

Essex Flood Services successfully deliver a wide range of flood risk management functions.

Local Flood Risk Management Strategy



Essex Flood Services has grown as a proactive commercial flood risk service provider.



How we manage local flooding in Essex

Flooding can be a complicated problem, often involving many different people and organisations. Despite the challenges, we are positive and clear about how we are managing the issue and want to share with you how we are making things better.

We have focused on sharing real stories from around the County showing exactly how our work happens and how easy it can be for you to help us make a difference.

First and foremost we want you to be informed about the risk of flooding to you and your property. Every year we are involved in helping more families from flooded homes, so please check your address on our flood map and talk to us if you need more information:

www.essex.gov.uk/flooding

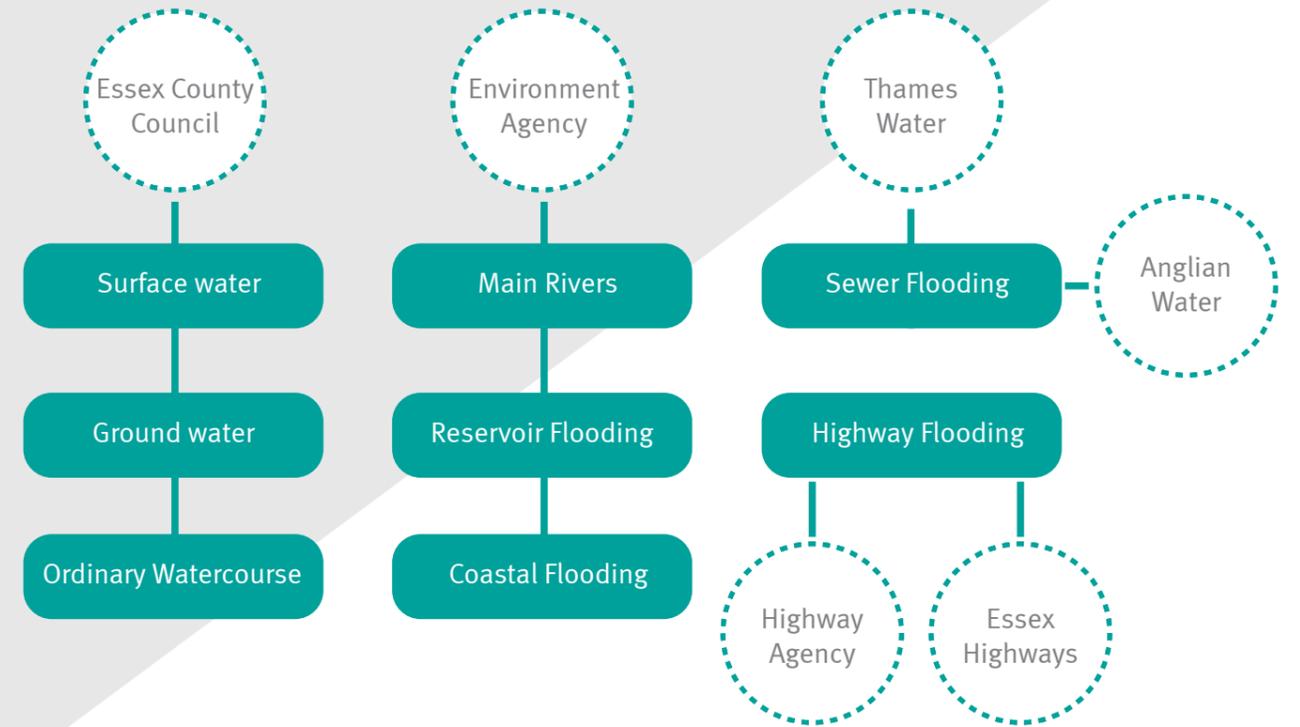
The Flood and Water Management Act states that Essex County Council has to put in place a local flood risk management strategy.

This strategy sets out our aims and actions to reduce the impact of local flooding to your community.

'Local' flooding in Essex means the risk of water from man-made drainage systems, small watercourses and rainfall off the land.

Who we work with

Local flooding isn't the only type faced by Essex communities. Flooding from our major rivers and the sea have been devastating for large areas of the County in the past. The risks of these widespread events are managed by the Environment Agency. Essex Highways, the water companies and local councils also have a part to play in how we deal with water. The diagram opposite shows which authority is responsible for various types of flooding.



We understand that the type of flooding doesn't really matter when you're in need of our help. The authorities will always work with each other when flooding happens.

To prepare for how we deal with future flooding, we hold regular meetings at County Hall to discuss the decisions and actions of each organisation. It is important to understand which cases are considered a priority for each authority as this can sometimes differ. These meetings involve all the partners. Elected members also attend our Essex Flood Partnership Board representing their residents and local councils. The group is called the 'Essex Flood Partnership Board', and discussions and decisions made here about our plans can be found [here](https://cmis.essexcc.gov.uk/essexcmis5/Committees/tabid/94/ctl/ViewCMIS_CommitteeDetails/mid/483/id/145/Default.aspx).

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What we would like to do

Our ambition is to ensure that Essex is a great place to live and work. We want to enhance the environment here, and create a place that is safe and sustainable. In terms of flooding, this means that you are informed about your flood risk, and understand why flooding is a problem for us all, and what is being done to manage it.

These are the nine objectives that have always been important to us and our residents:

- To provide a clear explanation of everyone's responsibilities.
- To ensure that planning decisions properly consider flooding and the future impact of any development.
- To encourage innovative new thinking, considering community needs, while working with the existing natural and built environment.
- To make sure people understand their risk of flooding and think about how we communicate this.
- To state how we share information and work with other authorities.
- To highlight where further detailed information and legislation regarding flooding can be found.
- To explain how we assess flood risk in Essex and then prioritise the work we do.
- To ensure that emergency plans and responses to flood incidents are effective and that communities are prepared for flooding.
- To clearly set out our work so that communities and businesses can make decisions about how they also manage flood risk.



How and when we will do it

Having told you what we'd like to do, we want to show how our work is helping us to achieve this. As a priority we will help anyone who has been affected by flooding within their property.

Day to day when it's not flooding, we're doing a lot to try to prepare and protect for the next flood.

In this section we will set out the measures we have in order to achieve our objectives. Our flood services have come a long way since we became responsible for local flooding in 2010. We continue to develop each year, working with more residents, communities and partners to protect property and make positive changes.

- Our measures:
1. Investigating Floods
 2. Mapping local routes for water
 3. Looking after our watercourses
 4. Planning for future floods
 5. Influencing new development and drainage
 6. Building flood defences
 7. What more can you do?



Measure 1: Investigating Floods

Legislation gives Essex County Council a duty to investigate floods. In Essex, not only do we investigate what happened in a local flood, but who should be involved and what they will do. We are also helping flooded residents to access grants to protect their property. Unfortunately a solution to every case isn't always possible or affordable, but we will work towards this wherever we can. Our flood investigation engineer will aim to contact flooded residents as soon as possible following a flood. Investigations can take a few months to complete while we gather data and speak to all those involved.

Case Study: Canvey Island

Canvey Island is well protected from tidal surges by its sea wall, but has suffered extensive flooding from surface water in recent years. The summers of 2013 and 2014 were particularly bad, impacting up to 1000 properties in July 2014.

In cases where properties have flooded internally we consider if we should carry out what is known as a formal 'Section 19 Flood Investigation'. In Essex this involves writing an account which explains the source of the flood water, the scale of the event, along with probable issues and recommendations.

During a flood investigation we will meet on site to talk with individual property owners. This gives us a greater understanding of the damage and allows us to gather information and observations from those directly involved. Recommendations are passed onto each authority, and flood investigation areas are also put forward for further analysis and investment for solutions where possible.

As part of the process on Canvey Island we have worked very closely with partner authorities including the Environment Agency, Anglian Water and Essex Highways. The problem is very complex here, so ongoing regular meetings are held to discuss progress and future options. Many homeowners on Canvey Island have taken up our Property Level Resilience Grant to reduce their risk of flooding again in future.

Measure 2: Mapping local routes for water

Case Study: Sturmer Village

The village of Sturmer in Essex had suffered from persistent surface water flooding, and Essex wanted to help. We contacted the parish council and invited them to take part in the Where Does Water Go project to survey their ditches, noting their location, condition, photos and measurements.

The community successfully found a group of willing volunteers to do the surveying, and with materials and training provided by the Floods Team they surveyed the village ditches and marked them all on maps.

The ditches and pipes which they surveyed were added to the Flood Asset Register which was really helpful for us to understand the drainage systems in Sturmer. Any problems such as blocked ditches were passed on to our Watercourse Engineer to investigate to ensure that the watercourses in this area were working to their full capacity.

This information has also been used in our flood modelling and to investigate possible future Flood alleviation schemes.

Another of our duties is to keep a record of structures or features that form part of local drainage systems. These can be things such as pipes, bridges or raised banks, which occur on local routes for water. These can have a big impact on local flooding.

We record both old or new features and keep details about their ownership and condition. The record must be available for the public to view. For Essex it can be accessed through the online map at www.essex.gov.uk/flooding

There are already 10,000 records on our database, these numbers have been built up through our flood planning work, but we are also asking for communities to help us gather more. We run a project called 'Where Does Water Go?' with Parish Councils and Flood Action Groups. In this project we provide volunteers with the tools for surveying and recording their local drainage. In the process we can assist sharing information about maintenance and responsibility to help make sure local routes for water are clear. We also provide a digital map of the drainage for future reference.

Measure 3: Looking after our watercourses

Small streams and ditches have an important job in draining water across our land. We know these channels as 'ordinary watercourses'. Unfortunately a lot of open channels have now been built over, filled in or piped.

If you are planning on starting any work affecting or changing an ordinary watercourse, you may require permission from us before you start the work. We will check that your plans are necessary and won't increase flood risk. We want to keep our ordinary watercourses open, clean and free of obstacles so that when water levels do increase, they are in the best possible working order.

For more information on this please go to: www.essex.gov.uk/flooding

If any work has been carried out without our permission, the Council can start a legal process to get things put back how they were.

Case Study: Danbury

We were contacted by a member of the public who reported that their property was being flooded by a blocked watercourse. After visiting the site we found the channel to be heavily silted and with a large amount of debris obstructing the flow.

In situations like this, we will write to adjacent landowners explaining that they have a 'riparian' responsibility to look after the ditch or watercourse.

This means responsibility for the margin between their land and the ditch or stream. The margins and the channel should be generally maintained and kept clear of any debris causing obstruction.

In the Danbury case, we arranged a follow up site meeting with all those involved to discuss the issue further. We set out what needed to be done to resolve the problem and gave a reasonable timescale to carry out the work, which in this case was a maximum of 2 months. The landowner subsequently

completed the work required to a high standard, and confirmed the watercourse would be kept regularly maintained in future. We let the original enquirer know the result and provided them with some before and after photographs.

We find that the majority of cases are resolved in this way. Although, we do also have enforcement powers, which we would use in situations where there is evidence that a lack of maintenance is directly linked to property flooding.

Measure 4: Planning for future floods



Thinking about how we manage a flood that might happen in the future requires some technical help. We have to create computer generated mock-ups of all possible scenarios. Our computer models will include accurate levels from the lay of the land, they map the buildings the soil types and the drainage locations, all to create the best representation of reality. A simulation then acts out very heavy rainfall for different lengths of time onto each location, giving us a look

at the worst-case scenario. We use flood models where there is potential for most people to be affected by flooding. Finding out where most people are affected is something an initial study called a Preliminary Flood Risk Assessment (PFRA) does. We have to carry the PFRA assessment out every six years. In locations where more than 500 properties could be at risk, we then will carry out a Surface Water Management Plan.

Case Study: Surface Water Management Plans

Surface Water Management Plan (SWMP) is a study that looks more specifically at what can be done to help flooding in an area. All the agencies we work with are involved in writing this.

The plans can help us make decisions about:

- Emergency and evacuation plans
- Future housing and development locations
- Where it's important to keep watercourses clear
- Where money and new infrastructure may be needed to help
- Where it may be safe to divert or store floodwater

- Where people will need to consider flooding a priority
- Informing and helping the community

Surface Water Management Plans have been carried out in:

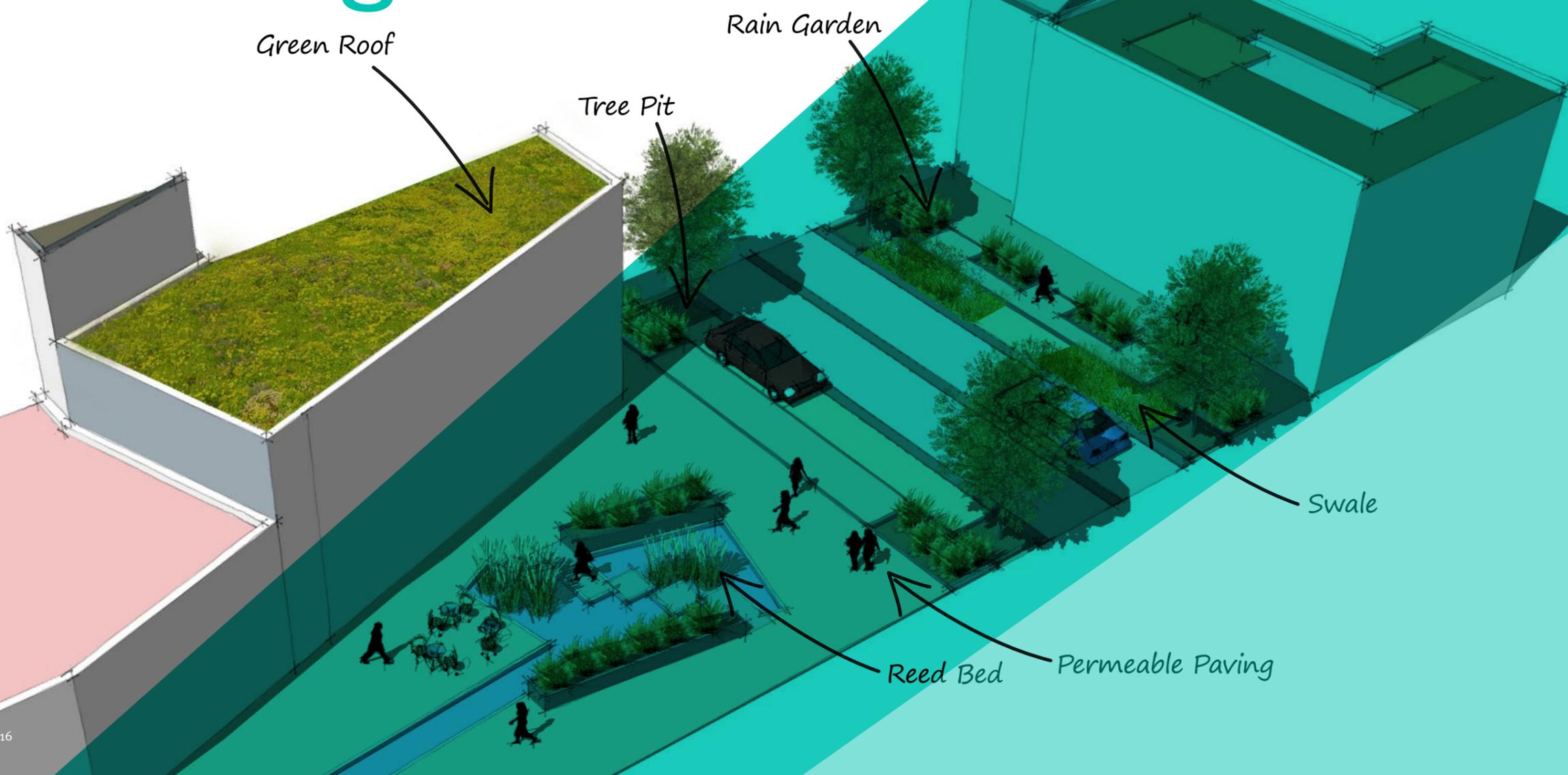
- Chelmsford
- Maldon
- Harlow
- Brentwood
- Basildon
- Rochford
- Castle Point
- Colchester
- Epping, Loughton, Buckhurst Hill and Theydon Bois
- Braintree and Witham

Measure 5: Influencing new development and drainage

New developments can increase the risk of surface water flooding; as a result we are consulted by Local Planning Authorities to comment on planning applications that are defined as major. We also provide surface water drainage specific advice to the District and Boroughs when they are writing their local plans.

In responding to planning applications, we want to ensure that the increased risk of surface water flooding is lessened by promoting sustainable drainage (SuDs) within the development. As well as ensuring that proposal meets the requirements within national and local standards.

Sustainable Drainage such as those features set out in the drawing below aim to reflect natural drainage. Further information on the design of SuDs features can be found in our SuDs Design Guide at: www.essex.gov.uk/flooding



Measure 6: Building new flood defences

Where our plans and investigations have identified communities to be at risk of flooding, we will consider whether building new flood defences provides a value for money solution. That is, whether the cost of the flood damage avoided equals more than the cost of building the defence. Solutions can range from small things such as flood walls, ditches or bunds. Whereas other schemes require larger attenuation ponds, pipes and flow control devices such as 'hydro-brakes'. Every year we have to consider potential schemes with our partners and a decision is made whether to implement any plans. The total amount of money available from Essex County Council to invest in these schemes is reviewed on a five year cycle.

Case Study: Kingsmoor Capital Scheme

The Kingsmoor area of Harlow in Essex has historically experienced flooding with properties internally damaged and access roads cut off. As part of its Capital Flood Alleviation Programme, Essex County Council investigated the area further and delivered a scheme to reduce local flood risk.

Working in partnership with Harlow District Council, the Environment Agency and Thames Water an innovative approach was devised involving the

construction of 8 leaky dams and pond de-silting works within local woods to slow flows. These are combined with an earth bund in a playing field directly upstream of the residential area to provide larger floodwater storage.

The woodland areas of Parndon and Ridsen Woods are both ancient woodland and Sites of Special Scientific Interest. Therefore a sensitive and sustainable approach was developed by Place Services following consultation with Harlow District Council and Natural England. We ensure

compliance with regulations and minimised ecological impacts. To achieve this, dams were constructed by hand from logs sourced directly from the wood. The material was moved into position using heavy horses to minimise the impact on the trees and local wildlife and to avoid the use of heavy machinery.

As well as providing flood risk reduction benefits to 38 properties, the leaky dams will improve local biodiversity by creating new and diverse habitats.

Measure 7: What can you do?



Apply for a Community Grant

Community Flood Improvement Fund

We hear from many communities that feel a solution to their flooding problem could be a simple and low-cost one. This grant has been enabling communities to put plans or schemes into action, and reduce flood risk to properties or businesses within their local area. Projects to protect homes are given a priority, but if you have an idea then talk to your local or parish council about supporting your application.

We will consider applications from the following groups:

- Town and parish councils
- Community groups
- District, Borough and City Councils
- Landowners and farmers
- Charities and voluntary organisations
- Conservation bodies
- Other Flood Risk Management Authorities in Essex

Apply for a Homeowner Grant

Property Level Resilience Grant

With our Property Level Resilience (PLR) Grant you can get up to £5000 to protect your property against flooding. Since 2014, our PLR Grants have been made available to Essex residents who have experienced flood water entering their property. Successful applicants have had practical resilience measures installed, such as self-closing air bricks, reinforced flood doors, non-return valves, pumps and flood barriers. We have made sure the process is as simple as possible for those in need of our help and the scheme has received national praise for its success.

To find out more and how to apply for funding visit www.essex.gov.uk/flooding

What more can you do?

Volunteer with us

Community ditch maintenance

One way we try and reduce local flood risk is through volunteer ditch clearance events. For the last couple of years, Essex County Council has teamed up with local residents and volunteers to assist landowners maintain streams and ditches in their area.

These events are not only a great way to meet our residents, but also enable us to educate them about flood risk and help build community resilience whilst directly protecting properties from flooding.

Case Study: Wivenhoe

One of our recent events took place at St Johns Road, Wivenhoe. After a few hours of vegetation clearance and de-silting, the watercourse was transformed from an impassable bog into a clear, free-flowing channel, both increasing its capacity and efficiency and reducing local flood risk to properties.

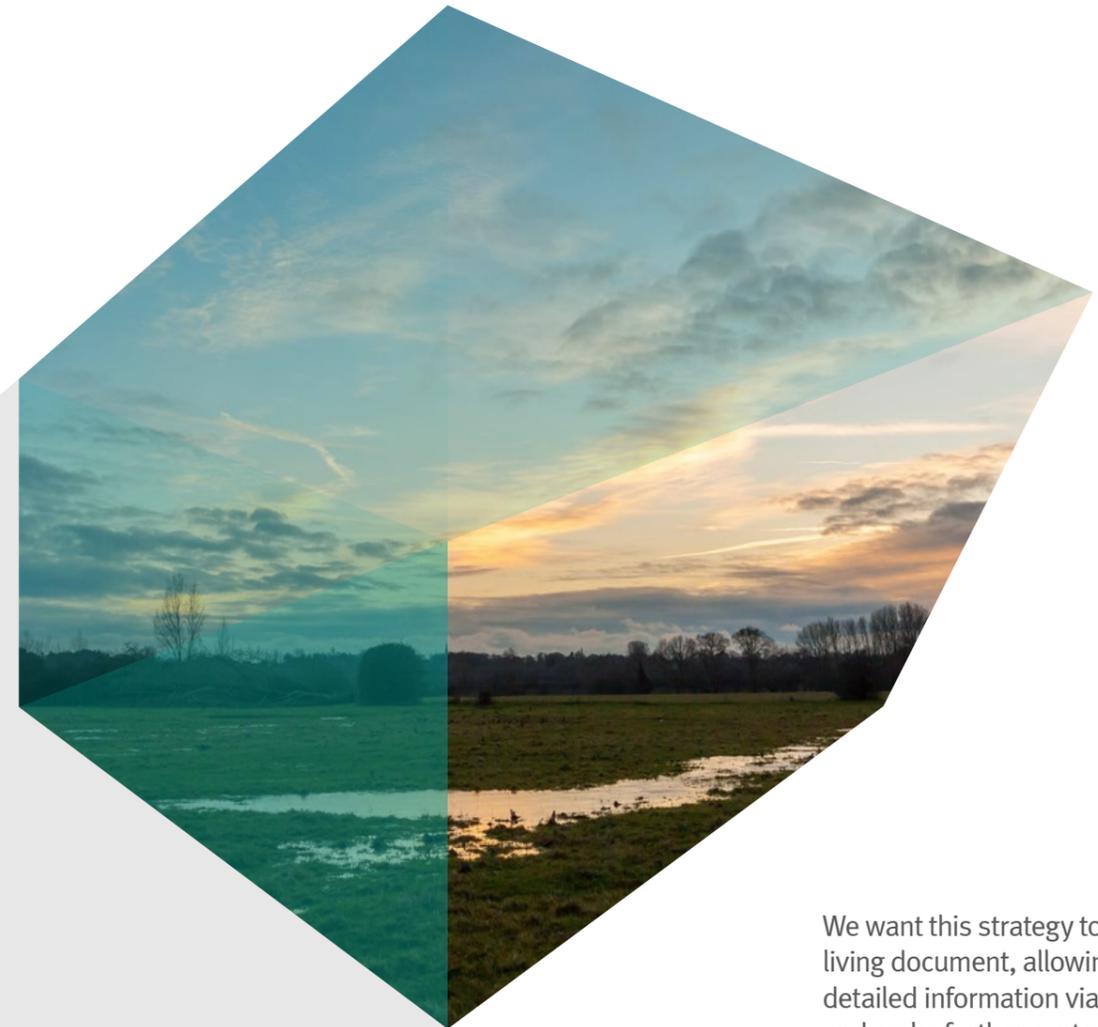
We are always looking for more volunteers and have a growing number of Essex County Council colleagues looking to get involved in the future. More information can be found on our website www.essex.gov.uk/flooding



Before



After



We want this strategy to be a simple living document, allowing you to find detailed information via existing links and make further contact where you have interest to do so.

Our Essex Flood Partnership will review and comment on this strategy, in line with our statutory and government flood investment programme timescales (6 year cycle). The Environment Agency make annual checks to ensure that Lead Local Flood Authorities like Essex County Council are delivering their statutory duties.

For further information please contact floods@essex.gov.uk

This document is issued by:
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formats, on request.

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