Planning and preparing for flooding

Rachel Crompton B.Eng (Hons), C.Eng, MICE Lead Local Flood Authority



Planning and preparing for flooding



Lancashire

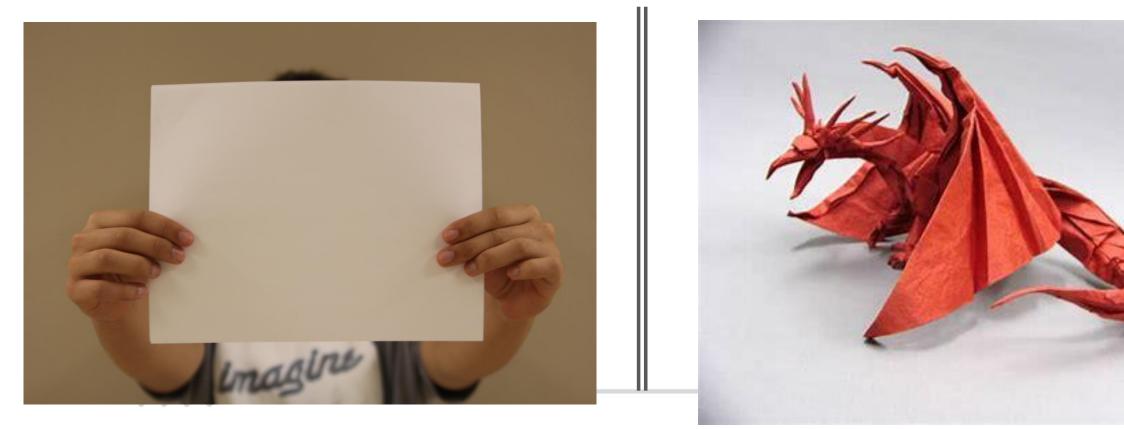
County Counc

Icy roads





Icy roads vs Flooding

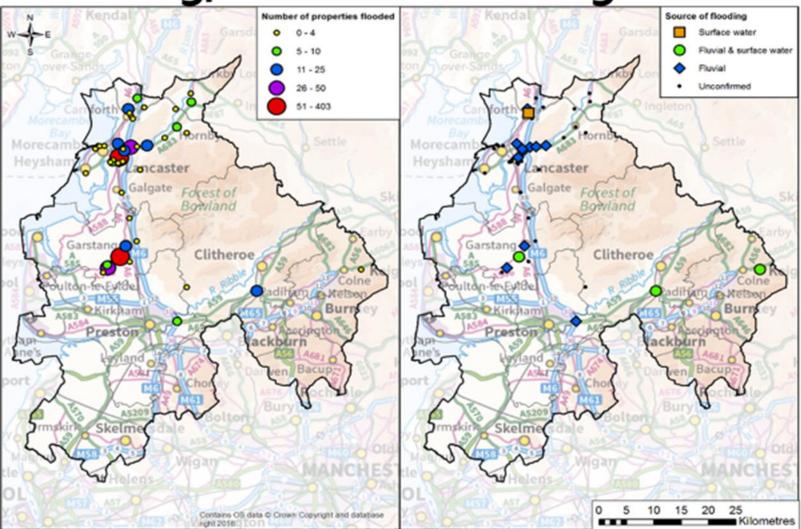




December 2015

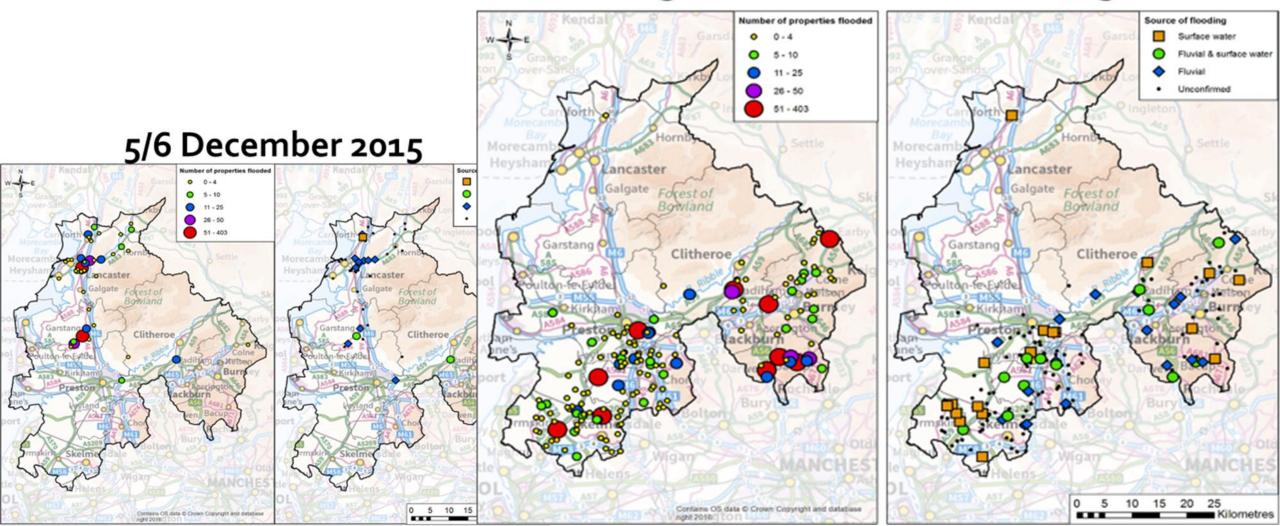
_____)

5/6 December 2015



December 2015

25/26 December 2015





Flooding in Lancashire Before a flood During a flood After a flood Drains and Sewers - Contacts

Flooding in Lancashire

Over the last few years, flooding caused by extreme rainfall has become a bigger issue in Lancashire and across the country. Heavy rain has had a devastating impact where people have had to leave their homes and seen valuables destroyed by flood water.

If there is an immediate risk to your life or you are trapped by floodwater **call 999** and follow their advice.

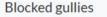
Watch our short animation for advice and tips on what to do before, during and after a flood.



Surface water flooding

When it rains heavily and for a long period of time, the drains become overwhelmed by the amount of water – they overflow and the water on the surface has nowhere to go. It's normal for large puddles to appear when it rains heavily, but sometimes the puddles become more of a flood, stretching across whole streets, pavements and sometimes further beyond that – this is known as surface water flooding.







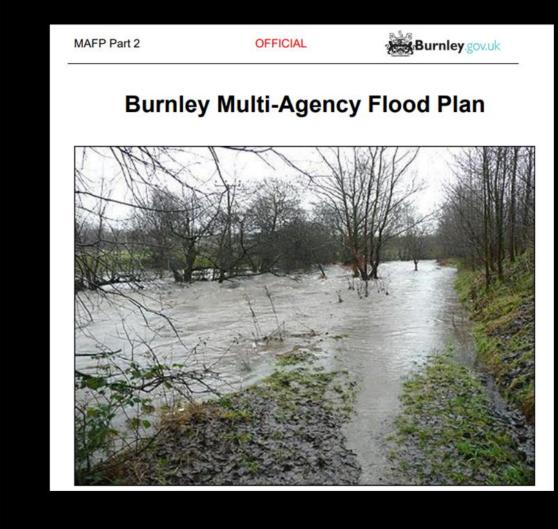
Find out how we <u>maintain over 300,000</u> roadside drains, also know as gullies.



Multi Agency Flood Plan PART 1

Lancashire Multi Agency Response to Flooding Incidents







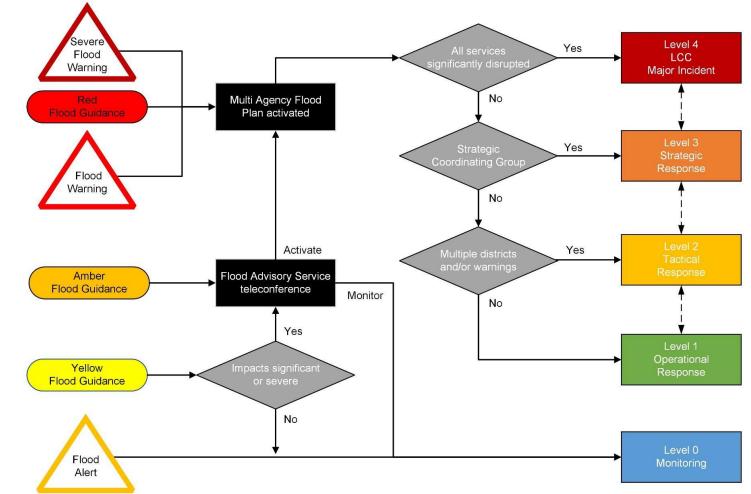
OFFICIAL FOR LANCASHIRE RESILIENCE FORUM USE ONLY



Flood Response Plan

Version: 1.0 Date Issued: May 2022





Additional indicatiors include: Met Office advices, reports of actual flooding, reports from the public.

Operational response planning



Response & Stand-Down

- Inspecting damage to LCC assets.
- Impact on the highway network.
- Collection/disposal of any (contaminated) sandbags.
- Providing advice in respect of grants (residential and commercial).
- Highways cleansing in affected areas.
- Provision of waste management support to district councils.

Public Media & Communications

- Formal 'press releases';
- Social media:
 - Repeated by partner organisations;
 - enhanced by personal Councillor/officer accounts;
- Direct advice to Councillors & Flood Action groups.

Appendix A: Public Messages

Pre identified public messages are detailed below for the different stages of the response. All actions at lower levels will be considered as part of wider messaging.

Level 0: Monitoring

• Direct the public to the LCC Flooding section on the internet for the latest advice and guidance.

Level 1: Operational Response

- Monitor Flood Alerts and Warnings.
- Direct public to the Environment Agency / Met Office website for further information.

Level 2: Tactical Response

- If there is an immediate risk to life or you are trapped by flood water call 999.
- If flood water is entering your house, or is over halfway across the road, call:
 - Monday to Friday 8am to 5pm (excluding bank holidays) 0300 123 6780
 - Out of office hours 101 (local Police non-emergency number)
- Get the latest information about flooding in your area from the Flood Information Service - <u>https://check-for-flooding.service.gov.uk/</u>
- Contact Floodline on 0345 988 1188 for advice during a flood.
- Direct the public to the LCC Flooding section on the internet to report flooded properties.

Level 3: Strategic Response

- A multi-agency response will likely have been established.
- LCC Communications will engage with partners on the Warning and Informing Cell to agree clear and consistent messages.
- Consider issuing a press release.

Level 4: LCC Major Incident

Sandbag Statement

- NO statutory duty to provide;
- Not as effective as purposedesigned barrier products;
- Only used in public highway, primarily to maintain access along roads;
- Personal use: buy from builders' merchants, DIY stores etc

ALTERNATIVE SANDBAGS

Is there an alternative to traditional sandbags?

For many years, traditional sandbags using hessian sacks have often been the most popular method of preventing flood water from entering and inundating properties or an area of land. However, over time, alternative sandbags have now been developed and identified as a better substitute for traditional sandbags.

Even though traditional sandbags are cheap, and can prevent flood water from entering areas for short periods of time, there are some negative aspects of using them:

- They are relatively easy to obtain, but at the time of a flood event, demand for them may exceed availability at your local builder's merchants.
- Due to their weight (~13kg), they can be very difficult to handle.
- The hessian sacks are biodegradable and can rot if they are left in the same position for long periods of time.

What are the alternatives and how do they work?



A range of alternative sandbags are now available to purchase in preparation for flooding. They have many advantages over traditional sandbags and have been found to be more effective at protecting against flooding.

Some alternative sandbags are filled with a gel substance which can mould to gaps and available space, creating a better seal than traditional sandbags. They can be applied in small strips and can act as a water tight seal around windows and door frames or laid out as barriers to

Gravitas International ltd / Domestic flood control 2011 - water reactive sandbag / <u>CC BY-SA 3.0</u>

divert flowing water during a flood.

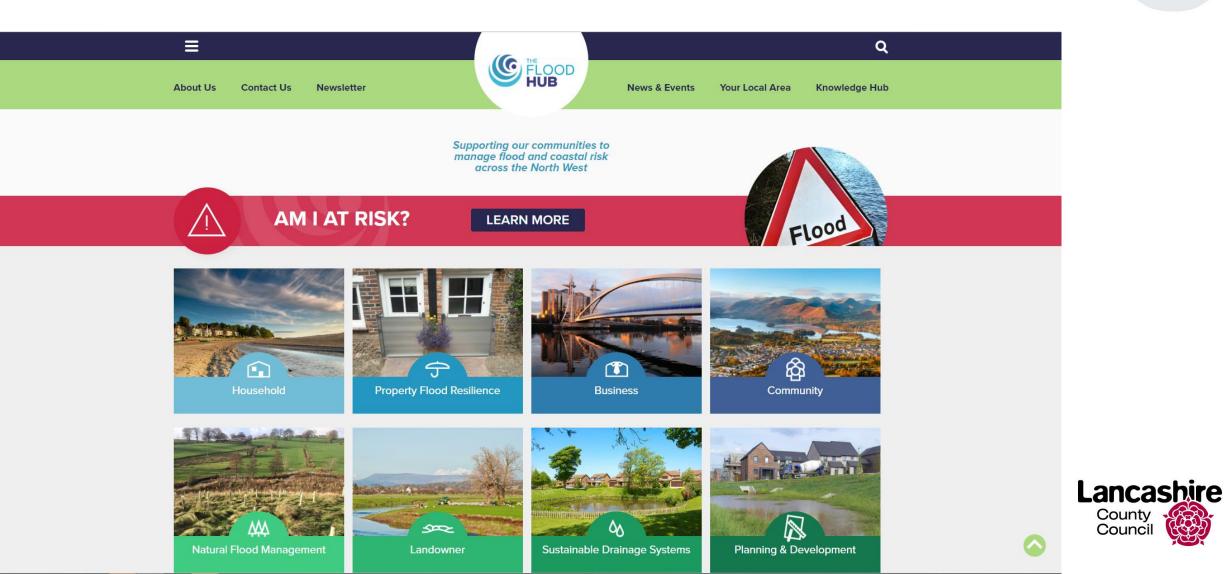
They are lightweight and easy to store and deploy, so are very useful in a flash flood event. Once the alternative sandbags are put in the appropriate place, it is important to wet them which will active them so that they are weighted down and can act as a barrier.

Some types of alternative sandbags can absorb approximately 20 litres of water. After the flood event has occurred, alternative sandbags can be re-used, as long as they are not contaminated with sewage water.



Gravitas International Itd / Flood Doorway in Somerset / <u>CC BY-SA 3.0</u>





- Property flood resilience;
- Community action (e.g. Flood Action Groups, Parish/Town Councils);
- Business support/climate change funding;
- Natural flood management (e.g. peat restoration, coastal buffers);
- Development management and SuDS;
- Engineering projects (e.g. coastal protection, river defences, pumps).



- Property flood resilience;
- Community action (e.g. Flood Action Groups, Parish/Town Councils);
- Business support/climate change funding;
- Natural flood management (e.g. peat restoration, coastal buffers);
- Development management and SuDS;
- Engineering projects (e.g. coastal protection, river defences, pumps).



- Infrastructure resilience (e.g. coastal protection, river defences, pumps);
- Property flood resilience;
- Community action (e.g. Flood Action Groups, Parish/Town Councils);
- Business support/climate change funding;
- Natural flood management (e.g. peat restoration, coastal buffers);
- Development management and SuDS.





Anchorsholme & Rossall Coastal Defences, Blackpool and Wyre Hold back the sea



Croston Flood Alleviation Scheme, Chorley

Hold back the river

Bacup Old Brook, Rossendale

Before



• After





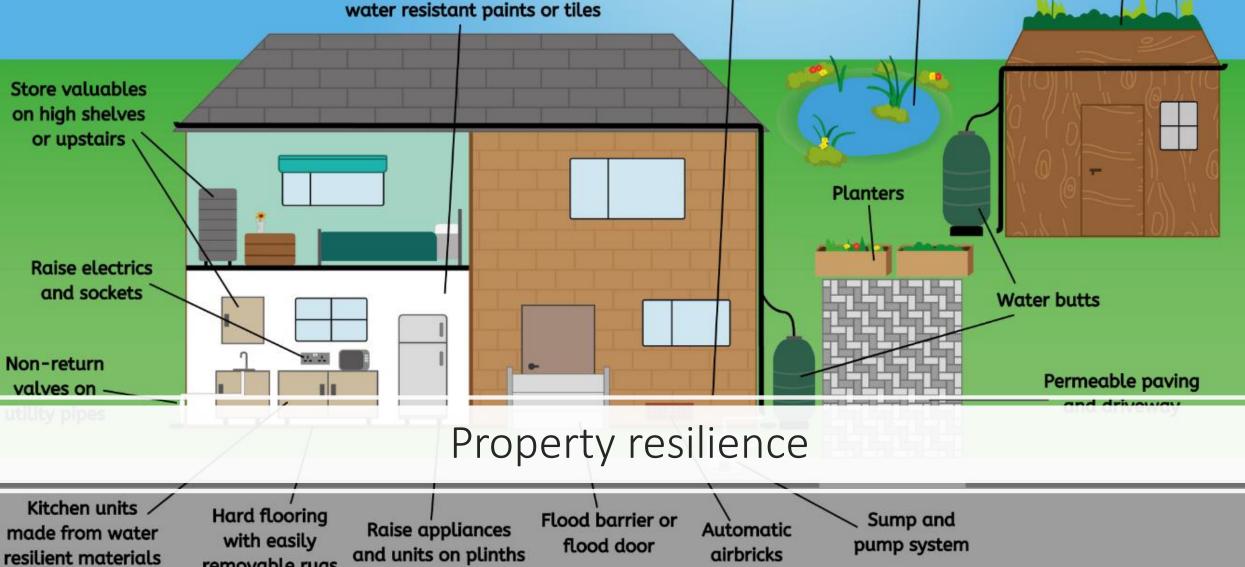
Regular maintenance & self-help





When protecting a property from flooding, it is effective to use techniques that are both flood resistant (keep water out) and flood resilient (reduce the impact of damage). There are many adaptations you can make to your house and garden, including with the use of sustainable drainage systems (SuDS). Here are some options...

Re-point brickwork with a water resistant mortar Retention pond and rain garden Green roof on garden shed

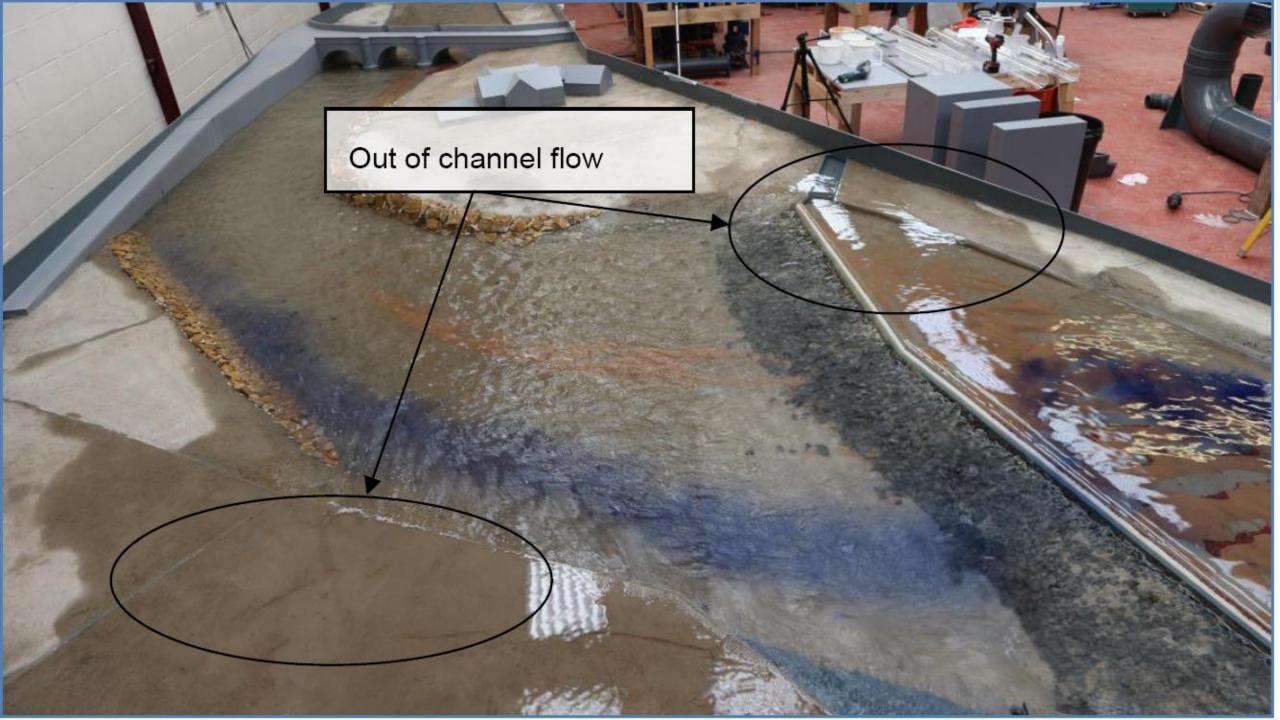


Use resilient wall plaster,









Community resilience

- Trusted neighbours;
- Frequent activities inc drop-in events & materials demos;
- Joint technical meetings with emergency responders & drainage authorities;
- Informed questions on planning applications;
- 'Dry run' incident preparation exercises.



Planning and preparing for flooding

Rachel.Crompton@lancashire.gov.uk

