

NWSF FLOODING SAFETY DOCUMENT LAUNCH

14 OCTOBER 2024



**national
water safety
forum**

Introductions and welcome

Russell Robson, Chair of Inland Group of NWSF

An introduction to flooding in a changing climate

Dan Ryan, NWSF Coordinating Group

An introduction to flooding in a changing climate

Dan Ryan – Independent member
of NWSF

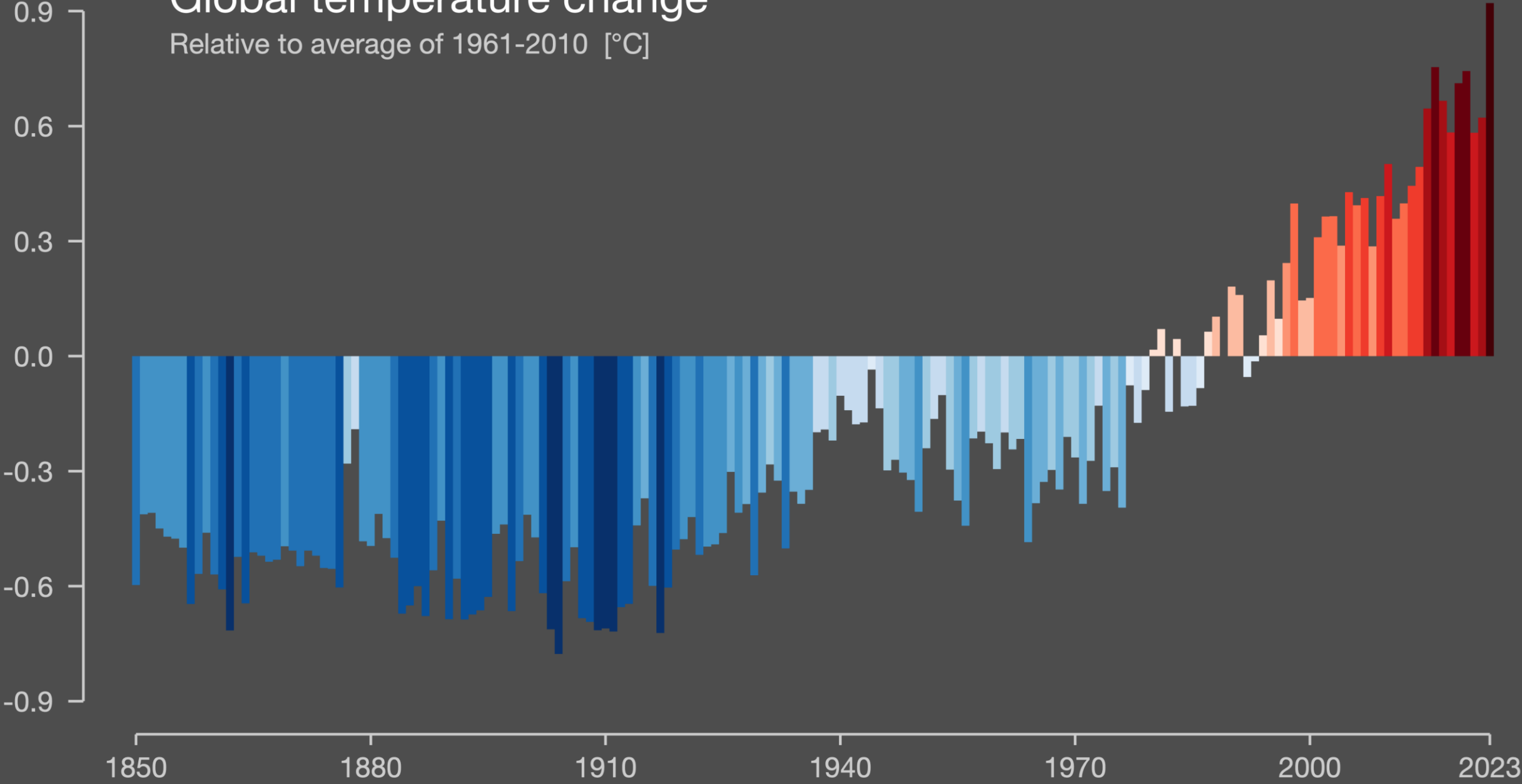


- Climate change in 3 key graphics
- Impacts of climate change on UK weather and associated hazards
- Implications for water safety

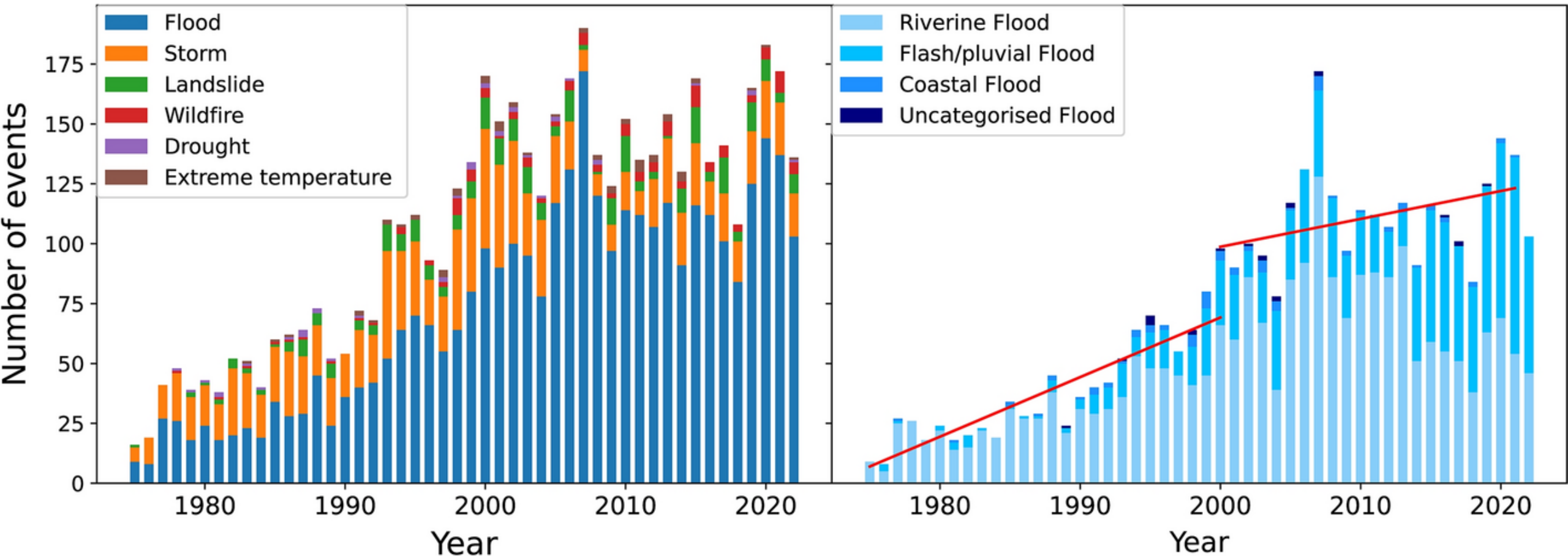


Global temperature change

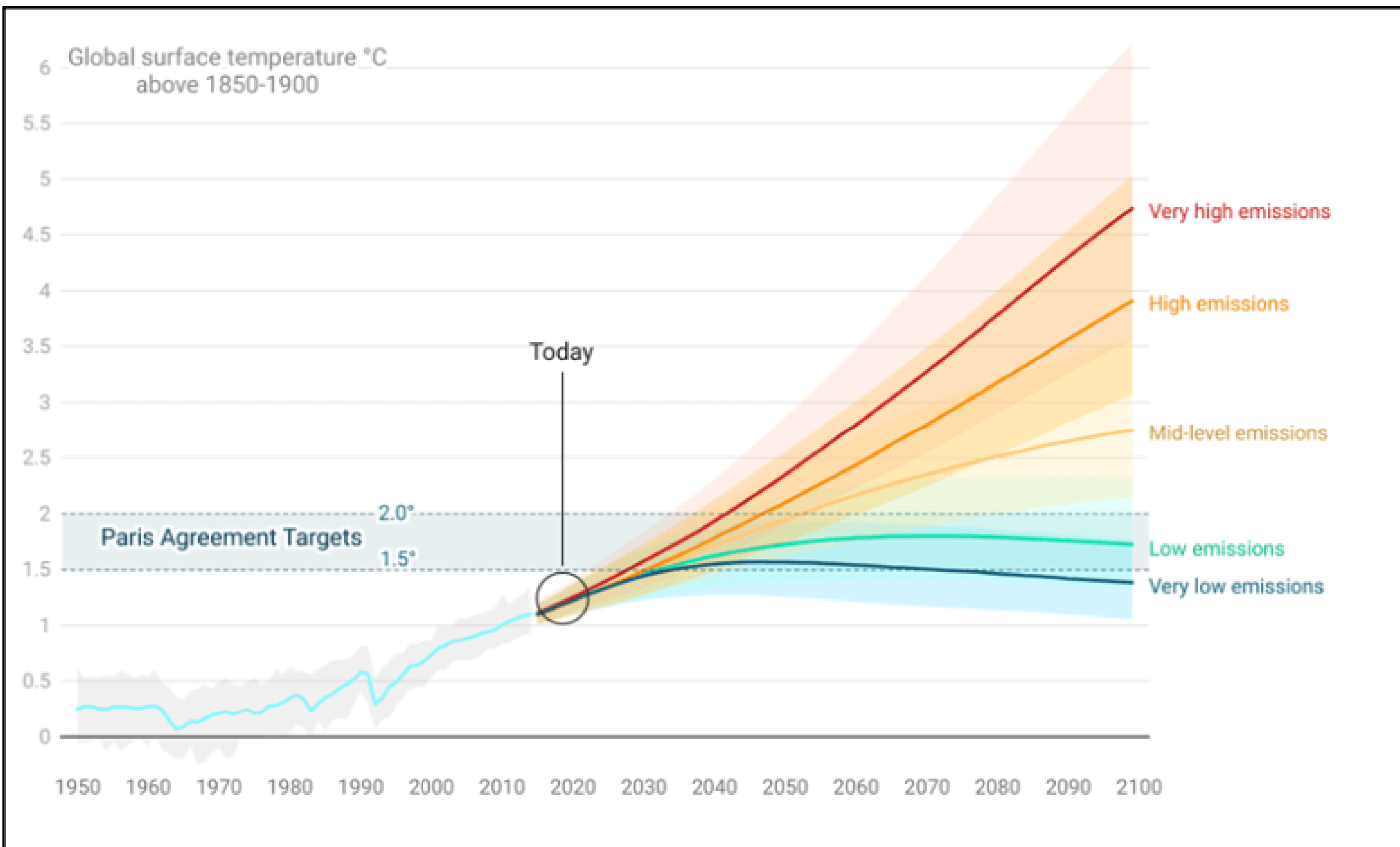
Relative to average of 1961-2010 [°C]



Hawkins, E. (2018). *Warming stripes*. Retrieved from <https://showyourstripes.info/>



Jonkman, S.N., Curran, A. & Bouwer, L.M. Floods have become less deadly: an analysis of global flood fatalities 1975–2022. *Nat Hazards* 120, 6327–6342 (2024). <https://doi.org/10.1007/s11069-024-06444-0>

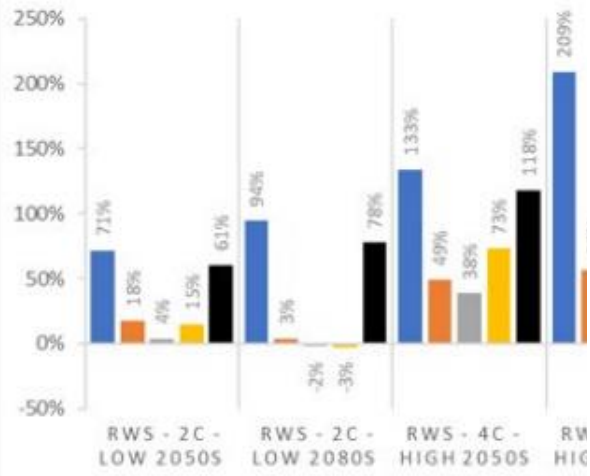


The impacts of climate change for the UK

- UKCP18: warmer wetter winters, warmer drier summer
- UK winter rainfall is likely to increase by 7% by 2050
- Heavier downpours in the summer
- Increased risk of sea flooding due to sea level rise exacerbating storms
- More extreme weather events



% INCREASE IN PEOPLE COUNT IN BAND SIGNIFICANT, ALL SOL

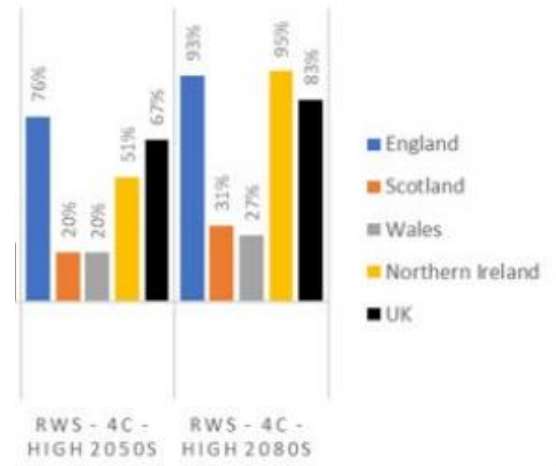


Health Effects of Climate Change (HECC) in the UK: 2023 report

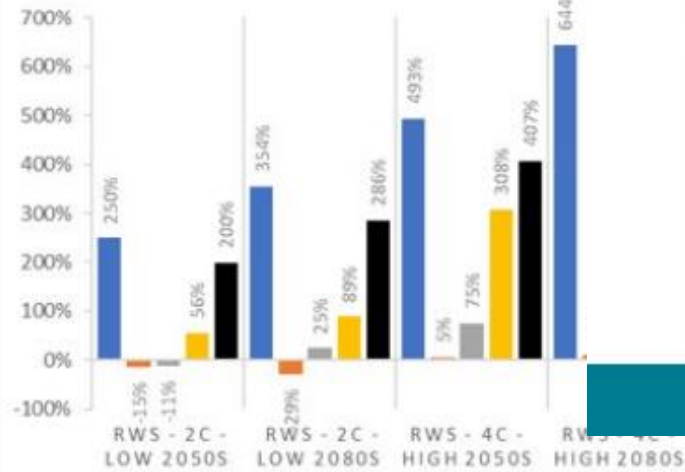
Chapter 3. Climate change, flooding, coastal change and public health



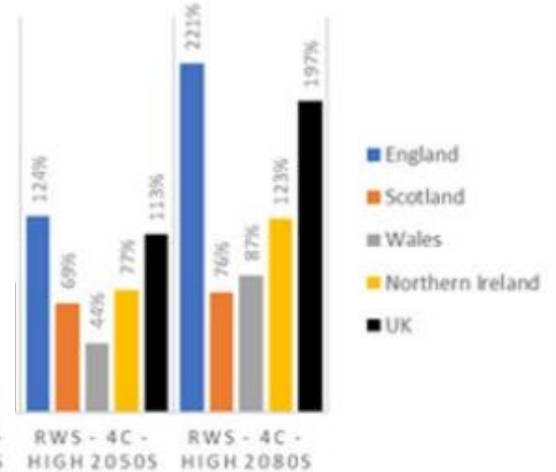
% INCREASE IN PEOPLE COUNT IN BAND SIGNIFICANT, FLUVIAL



% INCREASE IN PEOPLE COUNT SIGNIFICANT, COAS



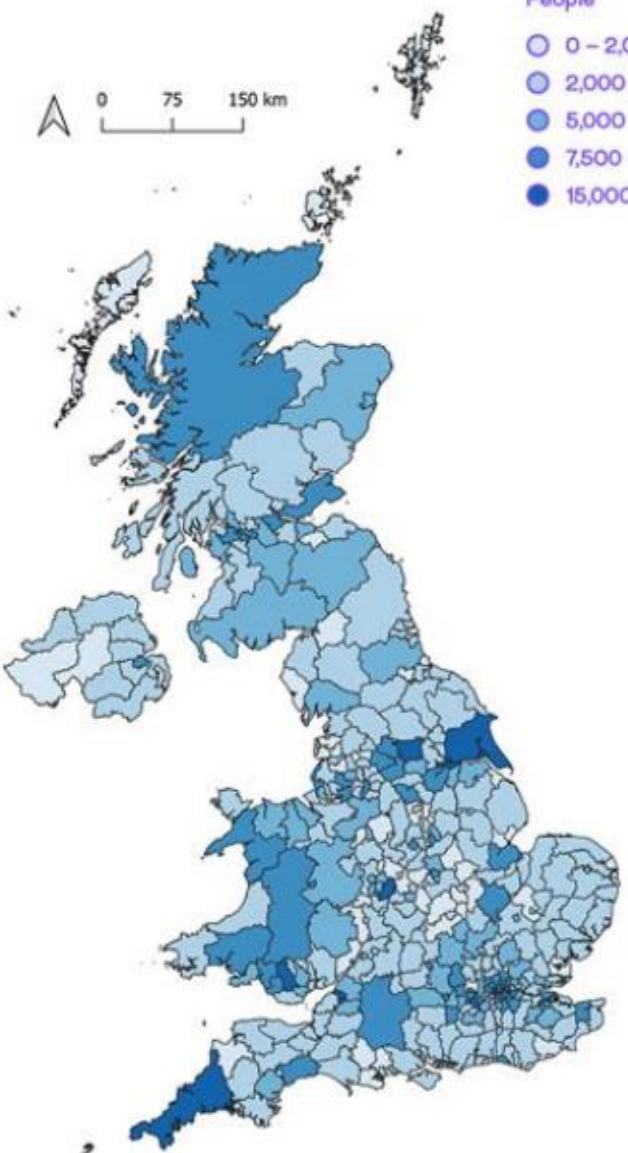
PEOPLE COUNT IN BAND SIGNIFICANT, SURFACE WATER



People

- 0 – 2,000
- 2,000 – 5,000
- 5,000 – 7,500
- 7,500 – 15,000
- 15,000 – 30,000

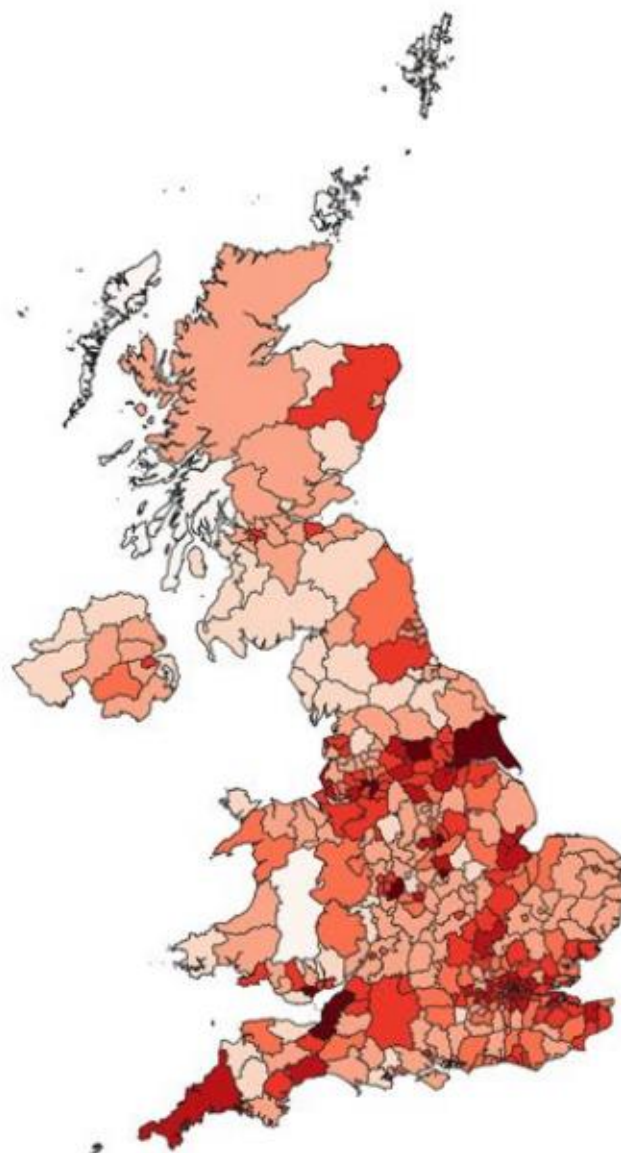
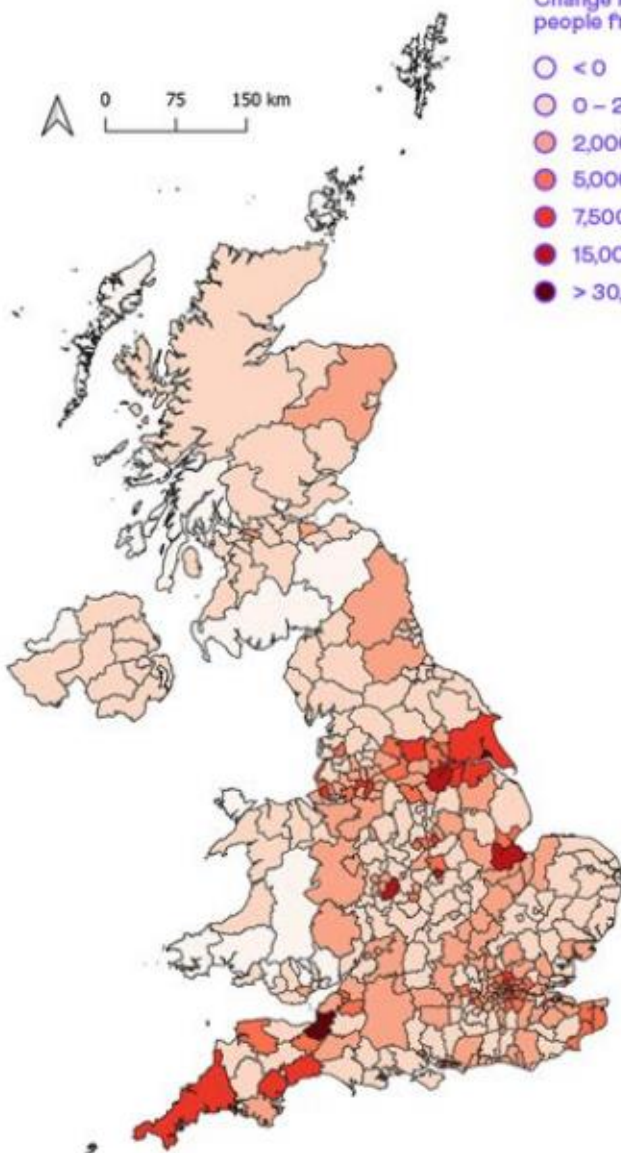
0 75 150 km



Change in number of people from present day

- < 0
- 0 – 2,000
- 2,000 – 5,000
- 5,000 – 7,500
- 7,500 – 15,000
- 15,000 – 30,000
- > 30,000

0 75 150 km





AVID FNC

Introduction and rationale for the Flooding Safety document

Claire Gauci, Canal & River Trust

Flooding advice document



- Document brought together by NWSF members – Canal & River Trust, Environment Agency, National Fire Chiefs Council, RoSPA
- Lifesaving advice from Surf Life Saving GB
- Coastal contributions from MCA

Guidance on the NWSF website



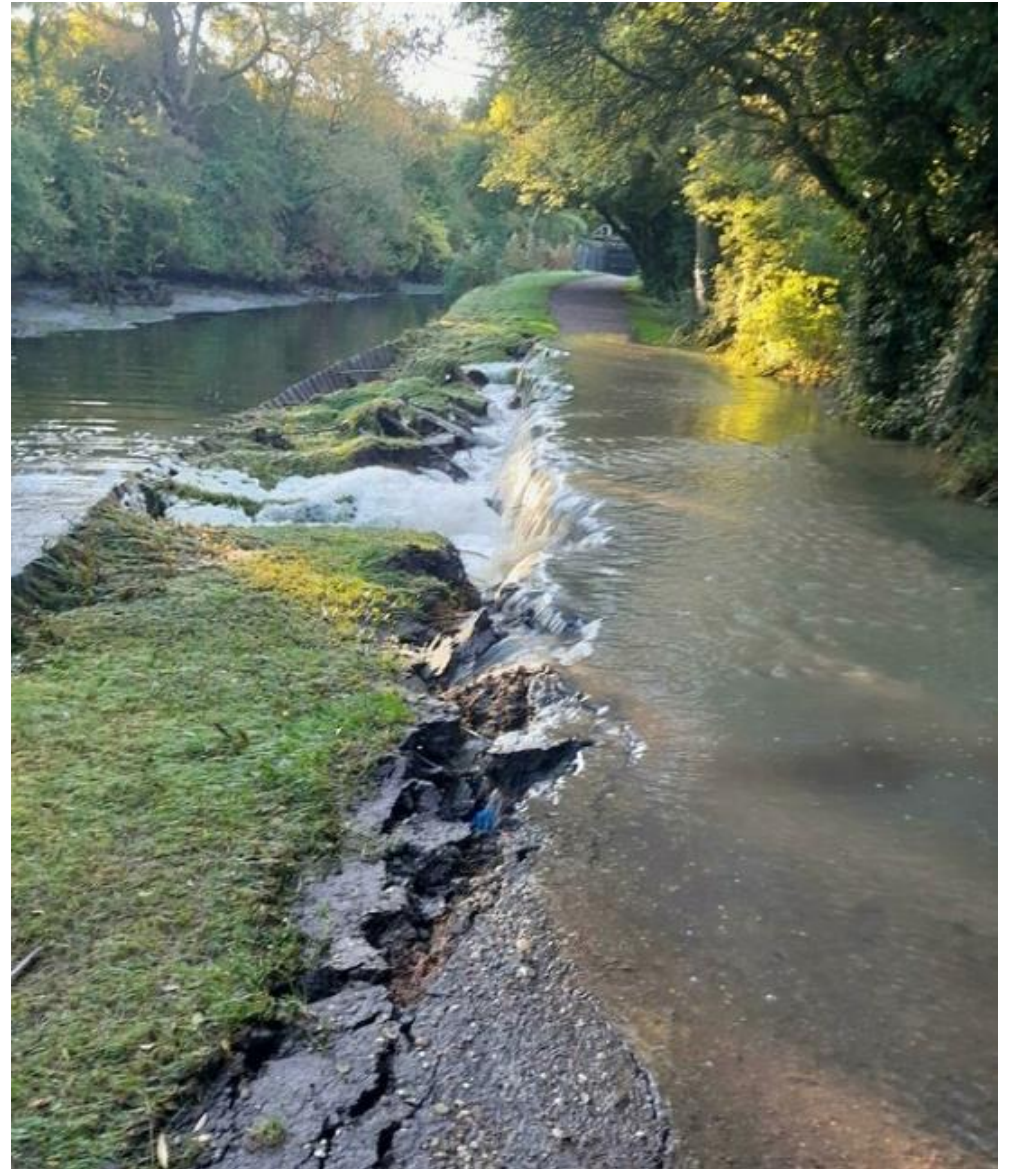
Resource Links

- Campaigns
- Coastal Resources
- Data and research
- Education
- Flooding
- General
- Inland
- Legislation and standards
- Other networks and organisations
- Recreation
- Swimming and Pools
- Water Safety Partnerships
- Guidance

Guidance headings

- Why is the risk of flooding an issue?
- Facts about flood water
- Flooded inland towpaths, footpaths and land adjacent to water
- Road-surface flooding and flash floods

Grand Union Canal, Leicester



Guidance headings

- If you fall into flood water
- Causeway crossing and flooding
- Stormy weather at the coast
- Boats on flooded inland waterways



Image used with kind permission from Surf Life Saving GB

Example of local authority resilience and emergency planning

Joe Langwith and Alice Dimaline - Oxfordshire County Council



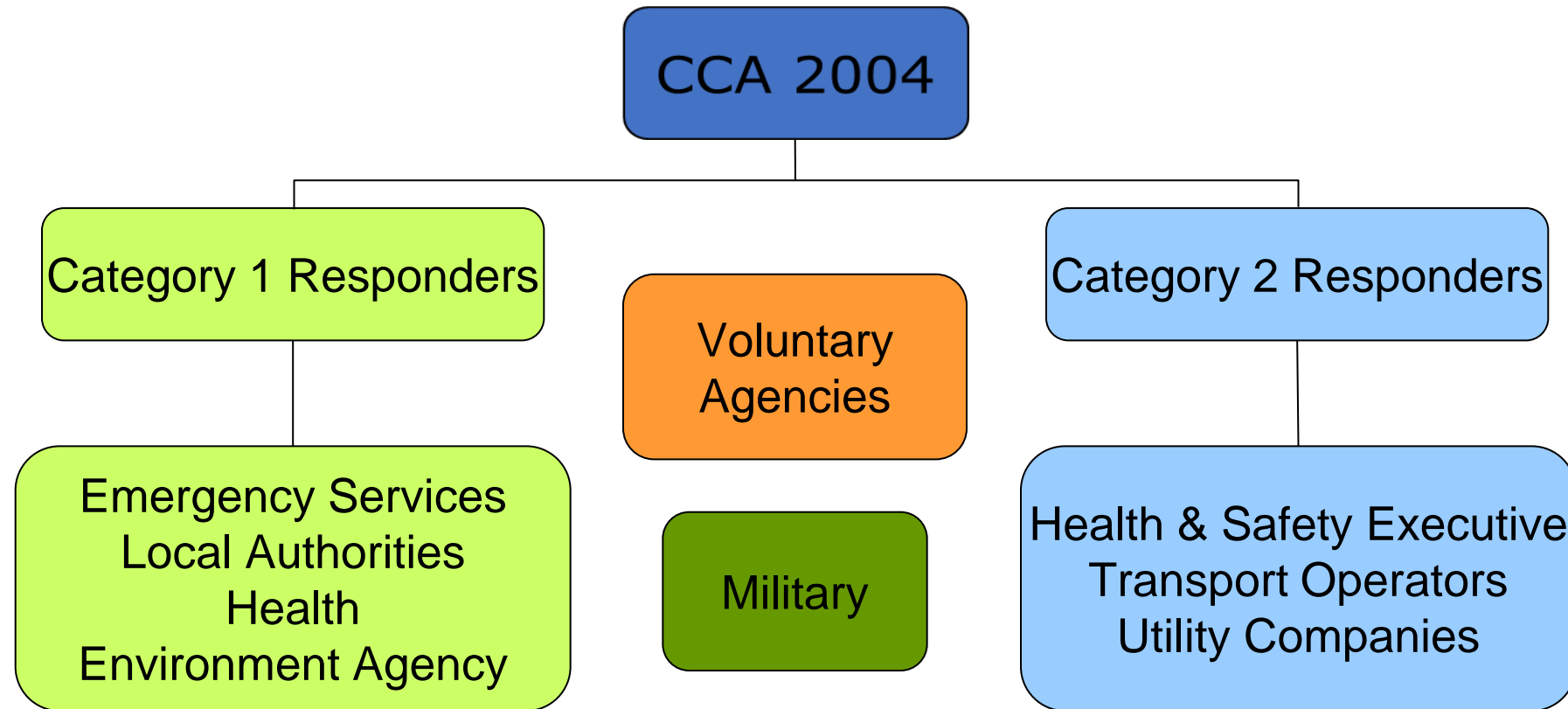
Oxfordshire County Council

Local Authority Emergency Planning & Community Resilience

Joe Langwith
Resilience Officer



Response Structure





Civil Contingencies Act (2004)

Assess risk of emergencies to inform planning

Put in place emergency plans

Business Continuity arrangements

Warning & Informing the public

Share information with other responders

Co-operate with other responders

Provide business continuity advice to businesses



Assess the Risk

- National Risk Register
- Thames Valley Community Risk Register
- Oxfordshire Risk Register

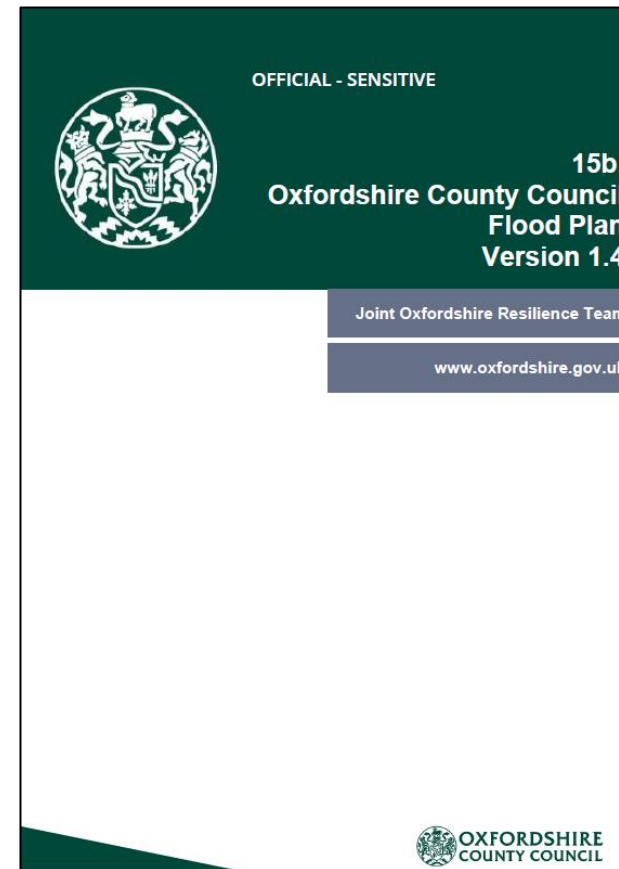
Impact	Catastrophic	Orange	Red	Red	Red	Red	Flooding	Terrorist Attack
	Significant	Yellow	Orange	Red	Red	Red	Adverse Weather	Cyber Attack
	Moderate	Yellow	Yellow	Orange	Orange	Orange	Drought	Fuel Disruption
	Minor	Green	Yellow	Yellow	Yellow	Yellow	Animal Disease	Major Fire
	Limited	Green	Green	Green	Green	Green	Human Disease	Industrial Action
		1	2	3	4	5	Plant Disease	Wildfire
							Chemical Incidents	Reservoir Collapse
							Radiological Incidents	Aviation Collision
							Public Disorder	



Put in Place Emergency Plans

Oxfordshire Flood Plan

- Notification
- Triggers & Activation
- Response
- Recovery
- Action Cards





Warn & Inform the Public

- Social Media
- Adverse Weather Page
- Flood Toolkit
- Community Resilience



Oxfordshire Fire and Rescue Service
(Official)

23 Sep · ⚙️

Very busy day for Oxfordshire Fire and Rescue Service today responding to a very high volume of calls across the county, mainly due to the weather, Wheatley, Kidlington and Barton were some of the areas worst hit by the flood waters where crews worked tirelessly to try and protect homes and help with salvage and give advice to residents etc on how to stay safe.

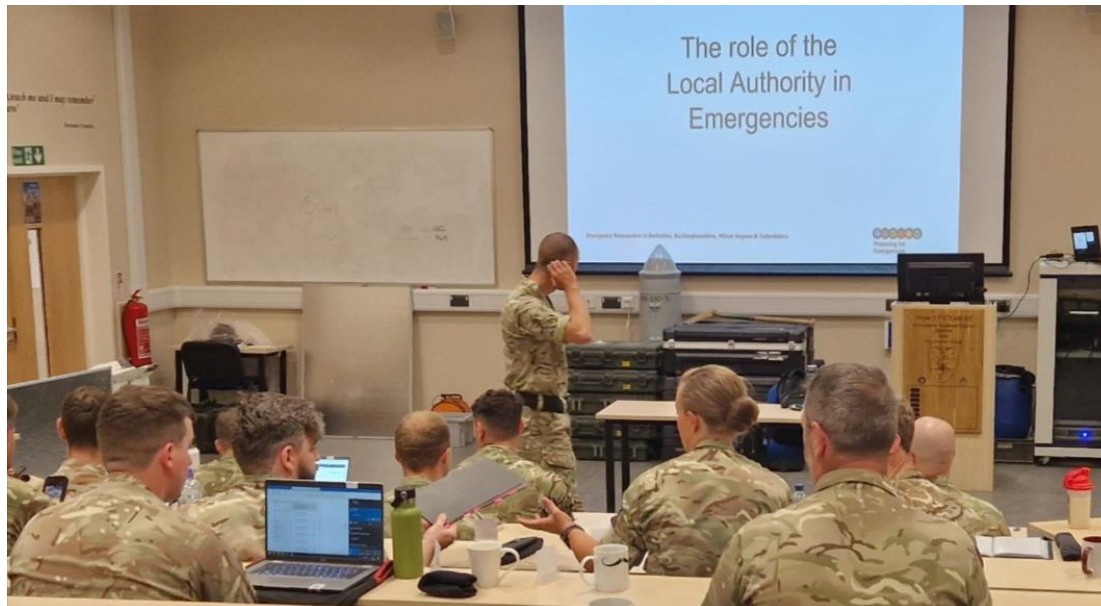
Please visit www.365alive.co.uk for more water safety advice!





Share Information & Co-operate with Other Responders

- Partner Activation Teleconferences (PATs)
- Tactical Coordination Groups (TCGs)
- Strategic Coordinating Groups (SCGs)





Community Resilience

- Provide community talks
- Attend community & business events
- Provide resources
- Support Community Emergency Plans





Community Resources

ICE Bottles

Emergency information



Are You Ready Booklet

Grab Bag, Fire Escape Plans

Other Safety Information



Community Resilience Bags

Utility failure Leaflets - Priority Service Register

Snow Guide, Riparian Ownership leaflets



Community Emergency Plans (CEPs)

What is a CEP?

Why is it important?

How is one produced?





Community Emergency Plans (CEPs)

What goes into a plan:

- Local Risks
- Activation Triggers
- Local Resources Available
- Safe Locations
- Emergency Contacts
- Helping the Vulnerable





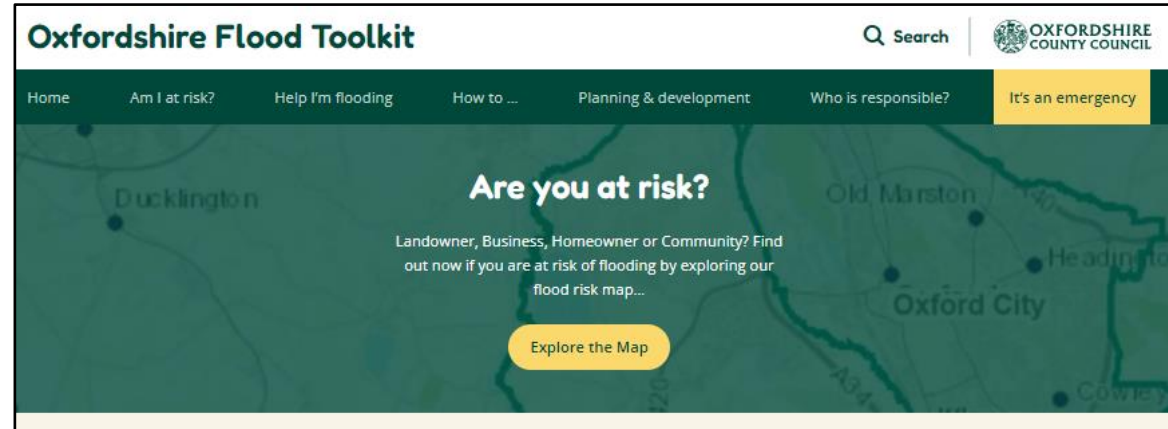
CEP in Action

- Following a flooding event, one of our local communities completed their own CEP and installed their own sandbag store which was filled by our Highways Team.
- During the next flooding event, the Village hall flood defense barriers were fitted when the river began to overflow
- In keeping with the CEP, the brook was initially reinforced with locally sourced sandbags. After coordinating with the Resilience Team, more sandbags were delivered to bolster the defenses.





Oxfordshire County Council Flood Toolkit



<https://www.oxfordshirefloodtoolkit.com/>

Alice Dimaline – Senior Flood Risk Management
Officer





LLFA – Key Responsibilities under Flood & Water Management Act (2010)

Oxfordshire County Council is the Lead Local Flood Authority (LLFA) for the county and is responsible for coordinating the management of flood risk from surface water, groundwater and ordinary watercourses. The LLFA do not provide an emergency response during flooding events.

Key responsibilities:

- Developing, maintaining and putting in place a Local Flood Risk Management Strategy for Oxfordshire
- Establishing a local partnership with other local Risk Management Authorities (RMAs) to ensure there is a joined-up management of flood risk.
- Being a statutory consultee on all major planning applications with surface water drainage implications.
- Establishing and maintaining a register of flood risk management assets
- Co-ordinating flood risk management across the county
- Formal flood investigations (Section 19 Reports)

Before a flood event

Key information is available on the Flood Toolkit for how to prepare for flooding. This includes:

- Knowing your risk
- Signing up to flood warnings
- How to protect your home
- Riparian responsibilities

Things a home owner can do

PROTECT AIR BRICKS: There are two ways of protecting air bricks from allowing flood water into a property. Temporary covers can be fitted over the air bricks in time of flood, or new air bricks can be installed which are flood proof.

You can buy flood protection measures for your home, such as door barriers, air brick covers or pumps, from a number of different providers.

Northamptonshire County Council's downloadable [Flood Mitigation Measures](#) guide provides a list of different products you can purchase from around the UK and includes a brief description of each along with a suggested cost, or why not take a look at the Know Your Flood Risk Campaign's [Homeowner's Guide to Flood Resilience?](#)

You may also want to take a look at our [How to protect your home from flooding](#) guide in the Flood Library for more information on what you can do to help reduce or stop the damage from flood water.

Register here for free flood warnings
from the Environment Agency

FLOODS DESTROY
the Economy

Oxfordshire Flood Toolkit

Home Am I at risk? Help I'm flooding How to ... Planning & development Who is responsible? **It's an emergency**

It's an emergency! >

Preparing for a flood

Flooding can happen at any time and sometimes with little warning. Therefore preparation is key to making sure you, your family and your friends are safe, as well as reducing the damage to your home and treasured belongings.

Even before bad weather is forecast, on a quiet evening when you have some spare time there is one important task you can carry out...

Create a household emergency plan to help you deal quickly and effectively with an emergency situation, including flooding. Our [Are you ready?](#) guide includes important information on how to best prepare, as well as a template for a [household emergency plan](#) and what to include in a 'grab bag'.

If a [flood warning](#) has been issued, follow the [nine steps below](#) to be as well prepared as you can be. Tick off each step to reveal the next.

Nine steps to being prepared

Step 1

Home Am I at risk? Help I'm flooding How to ... Planning & development Who is responsible? **It's an emergency**

Local weather warnings

Check out the local weather, flood warnings and river levels

It's always important to keep an eye on what the weather is doing in your local area so you can be best prepared for the days ahead. This becomes even more important if there is severe weather approaching that could lead to flooding in your community or across the county.

To keep you aware of the situation in Oxfordshire, the widgets to the right show any severe weather warnings released by the Met Office for the next 5 days as well as any flood warnings from the Environment Agency.

If a warning is showing, click on it to find out more!

To check the current levels of rivers in Oxford, flood warnings and alerts in force and get a 5-day flood forecast visit [check for flooding in England - GOV.UK](#) ([check-for-flooding.service.gov.uk](#))



During a flood event

If there is danger to life phone 999

Other key contact information can be found under the it's an emergency tab

Home Am I at risk? Help I'm flooding How to ... Planning & development Who is responsible? **It's an emergency**

It's an emergency!

What should I do?

If there is a danger to life contact Oxfordshire Fire and Rescue Service on **999**.

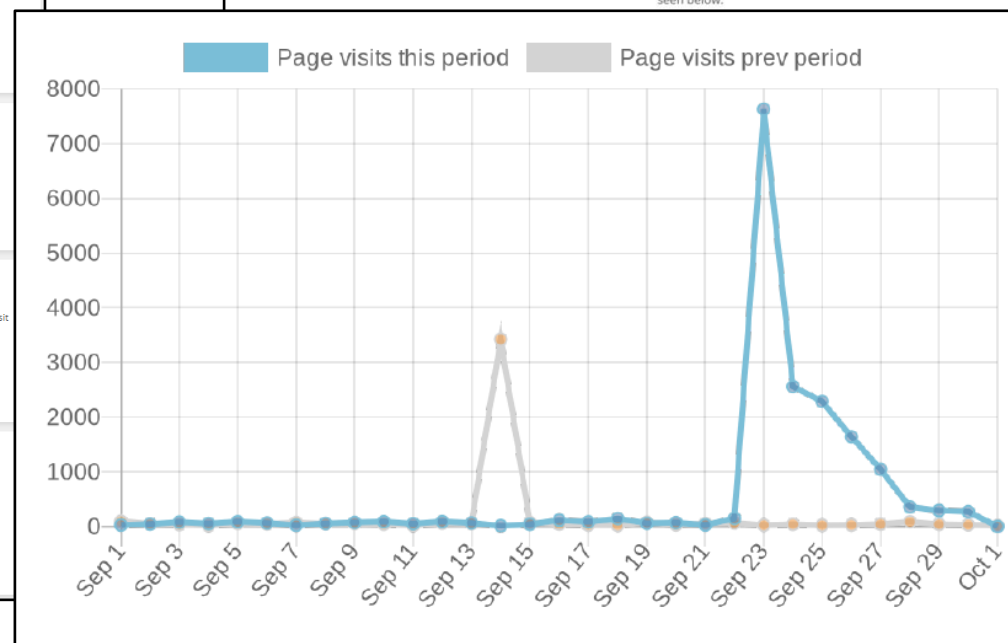
Oxfordshire Fire and Rescue Service's main responsibility is saving lives, property and the environment. They will also support other agencies to alleviate flooding as part of a joined up approach as can be seen below.

OXFORDSHIRE COUNTY COUNCIL **Oxfordshire Highways**
To report flooding relating to a highway such as blocked ditches, blocked drains or flooding on a road call Oxfordshire County Council Floodline or visit the Fix My Street website. Oxfordshire Highways also provide emergency response to flooding by closing roads, setting up diversions, pumping flooded highways, and providing sand bags to properties and communities threatened by flooded highways in accordance with the sandbag policy below.
[Oxfordshire County Council – Sandbag Policy and Advise](#)
Tel: 0345 310 1111
[Visit website](#)

national highways **National Highways**
To report flooding on the M40, A34 or A43 (Oxfordshire to Northamptonshire border) contact National Highways.
Tel: 0300 123 5000 (say "Report")
[Visit website](#)

Environment Agency **Environment Agency**
To report flooding from a main river contact the Environment Agency through the Floodline or visit their website. Visit our Flood Risk Map page to see all [main rivers in Oxfordshire](#).
Tel: 0345 988 1188 or 0800 80 70 60
[Visit website](#)

Thames Water Utilities
To report flooding from a Thames Water burst water main or sewer use the contact details to the right.
Tel: 0800 316 9800 (Select option 2 and then option 2 again)
[Visit website](#)



OCC Flood Toolkit page visits during recent flood event during September 2024

After a flood event : report a flood

- Online form: location, duration, date, cause and impact of flooding – thresholds explained
- Ability to upload photos and videos
- Forms sent to the OCC LLFA team to log and investigate with other Risk Management Authorities
- Flood reports across the county are mapped on our internal asset register and used to identify areas that flood regularly which can then in turn lead to things like increased maintenance of assets in this area or areas to target community engagement events/ volunteers.

The screenshot displays the Oxfordshire Flood Toolkit website. The main navigation bar includes links for Home, Am I at risk?, Help I'm flooding, How to..., Planning & development, and Who is responsible?. A dropdown menu is open under 'Am I at risk?', with 'Report a flood' highlighted in a red circle. Below the navigation, there is a section for 'If you are currently suffering from internal property flooding' with a yellow button 'It's an emergency'. A map section titled 'Are you at risk?' is also visible. On the right, a 'Flooding Information' form is shown, containing the following fields:

- Flooding Information**
- Are you reporting a blocked drain or an issue with highway drainage? *
 - Yes
 - No
- Address ***
(Where the flooding occurred)
 - Street Address
 - Village or Town
 - Postcode
- Additional location details**
i.e. road junction, or grid reference
- When did the flooding happen? *
dd/mm/yyyy



After a flood event: flood recovery

- Information on flood recovery can be found under the help I'm flooding tab
- There are useful links and phone numbers to The National Flood Forum and Citizens Advice who also offer support following flooding.

Oxfordshire Flood Toolkit Search | OXFORDSHIRE COUNTY COUNCIL

Home Am I at risk? **Help I'm flooding** How to ... Planning & development Who is responsible? It's an emergency

Flood recovery
Report a Flood
PFR Repair Grant

It's an emergency! >
Flood recovery

When the floodwater has gone and it's safe to return home, you may be faced with a difficult sight. Even a small amount of water can have a devastating impact with damage to your property and belongings, some of which may have to be replaced.

Contact your insurers as soon as possible and follow their advice.

The [National Flood Forum](https://nationalfloodforum.org.uk/wp-content/uploads/2016/12/Ready-For-Flooding-26-11-14.pdf) provide information on what to do before, during and after a flood - <https://nationalfloodforum.org.uk/wp-content/uploads/2016/12/Ready-For-Flooding-26-11-14.pdf>
You can also call the National Flood Forum for advice at any time on **01299 403 055**.

Advice for dealing with flooding in a rented home can be found here - <https://www.citizensadvice.org.uk/housing/repairs-and-housing/repairs-and-housing-conditions/common-problems/rented-home-flooding-overview/>. Citizens Advice also have an AdviceLine (England) **0800 144 8848**.

The eight steps below will help you during this time and will give you advice on dealing with your insurance company and keeping safe. Try ticking off each step to reveal the next one.

Tick off the eight steps to get on your way to recovery...

Step 1

Following major storm events, the government may provide funding to assist those affected by property flooding. Information about such funding will be made available on the Flood Toolkit. For example, this occurred after Storm Henk in January 2024.

Oxfordshire Flood Toolkit Search | OXFORDSHIRE COUNTY COUNCIL

Home Am I at risk? Help I'm flooding How to ... Planning & development Who is responsible? **It's an emergency**

Property Flood Resilience Repair Grant

If your property or business has been flooded or significantly impacted due to flooding by storm Henk between 2 to 12 January 2024, you may be eligible for grants under the Flood Recovery Framework.

This grant is now closed to expressions of interest. Application forms must be submitted by 30th November 2024.

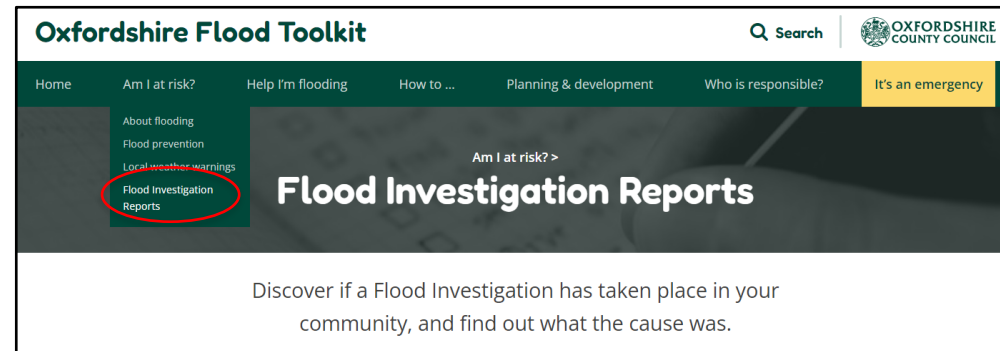
Following the flooding associated with Storm Henk Government announce funding for those affected, the announcement is here: [Government payments for communities affected by flooding](#). There are a number of schemes available, however certain eligibility criteria will need to be met to access the funding.

Oxfordshire County Council (OCC) along with our City and District partners have been working together to understand if the overall numbers of those affected meet the threshold to access this fund. We have recorded the required number of properties based on DEFRA's criteria, and this enables residents and businesses to access these funds. A summary of these are provided below and how to access them.



After a flood event : flood Investigations

- Following flood events, the LLFA will undertake investigations of the source of the flooding and make recommendations that could reduce future risk.
- Some events will meet our threshold to undertake a formal Section 19 Flood Investigation Report as set out in the Flood & Water Management Act 2010.
- Investigations will be undertaken in partnership with the district and city councils, the Environment Agency, other Risk Management Authorities, and the communities impacted.
- Updates and the finalised reports are then published on the Flood Toolkit.
- These investigations are then used for various pieces of works e.g. to provide evidence to fund a flood



Flood Investigations – When are they carried out?

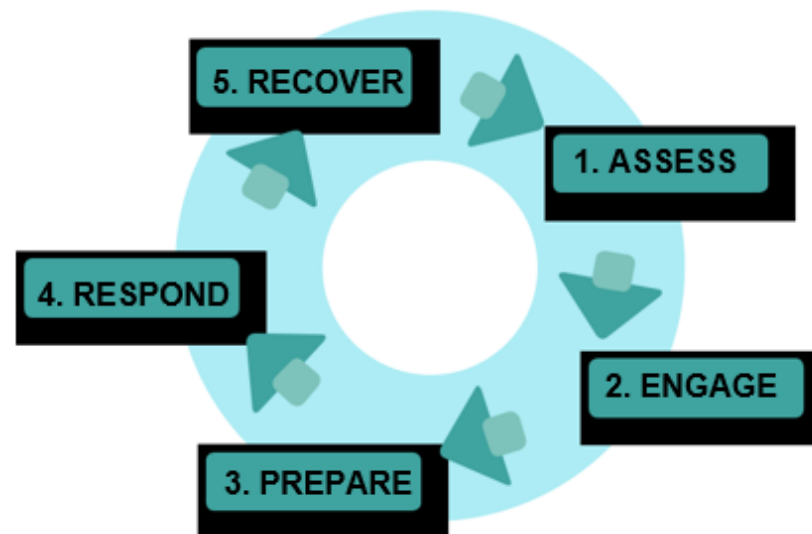
If a reported incident meets the threshold for a formal [Section 19](#) flood investigation, this information may be published publicly online. The following tests are used to decide this:

- Has **internal flooding** (excluding basements) of five or more residential properties or businesses been experienced within an area of 1km²?
- Has **internal flooding** of a business premises employing more than 10 people been experienced within an area of 1km²?
- Has **internal flooding** (excluding basements) of at least one property or business been experienced for one week or longer?
- Has flooding of one or more items of critical infrastructure, which could include hospitals, health centres, clinics, surgeries, colleges, schools, day nurseries, nursing homes, emergency services (police, fire, ambulance) stations, utilities and substations, been experienced?
- Thames Water will investigate all foul sewer flooding affecting the public highway, properties and watercourses.



Volunteer Flood Warden Scheme

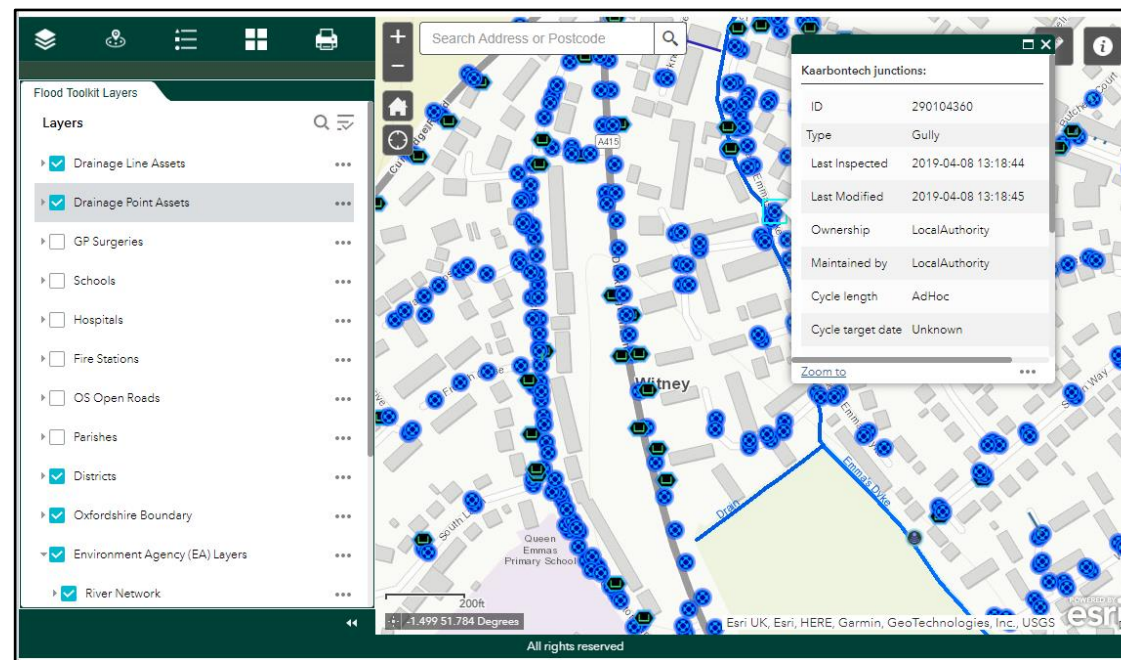
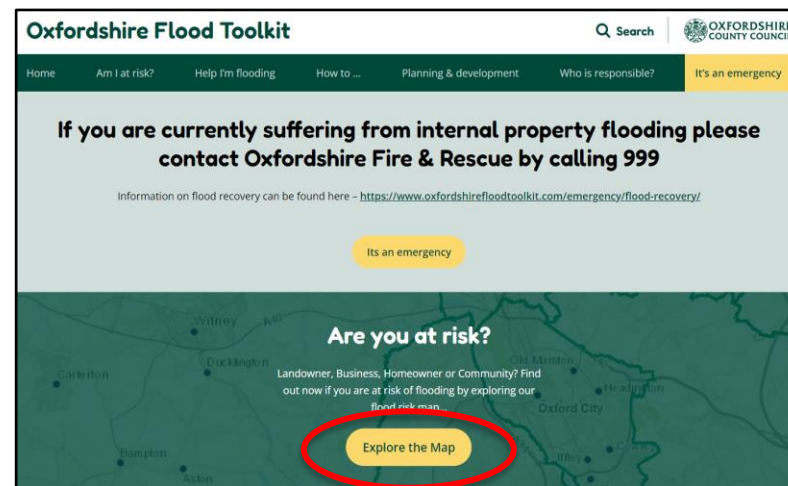
- The LLFA recognises that local community residents are well placed to provide information concerning flood risk and drainage issues.
- Flood Wardens will be the eyes and ears on the ground and report blocked drains, gullies and ditches etc. It is hoped these actions could help prevent or reduce flood risk in local communities.
- We currently have Flood Wardens in Witney, Ascott under Wychwood, Sunningwell and Abingdon and we are expanding the scheme further following a successful pilot.
- Flood Wardens can use the information available on the Flood Toolkit to aid them in their role.





Flood Risk Asset Register

- LLFAs must establish and maintain a register of structures or features that are likely to have a significant effect on flood risk.
- An external version of OCC'S asset register is available on the Flood Toolkit for members of the public to use.
- The asset register is an interactive map showing OCC highway assets, Environment Agency flood risk maps, critical infrastructure and district and parish boundaries.





Any Questions?

floodmanagement@Oxfordshire.gov.uk

Responsibilities of Search and Rescue Service

Bryn Coleman, NFCC



NFCC
National Fire
Chiefs Council

Fire and Rescue Service response to flooding incidents

Deputy Chief Fire Officer Bryn Coleman
Chair –NFCC Inland Water and Technical Rescue
Group (IWTRG)

Climate Change

- Wetter, milder weather systems affecting the United Kingdom
- Increased number of `named` Storms
- Increased building development preventing `run off`
- Silting of draining systems



Fire & Rescue Services Act

- No statutory responsibility in England to attend Water Rescue Incidents
- Scotland, Wales, NI and Channel Islands do have responsibility
- Community Risk Management Plans
- Civil Contingencies Act – Local Resilience Forums – Emergency Preparedness



Civil Contingencies Act 2004

CHAPTER 36



Devon • Cornwall • Isles of Scilly



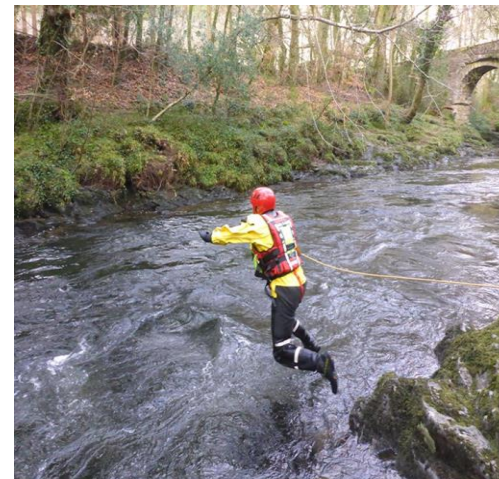
Local Resilience Forum



NFCC
National Fire
Chiefs Council

Response

- Local Fire & Rescue Service response – Water 1st Responder, Swift Water Rescue Technicians. Power Boat crews
- Regional support from neighbouring FRSs – Section 13/16 FRS Act
- National Response – National Resilience – DEFRA declared assets



National Response

- DEFRA Flood Rescue Concept of Operations – Team Types
- Fire & Rescue and Volunteer Teams
- Tactical Advisors
- Local Resilience Forums Co – Ordinate , Strategic and Tactical Co – Ordination Groups



Department
for Environment
Food & Rural Affairs



NFCC
National
Resilience



NFCC
National Fire
Chiefs Council

Equipment

- Sleds , Boats and Pathways



- Pumps

- Throw lines, Poles



- Personal Protective Equipment

- Helicopters



High Volume Pumps

- High Volume Pumps throughout the UK
- Capability to Pump 7000 litres per minute
- 3KM of 150mm hose
- Used to protect Critical National Infrastructure



FRS Role in Flooding

- Save Life ✓
- Evacuation ✓
- Pumping to support key infrastructure ✓
- Will not pump out properties ✗
- Lay sand bags ✗



Questions



Thank you

- b.coleman@gov.je



NFCC
National Fire
Chiefs Council

Question and Answer Session

Sum up and conclusions

Contact us at info@nationalwatersafety.org.uk