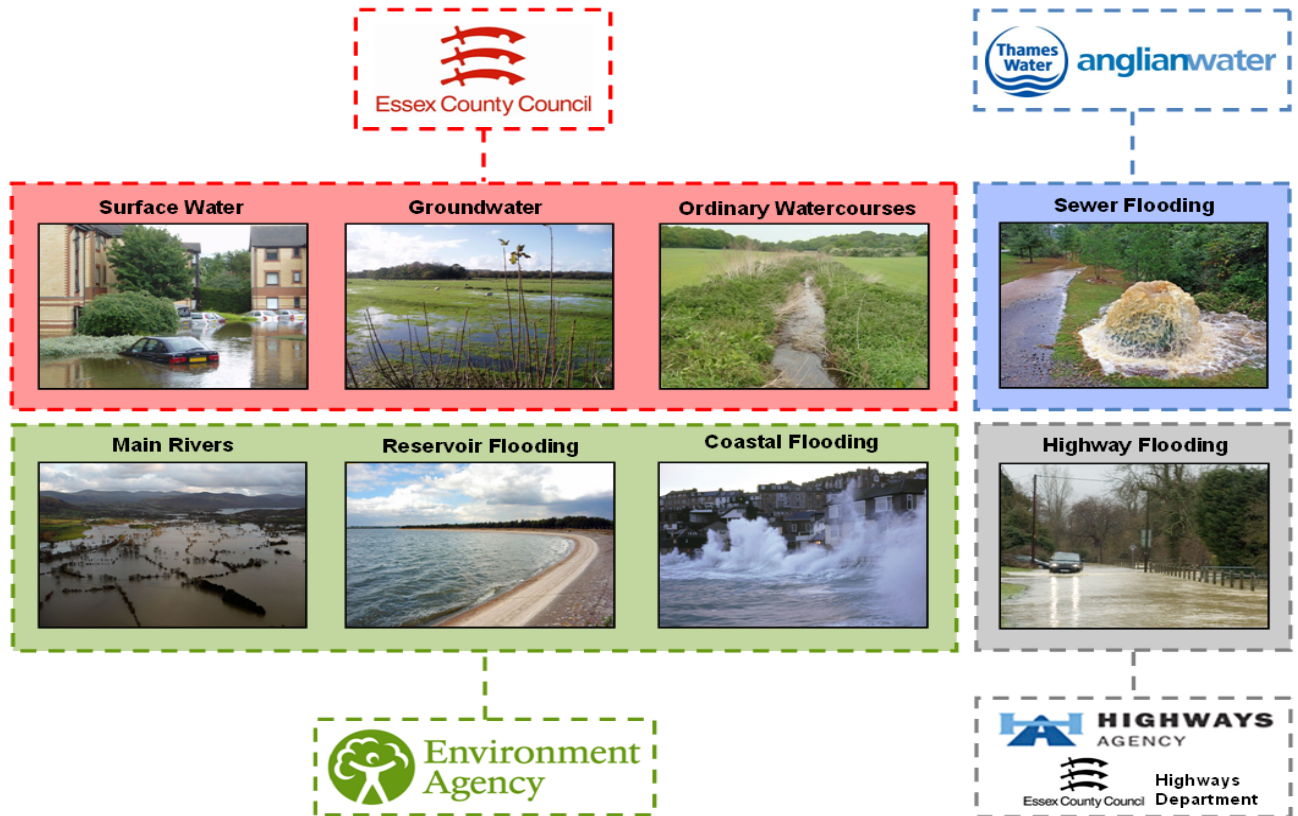
The objectives of the strategy are as follows:

- I. To provide a clear explanation of all stakeholder's responsibilities in flooding issues.
- II. To develop a clearer understanding of the risks of flooding from surface runoff, groundwater and ordinary watercourses and to consider how best to communicate and share the information that becomes available to us
- III. To define and explain the criteria by which areas at risk of flooding from surface runoff, groundwater and ordinary watercourses are assessed and resources are prioritised.
- IV. To state how risk management authorities will share information and resources.
- V. To set out clear and consistent plans for risk management so that communities and businesses can make informed decisions about the management of the residual risk.
- VI. To ensure that planning decisions are properly informed by flooding issues and the impact future planning may have.
- VII. To encourage innovative management of flood and coastal erosion risks, taking account of the needs of communities and the environment.
- VIII. To ensure that emergency plans and responses to flood incidents are effective and that communities are able to respond properly to flood warnings.
- IX. To highlight where information regarding other forms of flooding can be found

Nature of Flood Risk within Essex

There are a range of different flood risks that the residents of Essex may be at risk from. Figure 2 below shows which organisations have responsibility for managing the different forms of risk.

Figure 2: Organisations responsible for managing forms of flood risk



N.B. Although these organisations are responsible for managing these forms of flood risk this does not mean they are liable for damage caused by flooding of this sort. Property owners have responsibility for protecting their property and for clearing watercourses and rivers where they are the Riparian Owner (see P52).

Factors increasing flood risk

Flood risk is a combination of probability and consequence; as there are a number of factors which will lead to higher probability of flooding in the future and more serious potential consequences, this will result in an increase in the risk of flooding across Essex.

The factors leading to an increase in flood risk include:

- New development and changes in land use may lead to an increase in impermeable surfaces and therefore cause increased levels of runoff during heavy rainfall events;

- Development may also lead to deforestation and general loss of vegetation cover, also causing increased levels of runoff during heavy rainfall events; and
- Lack of maintenance on open watercourses and small culverts.
- Cumulative impact of unconsented minor development and changes to watercourses.
- Over time deterioration in the condition and performance of existing drainage infrastructure and flood defence structures will increase future flood risk;
- It is predicted that climate change and severe weather events will lead to more frequent and more severe extreme weather and therefore to more extreme floods with more serious consequences; (see p107 for more details)
- Damage to higher value property and contents may lead to increased cost of damages.
- Continuing rises in sea levels are likely to impact adversely on the effectiveness of gravity drainage systems that outfall to tidal waters.

Areas of Local Flood Risk

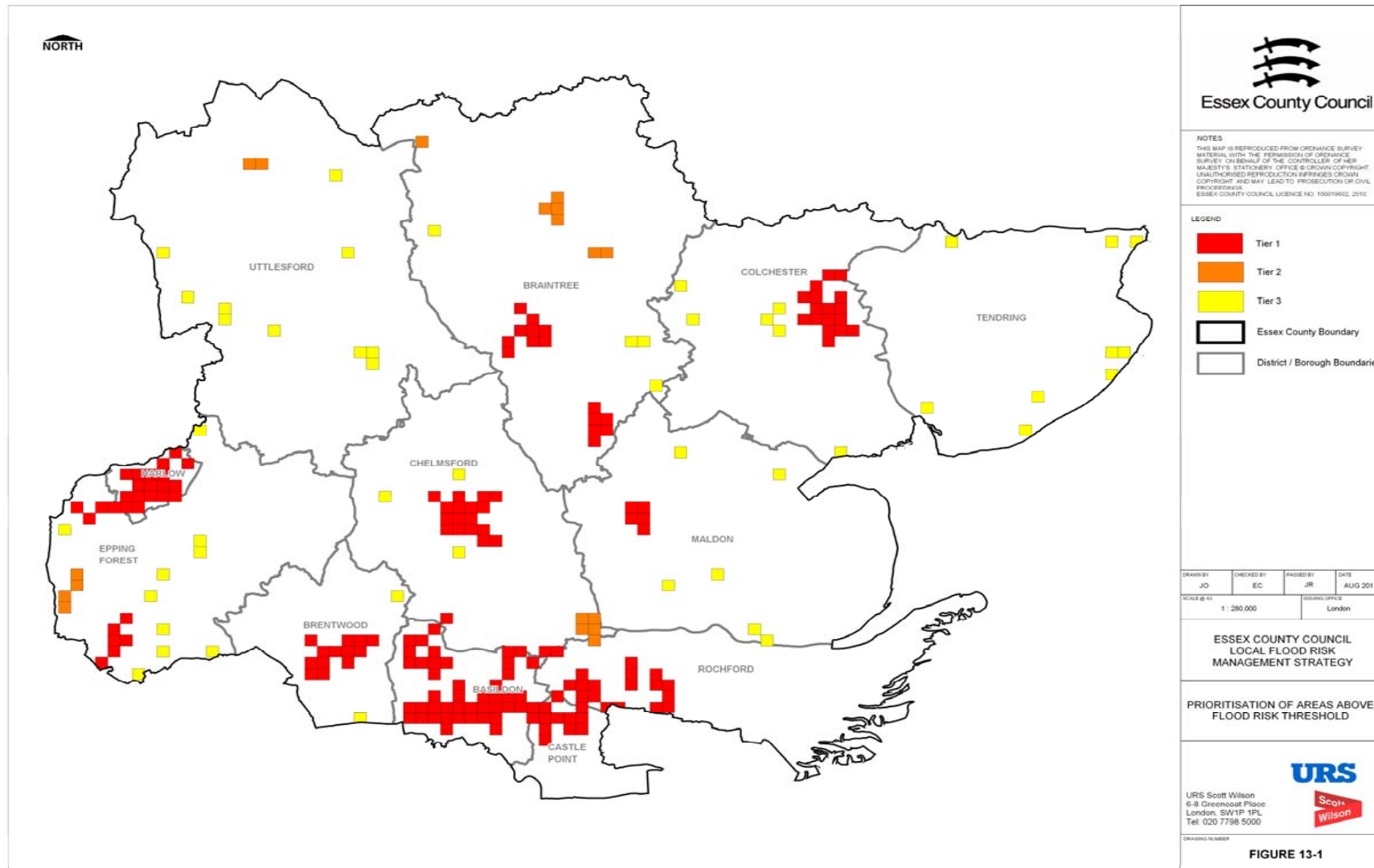
The strategy focuses primarily on 'Local' flood risk i.e. flood risk from surface water, groundwater and ordinary watercourses. In order to prioritise the risk of flooding and identify areas for further work, a three tier ranking system was developed. Figure 1 shows how the tiers have been organised.

Figure 1

Ranking	Criteria
Tier 1	More than 1000 people predicted to be at risk
Tier 2	Between 1000 and 500 people predicted to be at risk
Tier 3	Less than 500 people predicted to be at risk

Figure 2 (p9) shows a map of the county and the areas which have been identified by the tiering system. These tiers have been developed for planning work and should not be used to determine the risk to a specific household. Not all properties within a tier are at risk of local flooding nor does not being in one of the marked areas guarantee that you are free from flood risk.

Figure 2 Map of Tiered Areas of Surface Water Flood Risk in Essex



Powers and Responsibilities of Stakeholders

The strategy provides fuller information about all the powers and responsibilities that risk management authorities have. However it doesn't only do this. Unfortunately, flood risk management is not something that can be left solely in the hands of certain organisations and forgotten by everyone else. Households and businesses still have their part to play. Even if this strategy was being devised at a time of increasing public sector budgets, the risk management authorities would still not be able to prevent all floods or solve all concerns. For this reason the powers and responsibilities of both householders and parish councils have been included and are produced in full in the executive summary.

Powers and responsibilities of Risk Management Authorities

The Flood and Water Management Act identified certain organisations as 'Risk management authorities' which have responsibilities around flooding, both new ones from the Flood and Water Management and longstanding ones from previous legislation.

The Risk Management Authorities in Essex are:

<i>Essex County Council</i>	<i>Highways Agency</i>
<i>Thames Water</i>	<i>Anglian Water</i>
<i>Basildon Borough Council</i>	<i>Braintree District Council</i>
<i>Brentwood Borough Council</i>	<i>Castle Point Borough Council</i>
<i>Chelmsford Borough Council</i>	<i>Colchester Borough Council</i>
<i>Epping Forest District Council</i>	<i>Harlow District Council</i>
<i>Maldon District Council</i>	<i>Rochford District Council</i>
<i>Tendring District Council</i>	<i>Uttlesford District Council</i>
<i>The Environment Agency (Anglian and South Eastern Offices)</i>	

The powers and responsibilities of all of these agencies and others such as utility and local infrastructure providers can be found in the full strategy. Below the responsibilities of Local Households and Communities are published in full to provide a clear understanding of how they can help tackle flood risk management.

Powers and Responsibilities of Local Households

Riparian Ownership

Householders or businesses whose property is adjacent to a river or stream or ditch are likely to be riparian owners with responsibilities. If your property backs out onto a river or stream then you are likely to be a riparian owner and own the land up to the centre of the watercourse. Your land registry details should confirm this but you may need to discuss it with the local authority to ensure it matches their details.

Riparian owners have a right to protect their property from flooding and erosion but if this involves effecting the river or watercourse they will need to discuss the method of doing this with the Environment Agency for main rivers

and Essex County Council for all others forms of watercourse. They also have responsibility for maintaining the bed and banks of the watercourse and ensuring there is no obstruction, diversion or pollution to the flow of the watercourse. Full details can be found in the EA document 'Living on the edge' <http://publications.environment-agency.gov.uk/dispay.php?name=GEHO0407BMFL-E-E>

Property Owners and Residents

It is the responsibility of householders to look after their home, including protecting it from flooding. While in some circumstances other organisations or property owners may be liable due to neglect of their own responsibilities, there will be many occasions when flooding occurs despite all parties meeting their responsibilities. Consequently it is important that householders whose homes are at risk of flooding take steps to ensure that their house is protected.

These steps include:

- Checking whether their household is at risk from flooding from the river, coast or local flood sources
- Ensuring that preparations have been made in the event of a flood
- Taking measures to ensure that their house is protected from flooding, either through permanent measures such as sealants in the wall or temporary measures such as flood guards.
- Taking measures to make sure the house is resilient to flooding so that if it does occur it does not cause too much damage

Discovering whether your property is at risk

Information on whether households are at risk from all forms of flooding can be provided by the Environment Agency and Essex County Council. But this should only be considered the first step. It is not possible to know details about individual properties, for example how high the floor level is above ground level or what household level protection has taken place. Therefore, when considering the flood risk of individual properties, whether for valuation or insurance, the information available should only be considered the **first stage** in assessing the flood risk.

For those at risk from river or coastal flooding, that information is provided by the Environment Agency. The Environment Agency has classified the country into three Flood Zones: 1, 2 and 3. Those in Flood Zone 1 have less than a 0.1% or 1 in 1000 chance of being flooded from main rivers or the coast in any particular year. Those in Flood Zone 2 have a 0.1-1.0% (or 1 in 1000 to 1 in 100) chance. Those in Flood Zone 3 have a greater than 1.0% (or 1 in 100) chance.

All households in Flood Zones 2 and 3 should have been contacted notifying them of this and, unless they have chosen to opt-out, will receive flood warnings from the Environment Agency when the risk of river or coastal

flooding is high. It should be noted that these flood zones do not consider the impact that flood defences have but work on what would happen if the defences failed.

Residents can request a printed copy of a map showing flood zones for their location, for personal use, by contacting their local Agency Office, or by calling the National Customer Contact Service on 0370 8506506 or enquiries@environment-agency.gov.uk. Information can also be found on the Environment Agency website here: <http://www.environment-agency.gov.uk/homeandleisure/floods/31650.aspx>.

Information about surface water flood risk is much harder to map but some rough information can be found in the Essex Preliminary Flood Risk Assessment (PFRA), details of which are in the full strategy. However this is a high level document and cannot be applied to individual properties. It's not possible at this point to provide information at household level for surface water flood risk. Residents who have concerns can contact the Flood Risk management team (flood.prevention@essex.gov.uk) who can advise on what information there is.

Preparation for Emergencies

The Environment Agency provides information on what to do to prepare a household for emergencies. This includes how to make a flood plan which will help you decide what practical actions to take before and after a flood <http://www.environment-agency.gov.uk/homeandleisure/floods/38329.aspx>.

The Environment Agency has also developed a pamphlet which provides advice on how to make your house more resilient. <http://publications.environment-agency.gov.uk/PDF/GEHO1009BRDL-E-E.pdf>.

Household Level Flood Protection Measures

It is possible to apply for some support from central government for installing flood protection measures through Parish Councils. There have been some funds which have helped provide for surveys and installation of equipment in badly hit communities. It is also possible to apply for funding through the general grant for flood defences. However this will only pay a small proportion of the total and the majority of the money will have to be found locally if it is to be successful. To find out more about this, talk to your parish clerk or contact flood.prevention@essex.gov.uk who can advise as to the requirements.

The National Flood Forum's Blue Pages Directory provides information and advice on what products are available to help protect your home or business against flooding. It can be found here: <http://www.bluepages.org.uk/BluePages/tabid/1664/Default.aspx>

It is important when buying flood products that they have the Kitemark symbol or equivalent accreditation which shows that they have been tested properly.

It is also strongly recommended that, if when buying a household flood protection product, professional advice is sought from a building surveyor, architect or other independent professional.

Essex County Council will be working with the National Flood Forum in certain areas at great risk of local flooding to provide advice and workshops about what type of flood protection may be right for them.

Consulting on flood strategies and defence schemes

As a result of this strategy, the resultant annual action plans and other planned work by risk management authorities, there will be local plans and flood defence schemes to help manage flooding in parts of Essex. In all of these situations, the lead risk management authority should create an engagement plan to ensure that the affected communities are engaged early with the issues and are able to discuss it and share their concerns, interests and priorities.

It's important to understand that final decisions will still be made by the responsible risk management authority but those decisions must be informed by proper engagement with the affected residents. This engagement requires both the organisations and the households involved to work together to ensure that engagement events are well attended and that local issues are properly understood and discussed.

Responsibilities of Parish Councils and Communities

Flooding events can affect whole communities with households which do not suffer from internal flooding still potentially being trapped as roads are blocked or having to help support and provide shelter to their neighbours who have suffered from flooding.

Communities know better than anyone the level of flood risk that they face and can make important contributions to helping manage the levels of flood risk.

Reporting flood incidents

Officers from risk management authorities are not in a position to know about every flooding incident that occurs, particularly those which do not lead to flooding within properties. However records of flooding incidents which affected roads or entered the curtilage of people's properties are important to record. They can indicate that there has been extensive flooding in relatively regular rainfall events which would warn that the properties are at risk in more extreme rainfall events. This information is crucial in building up cases for flood defence and flood resilience schemes which will require strong evidence of the flood risk to properties.

Parish Councils and community groups in areas which suffer from local flooding (i.e. surface runoff, groundwater and ordinary watercourses) should contact the Flood Investigation Officer at Essex County Council to discuss how best they should record and report flooding incidents when they occur.

Flooding incidents caused by main rivers or the coast should be reported to the Environment Agency through their emergency floodline **0800 807060**.

Helping residents to be aware of and manage the risk to their household.

Many residents may be unaware of the flood risk to their property if there has not been a flooding incident while they have lived there. Parish councils can be the best way of letting residents know that they should be aware of flood risk and to check with Essex County Council and the Environment Agency as to the extent of the risk. Finding out through the community has the advantage of being provided the information in context so as to know the extent to which residents should be concerned.

Parish Council Emergency Self-Help Plans

If a parish is at risk from flooding it is advisable to create an Emergency Plan which details who can be contacted to lead and assist in an emergency, what equipment is available and where can be used as emergency accommodation.

Raising funding and skills for flood resilience and flood defence measures

As explained on page 21, most flood defence and flood resilience projects, particularly in small communities, will require some local funding to supplement that provided by national government if the project is to go ahead.

Parish Councils can look to raise funds through council tax precept or through other local commitments to raise the funds. They can also look to see in what way local residents can contribute to ensure that the price of work is kept low, and hence residents have to pay less. This may be enlisting residents who have training as surveyors or residents with the equipment to do some of the work, such as clearing ditches. There have also been some funds which have helped provide for surveys and installation of equipment in badly hit communities. Parish councils will be informed by Essex County Council when these opportunities appear but it is up to the Parish Councils to lead on the application.

Actions to improve flood risk in Essex

A key aim of the Local Flood Risk Management Strategy is to establish a programme of actions to meet the objectives and guiding principles of the strategy. It is also important that the actions set out in this strategy are consistent with the objectives and guiding principles of the national strategy.

Flood risk management actions included in the Local Flood Risk Management Strategy have been split into two categories:

- ***Strategic countywide strategic actions***
- ***Site level, specific management actions***

County-wide strategic actions

Countywide strategic actions will improve the ability of Essex County Council and its partners to effectively tackle flood risk across the whole of Essex. Once these have been accomplished, it will become easier for specific actions to be taken to areas of flood risk. The proposed strategic actions are:

- **Improve understanding of local flood risk**
- **Adapt spatial planning policy to reflect local flood risk**
- **Raise community awareness**
- **Establish working framework between Risk Management Authorities**

Detailed explanations of these actions and the proposed options can be found in the full strategy.

Site level, specific management actions

The following actions have been recognised as being appropriate for tackling flood risk in areas identified as at significant flood risk. The decision on when to use them should be decided through annual action plans which are agreed by the Essex Partnership for Flood Management.

Further details can be found in the full strategy.

- **Encourage implementation of flood resilience measures and property protection schemes**
- **Implement sustainable drainage and source control measures**
- **Manage overland flow paths**
- **Review land management methods**
- **Review asset management and maintenance methods**
- **Achieve wider environmental benefits**

Resource management

It is important that the local strategy sets out how the proposed actions and measures will be funded and resourced within Essex. It is also important to identify what funding mechanisms are available to Essex County Council to pay for the flood risk management measures that are set out in the strategy. Effective practical implementation of flood policy objectives requires adequate resources both for the day to day activities of risk management authorities as well as for capital projects.

Capital funding through ‘Payment for Outcomes’

DEFRA (Department for Environment, Food and Rural Affairs) have developed a new process called ‘Payment for Outcomes’ for all capital maintenance and defence projects seeking funding from April 2012. The scheme aims to encourage communities to take more responsibility for the flood risk that they face and to deliver more benefit by encouraging total investment to increase beyond the levels that government alone can afford. The new approach will see the level of central government funding available determined directly by how much benefit it creates. Benefit is determined by the number of households protected and the damages being prevented as well as other scheme benefits such as environmental benefits, amenity improvement, agricultural productivity and benefits to business. In addition to these elements, payment rates for protecting households in deprived areas will be higher so that schemes in these areas are more likely to be fully funded by the Government¹.

In many cases the level of funding available from central government will not be enough to allow the scheme to go ahead. In these cases funding will need to be raised locally to ‘top-up’ the amount available from central government. More detail on this can be found in the full strategy.

Further Information

All the topics discussed in this Executive Summary are expanded upon within the main document. There are also sections in there on the legislative context for this work and how it fits with our general environmental objectives.

¹ For further information on how levels of deprivation will be assessed, refer to the Index of Multiple Deprivation commissioned by the Department for Communities and Local Government (www.imd.communities.gov.uk)