

Bainton & Ashton Community Flood Management Planning

V2 2026

Three things that help:

1. Situational Awareness
2. Analytics
3. Smart Response

Local Wet Spots



Ashton filling up



Tallington
Weir

Flood Management

It's all about Resilience:

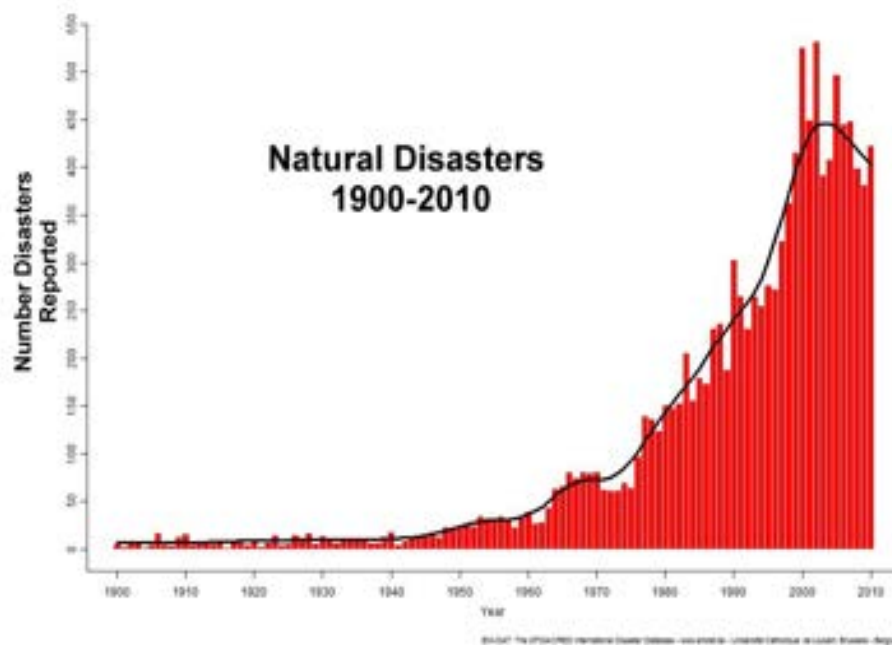
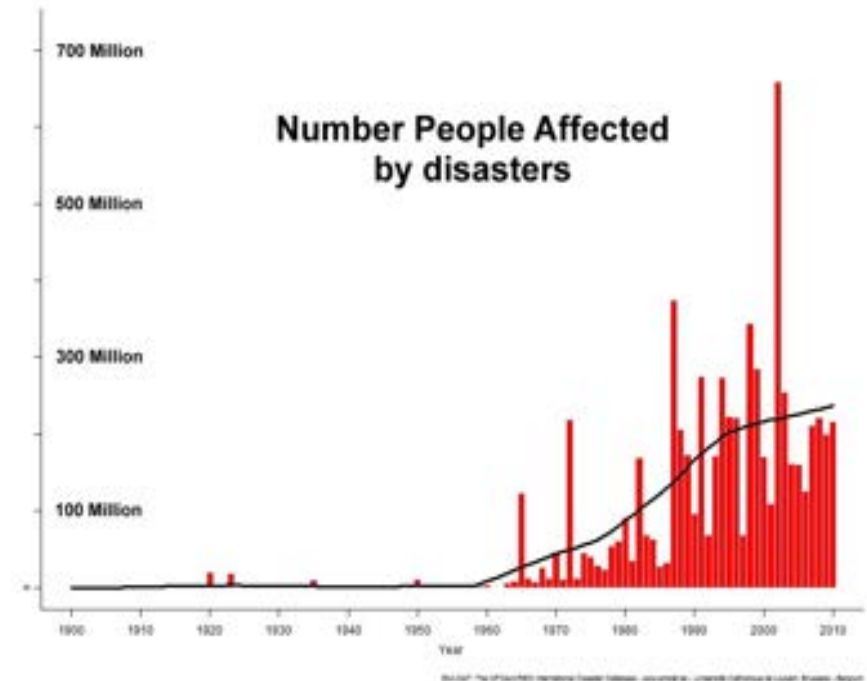
*“The ability of a system
to mitigate and recover
from
shock or change.”*

The art of bouncing back

1. Situational Awareness

Understanding what is going on

The number of natural disasters seems to be increasing, as are the number of people affected. Plus 2026/2027 [El Nino effect](#) predicted to bring more extreme weather to the UK



(Note that the number of people actually *killed* by natural disasters has declined significantly over the period).

Where can a flood come from?

What causes flooding

- River flooding:
- Coastal and tidal flooding:
- Surface water flooding:
- Reservoir or dam failure:

How it might happen locally

Nearby Flood Zone 2 and 3 **Likely**.

North Sea Storm Surge. **Possibility**

Rapid Heavy Rain locally. **Likely**

Rutland Water failure. **Unlikely**

- Groundwater flooding:

Catches you by surprise. **Unlikely**.

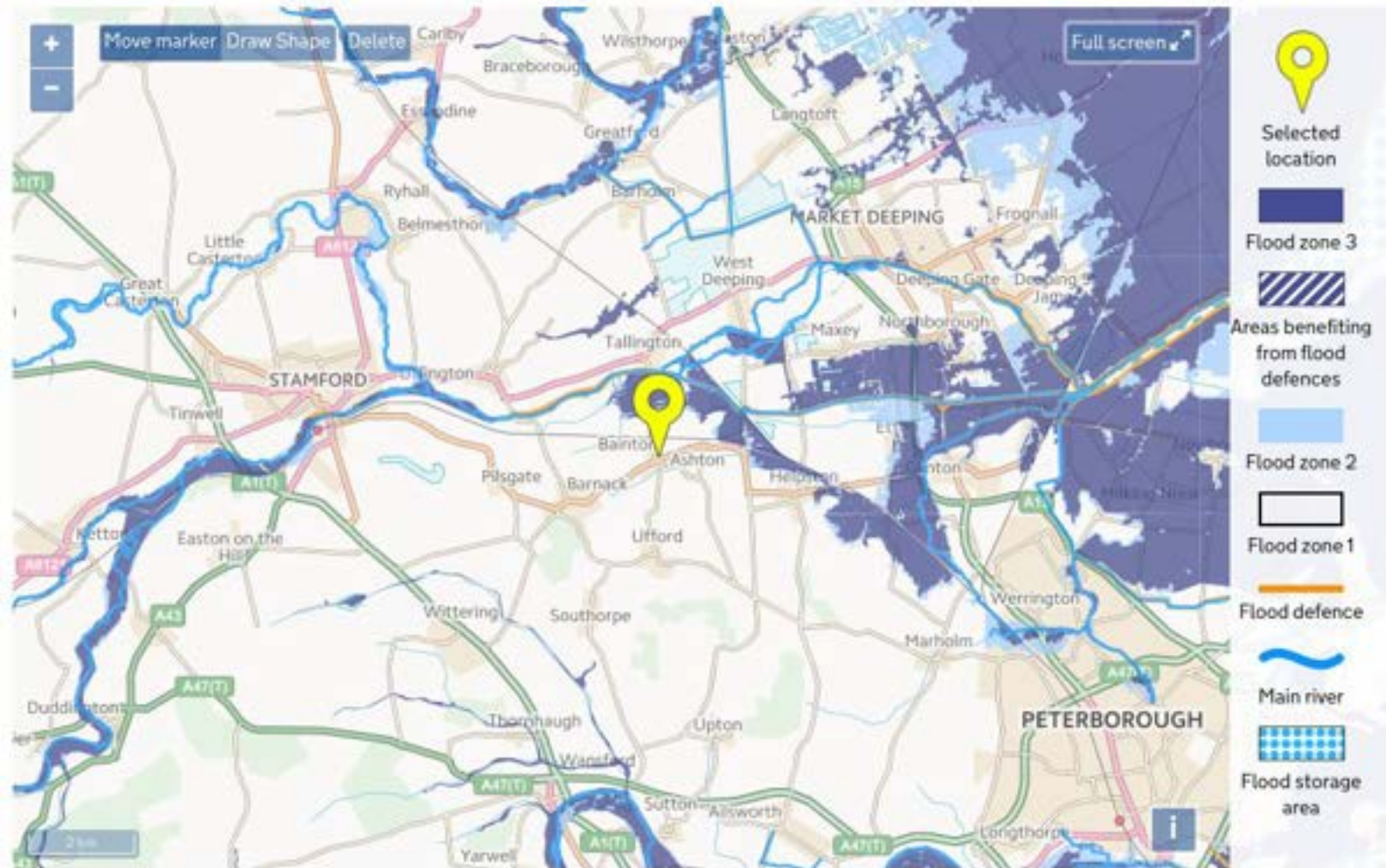
- Burst water mains:

Freezing or Groundwork's **Unlikely**.

- Sewer flooding:

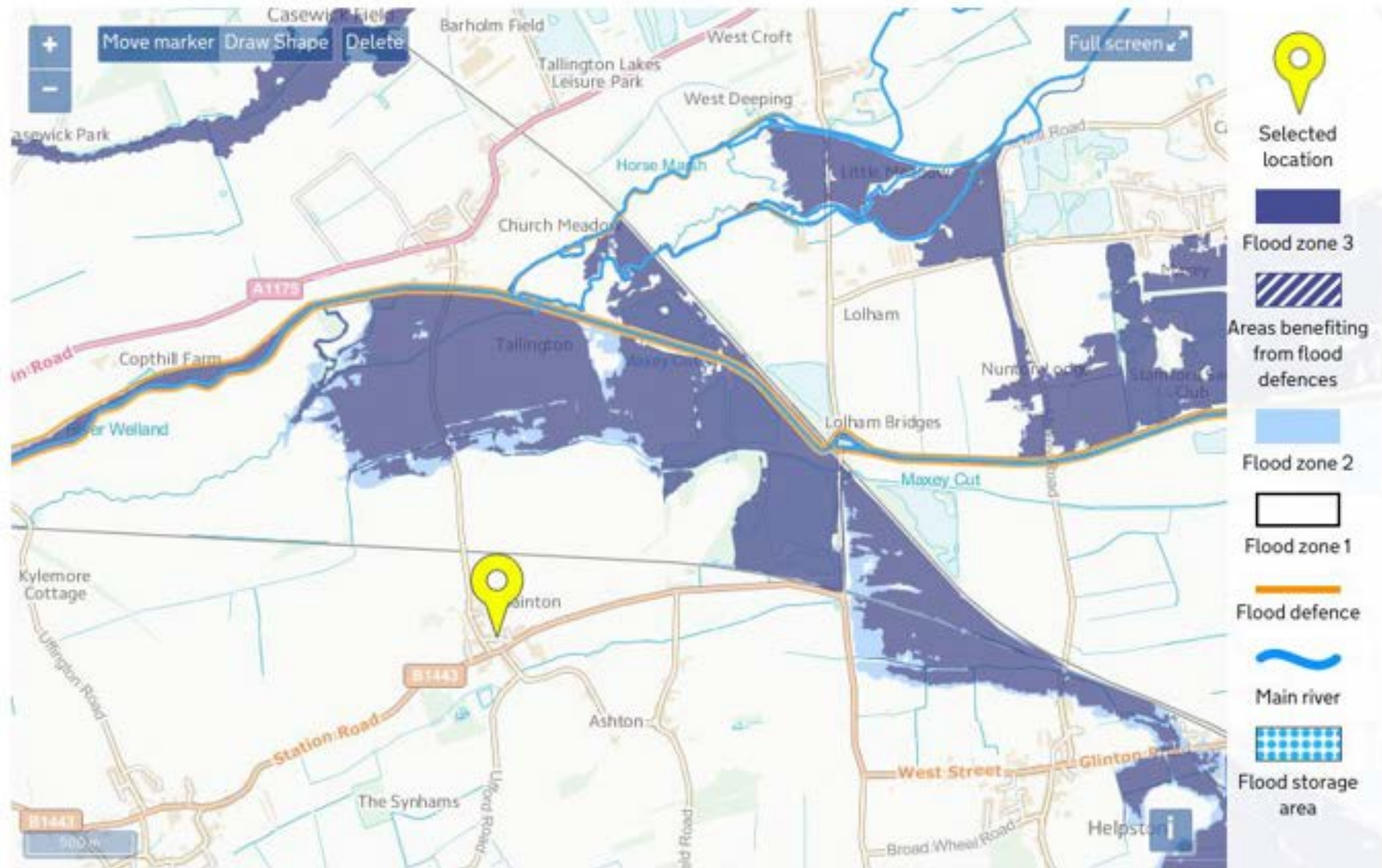
Sewer Drain Inside & Outside? **Possibility**
(Pumping station near the allotments
and sewerage treatment station off
Tallington Road operating on the edge of
their capacity)

Local Flood Zones



<https://flood-map-for-planning.service.gov.uk/confirm-location?eastings=509451&northing=306085&placeOrPostcode=pe9%203ag>

Local Flood Zones



Flood Zone 2 – Medium Probability 0.1% - 1% chance

Definition

This zone comprises land assessed as having between a 1 in 100 and 1 in 1,000 annual probability of **river flooding (1% – 0.1%)**, or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.5% – 0.1%) in any year.

Policy aims

In this zone, developers and local authorities should seek opportunities to reduce the overall level of flood risk in the area through the layout and form of the development, and the appropriate application of sustainable drainage systems

Flood Zone 3a – High Probability >1% chance

Definition

This zone comprises land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year.

Policy aims

In this zone, developers and local authorities should seek opportunities to:

reduce the overall level of flood risk in the area through the layout and form of the development and the appropriate application of sustainable drainage systems; relocate existing development to land in zones with a lower probability of flooding; and create space for flooding to occur by restoring functional floodplain and flood flow pathways and by identifying, allocating and safeguarding open space for flood storage.

Flooding from Rutland Water Dam Failure:

Unlikely but significant impact if happened.

3.3.4 Residual Risk from Reservoirs

The County of Rutland contains two significant reservoirs namely Rutland Water and Eye Brook Reservoir. On 1 October 2004 the Environment Agency took over responsibilities for enforcement of the Reservoirs Act 1975. This Act applies to raised reservoirs holding over 25 000 cubic metres of water above natural ground level. Generally risk of dam failure is considered extremely low but failure could have major consequences, including loss of life. Under the Water Act 2003 there is a requirement for reservoir undertakers to prepare reservoir flood plans which will need to include a map identifying the extent and severity of flooding resulting from an uncontrolled release of water. This is likely to become a legal requirement in 2009. Such maps are currently not available within the public domain although this situation is likely to change.

Rutland Water was constructed in 1975 and is a water supply reservoir managed by Anglian Water under the Reservoirs Act. Since its construction its large storage capacity has been shown to significantly attenuate flood flows. This has had the beneficial effect of reducing flood risk downstream of the dam along the lower Gwash. There remains a very small probability of downstream flooding due to overtopping of the dam or a dam breach. Should such a breach occur the consequence could be very high hence the risk (as defined by probability x consequence) could be significant.

Anglian Water has produced inundation maps for Rutland Water in the event of a dam breach but in line with security guidance these are not currently available to the public. It does however approximately show a 0.5-1.0 km wide swath of flood water centred on the River Gwash which propagates downstream and may also back up the North Brook.

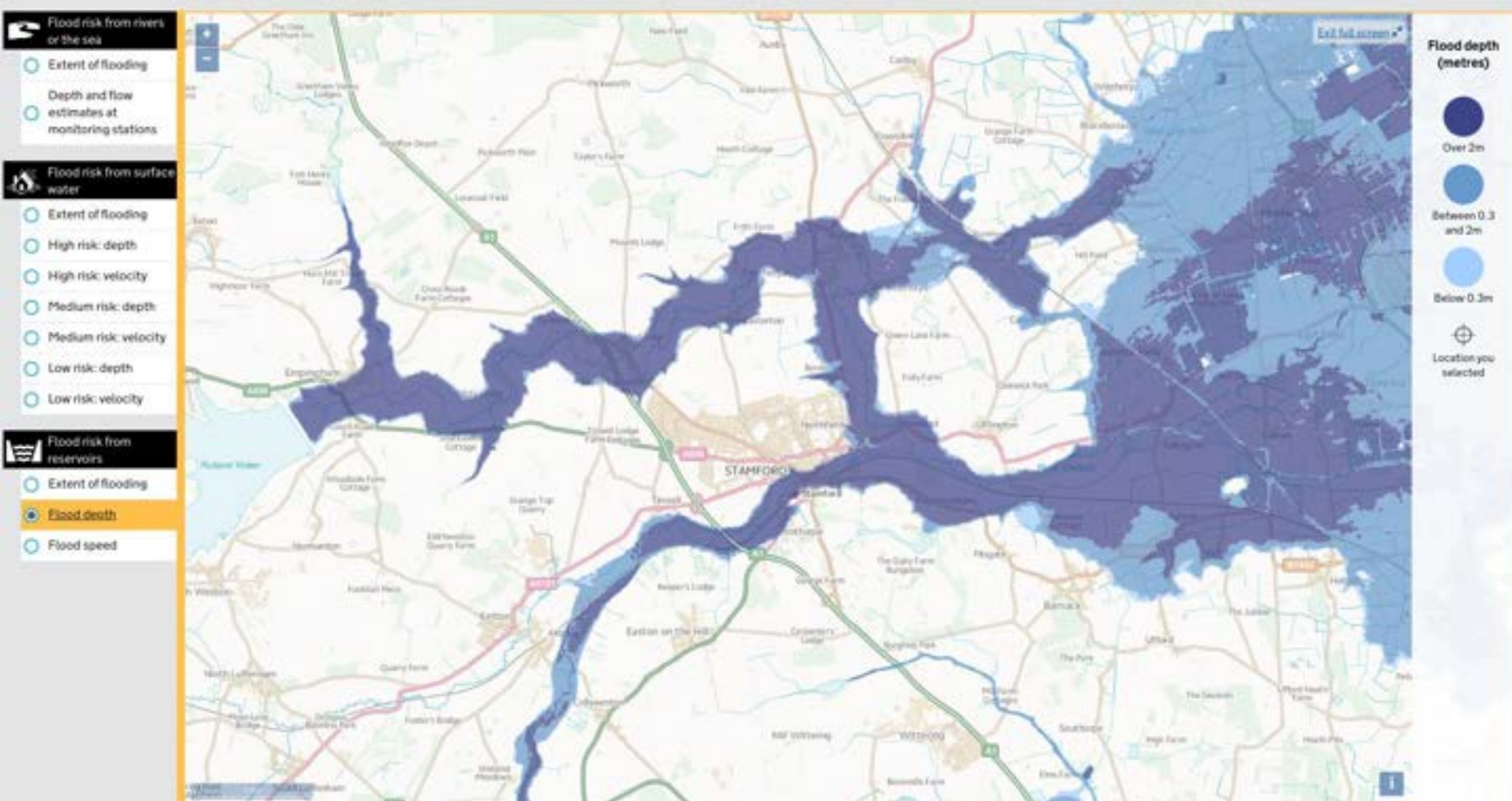
In the unlikely event that Rutland water failed

Then this would be the **flood risk zone**....

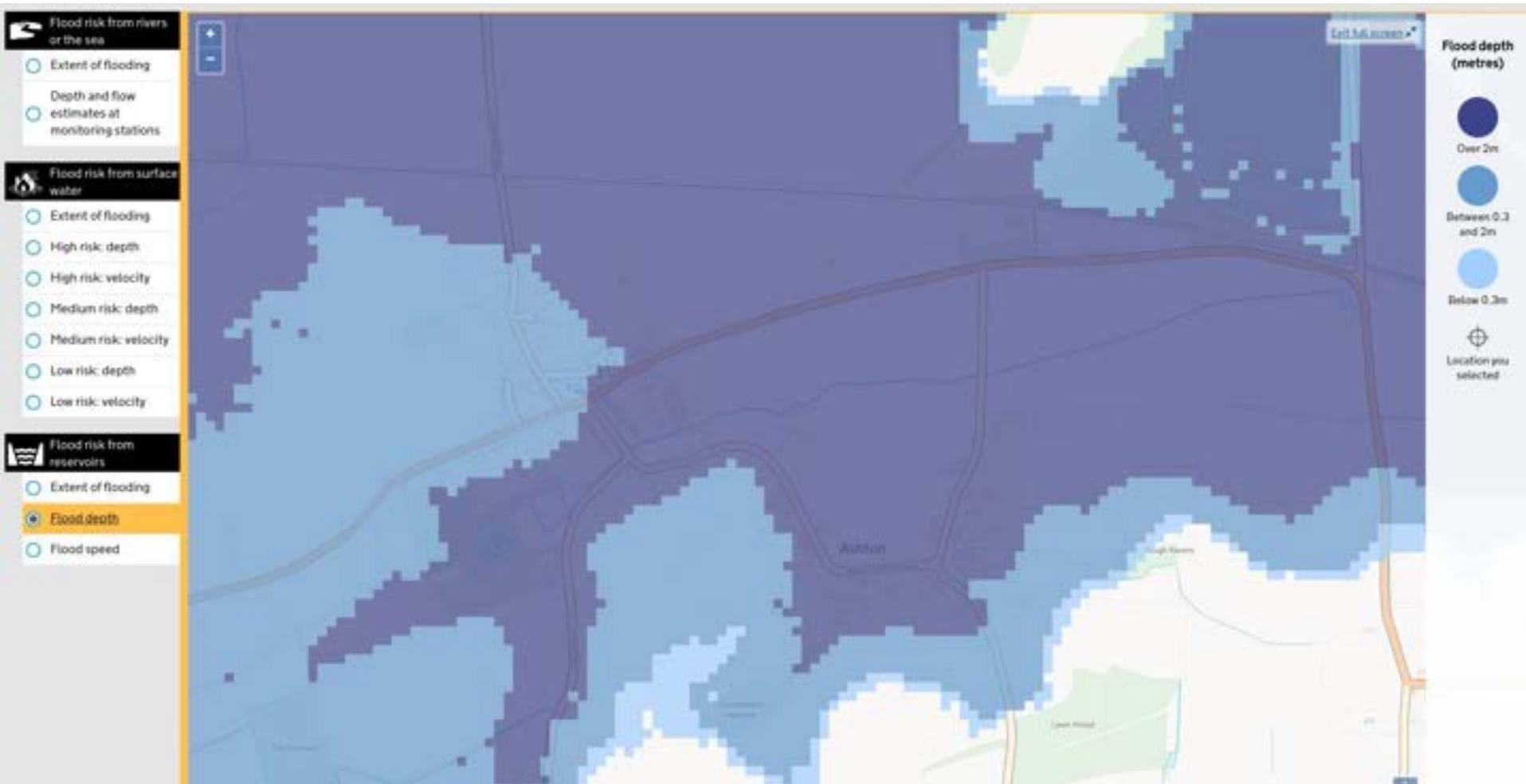
NB This zone does include Bainton and Ashton but the quality of the engineering and the geography of the catchment make this risk unlikely



In the unlikely event that Rutland Water failed
Then this would be the **flood depth**.... which is significant



In the unlikely event that Rutland water failed
Then this would be the **flood depth**....

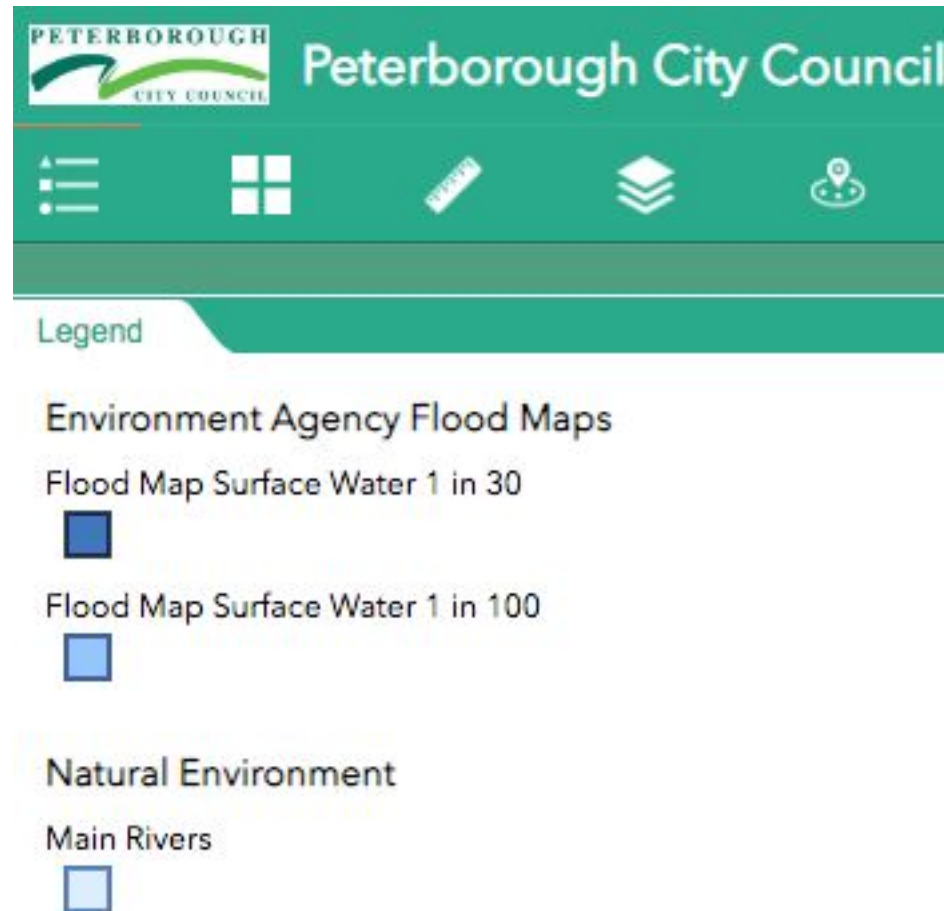


In the unlikely event that Rutland water failed
Then this would be the **flood speed**....



Surface Water flooding:

i.e. just from very heavy rainfall



Surface Water flooding: i.e. just from very heavy rainfall
This is a significant risk

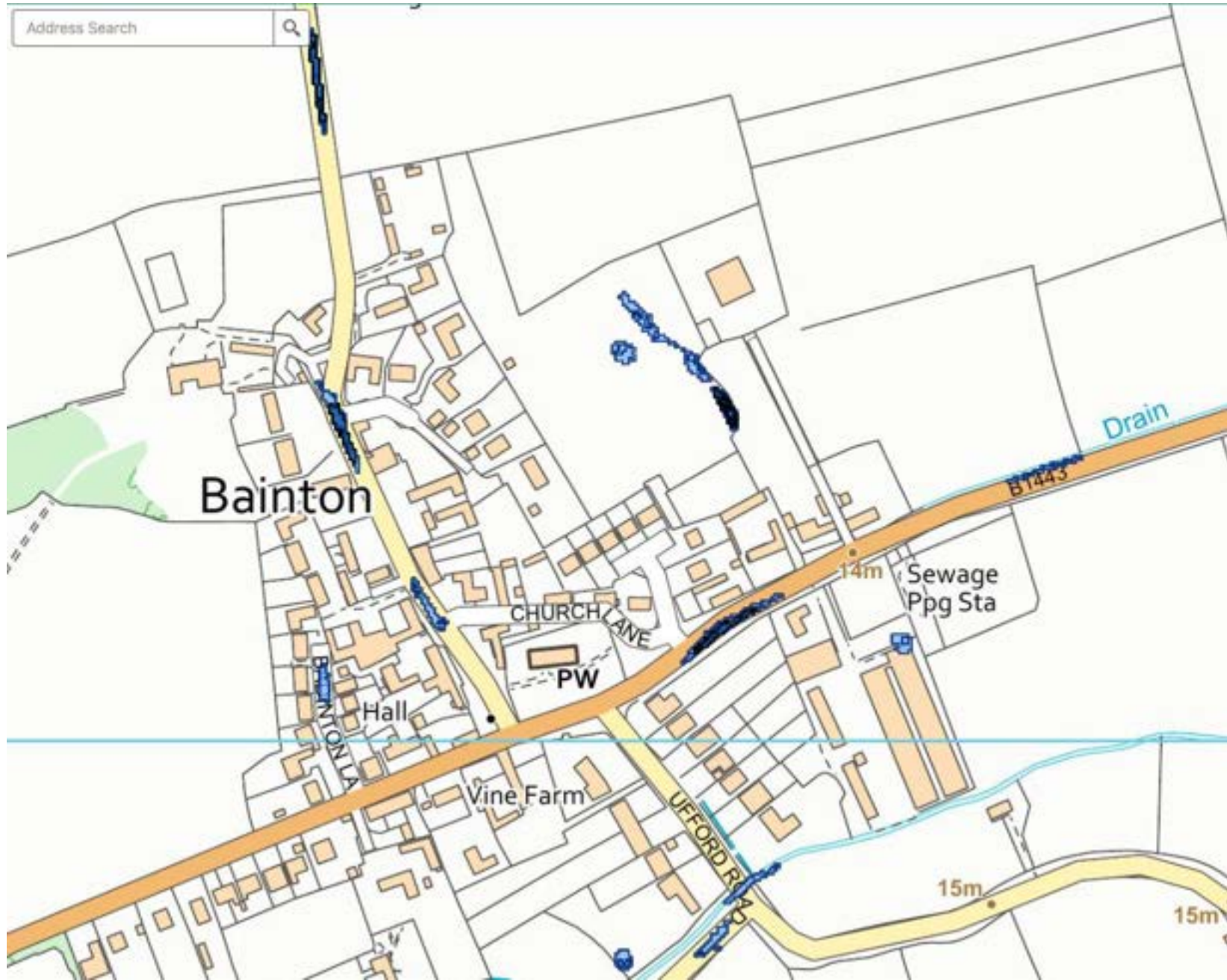


<https://peterborough.maps.arcgis.com/apps/webappviewer/index.html?id=1e47538c3218418e86741bf13a33a04b>

Surface Water flooding: i.e. just from very heavy rainfall

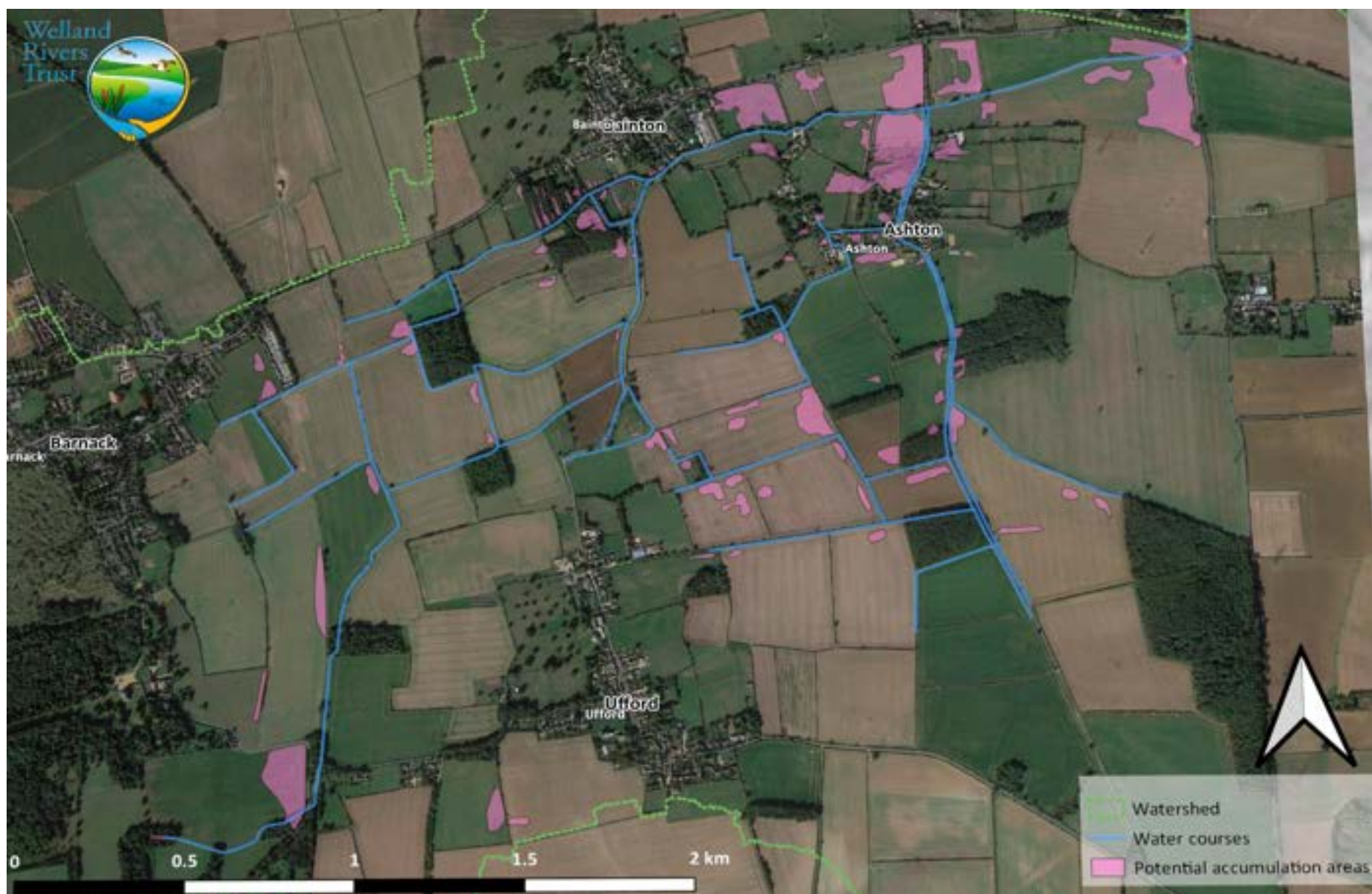
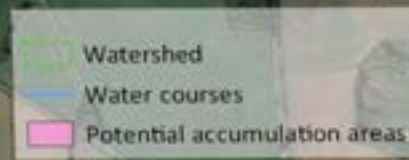


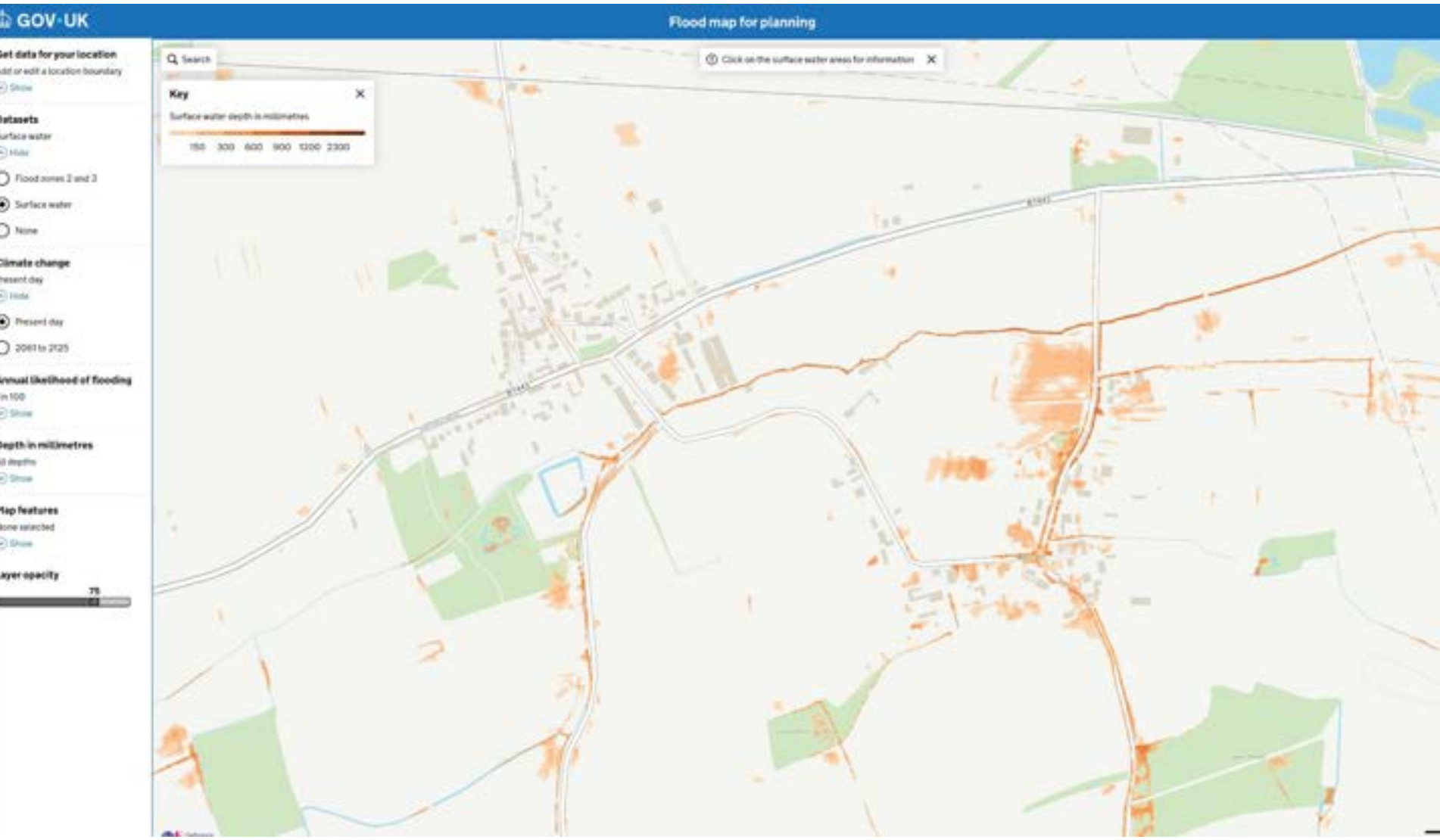
Surface Water flooding: i.e. just from very heavy rainfall



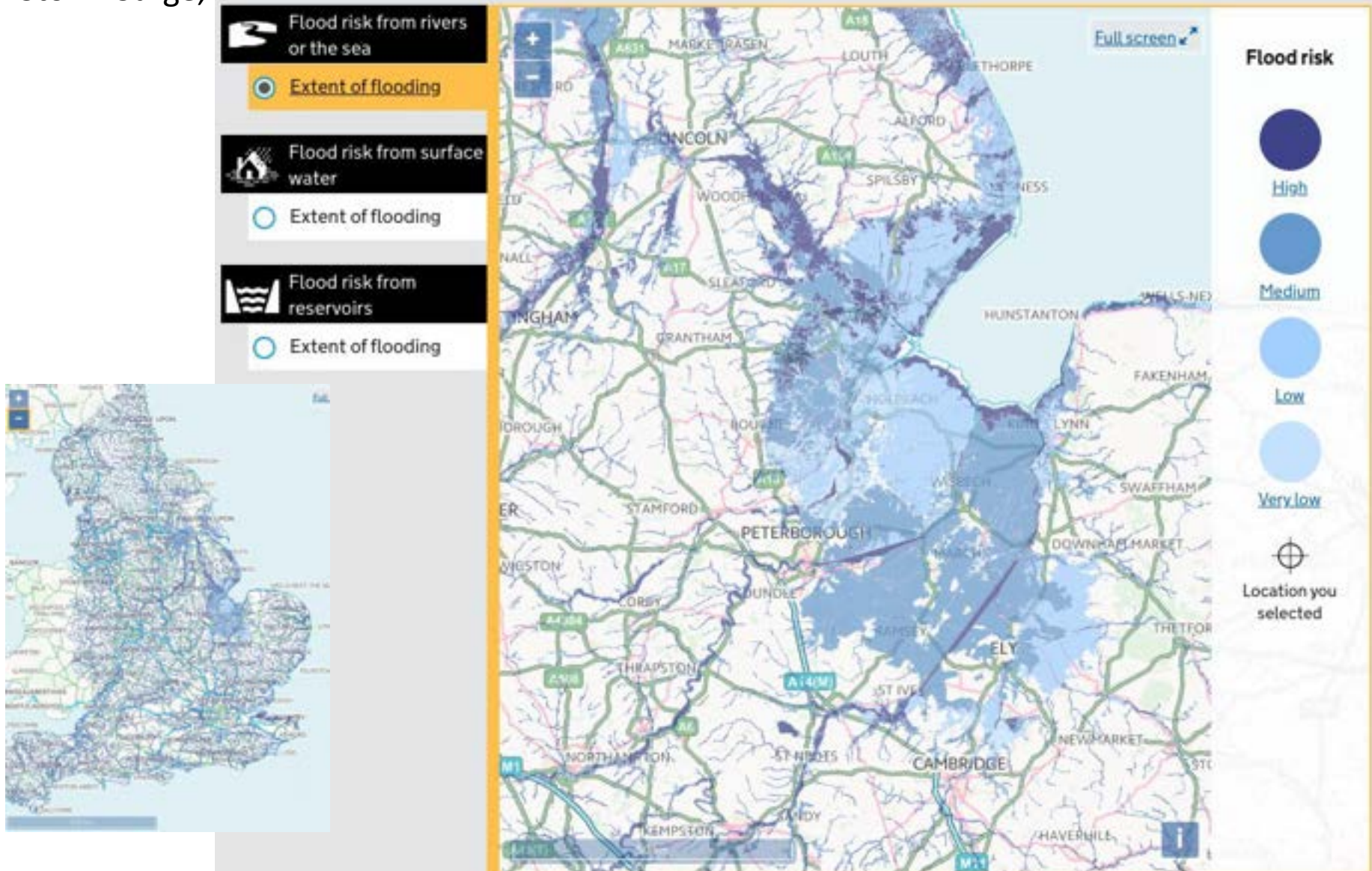
Surface Water flooding: i.e. just from very heavy rainfall







Although a **Sea Inundation from a North Sea Storm Surge** would not quite reach Bainton, the migration of people displaced from the East, because of a North Sea Storm Surge,



<https://flood-warning-information.service.gov.uk/long-term-flood-risk/map>

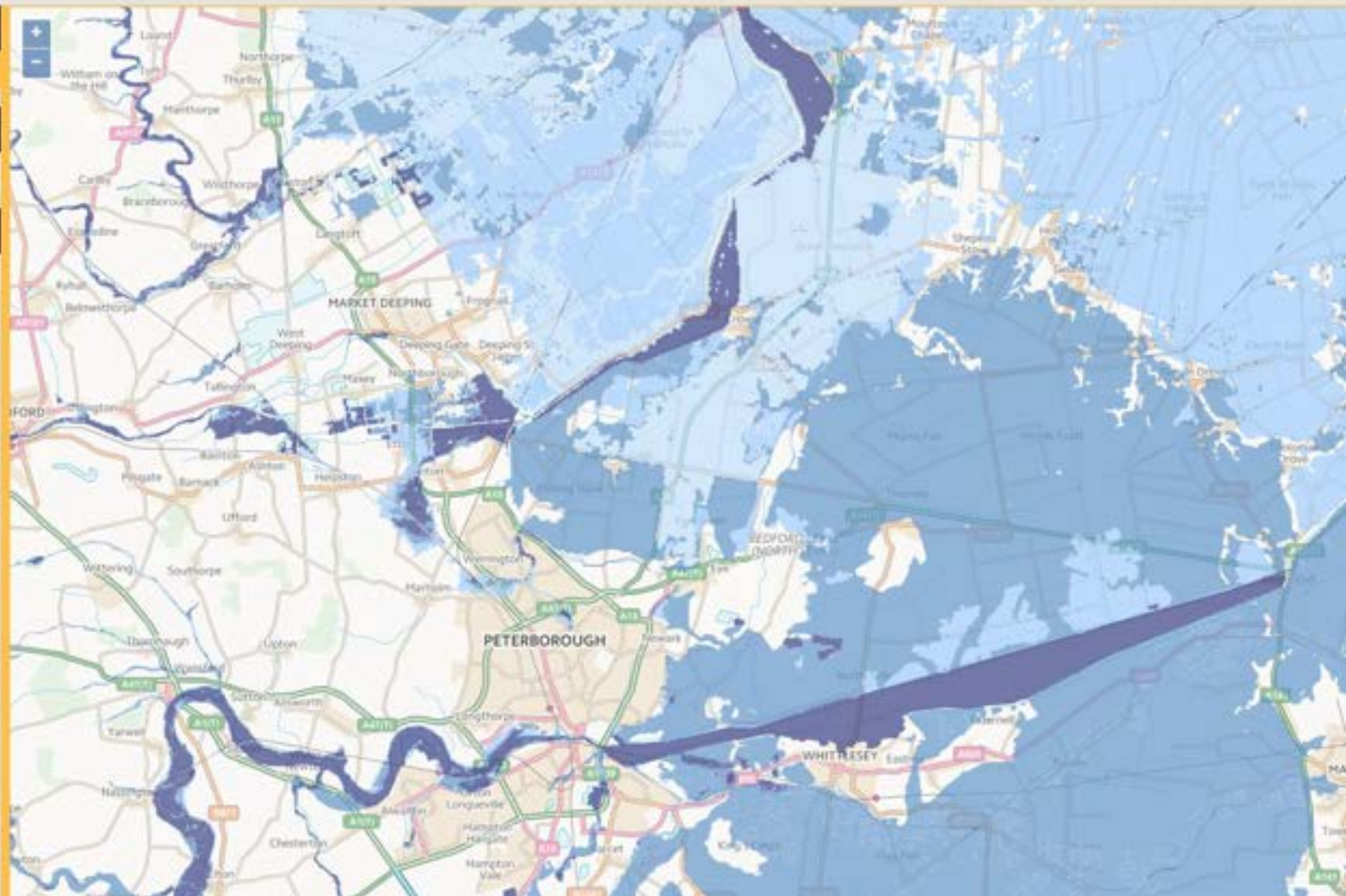
Flood Risk from Rivers and Sea

Basic view ☐ Detailed view

Location

Enter a place or postcode in England

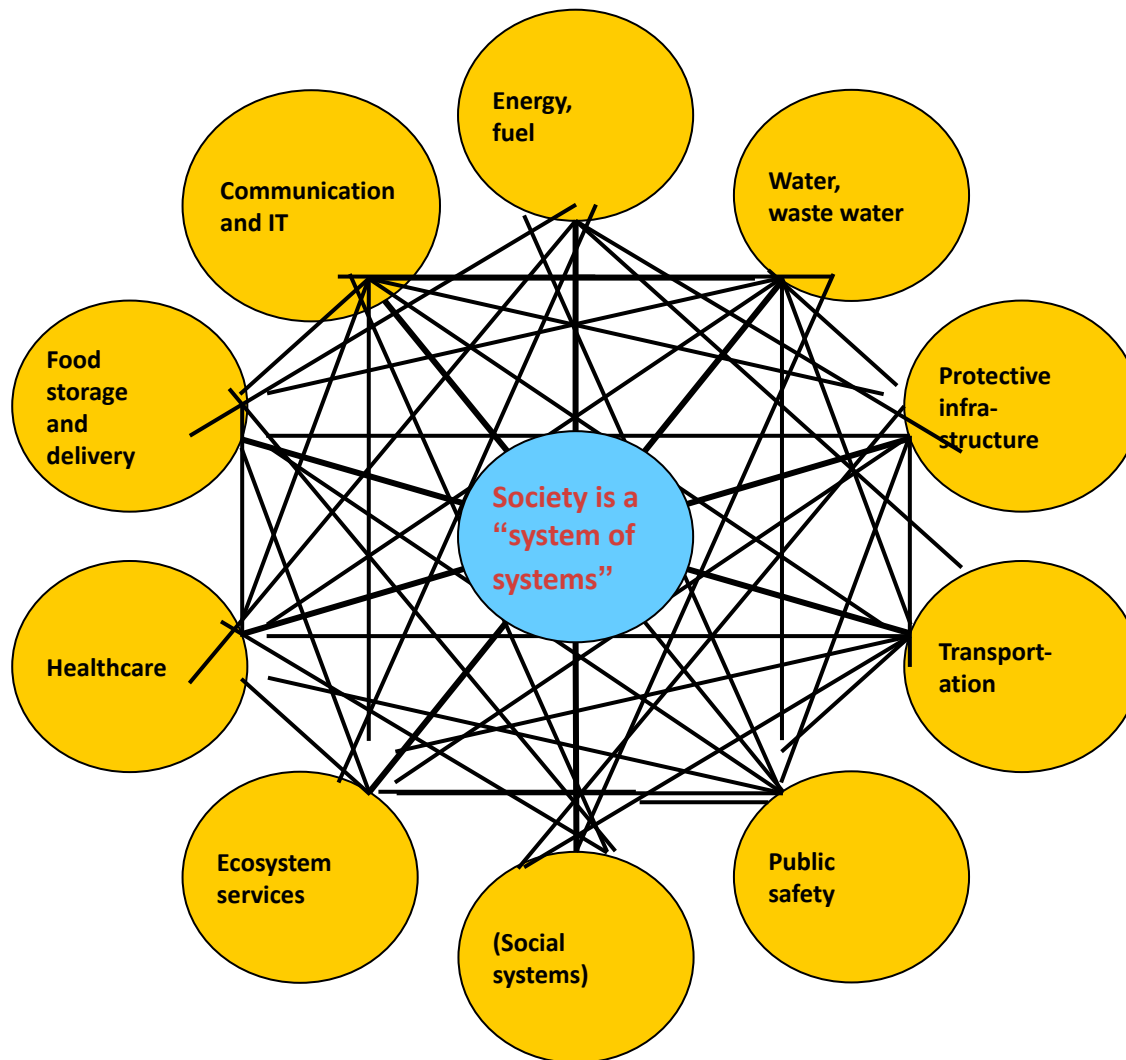
-  Flood risk from rivers or the sea
 -  Extent of flooding
-  Flood risk from surface water
 -  Extent of flooding
-  Flood risk from reservoirs
 -  Extent of flooding



2. Analytics

Thinking about the impact

We don't live in isolation, the systems upon which
we depend are very are interconnected
So floods affect a lot of things!



Where to get live Flood Warnings:

<https://flood-warning-information.service.gov.uk/map>

flood-warning-information.service.gov.uk/warnings

GOV.UK Flood information service

Flood warnings for England

6:24pm Thursday 14 November 2019

Show warnings near a location



 **0**
Severe flood warnings
Severe flooding - danger to life

 **113**
Flood warnings
Flooding is expected - immediate action required

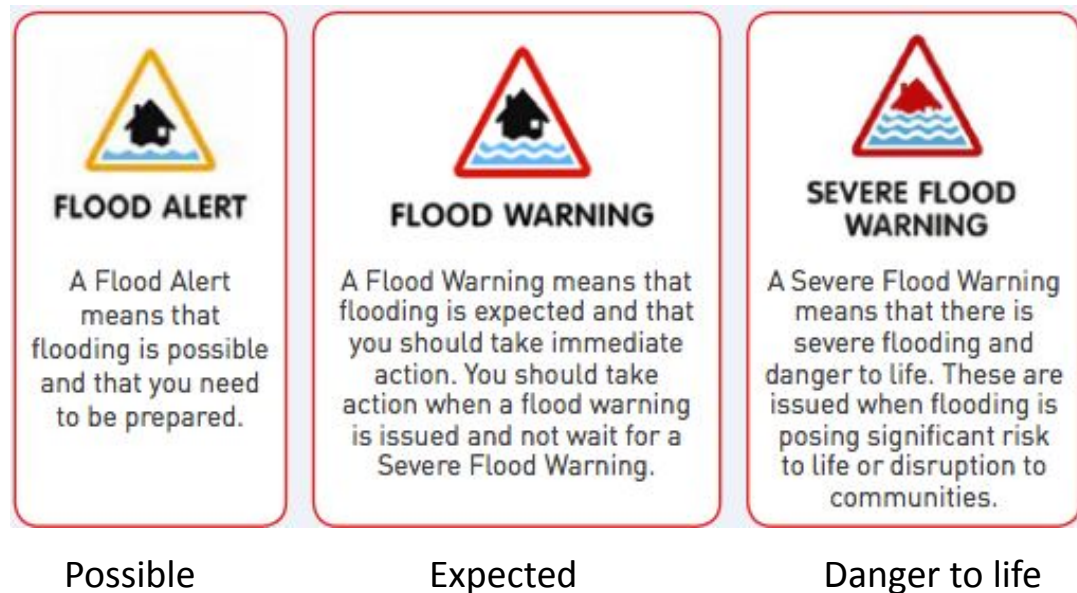
 **168**
Flood alerts
Flooding is possible - be prepared

+

+



What is the Difference between Alerts and Warnings



0345 988 1188 Information Service

This service sends you a direct message when flooding is expected and may affect your property. You can receive warnings by telephone, mobile, email, SMS text message or fax, whichever you prefer. You can also view flood warnings through the Environment Agency website:

<http://apps.environment-agency.gov.uk/flood/31618.aspx>

Or via Twitter: follow @EnvAgency

Or on Facebook: www.facebook.com/FloodAlerts (England and Wales)

<http://www.metoffice.gov.uk/public/weather/warnings/#?tab=map&map=Warnings&zom=5&lon=-3.50&lat=55.50&fcTime=1404082800>

ONLINE APP

<http://apps.environment-agency.gov.uk/ri>

Location 

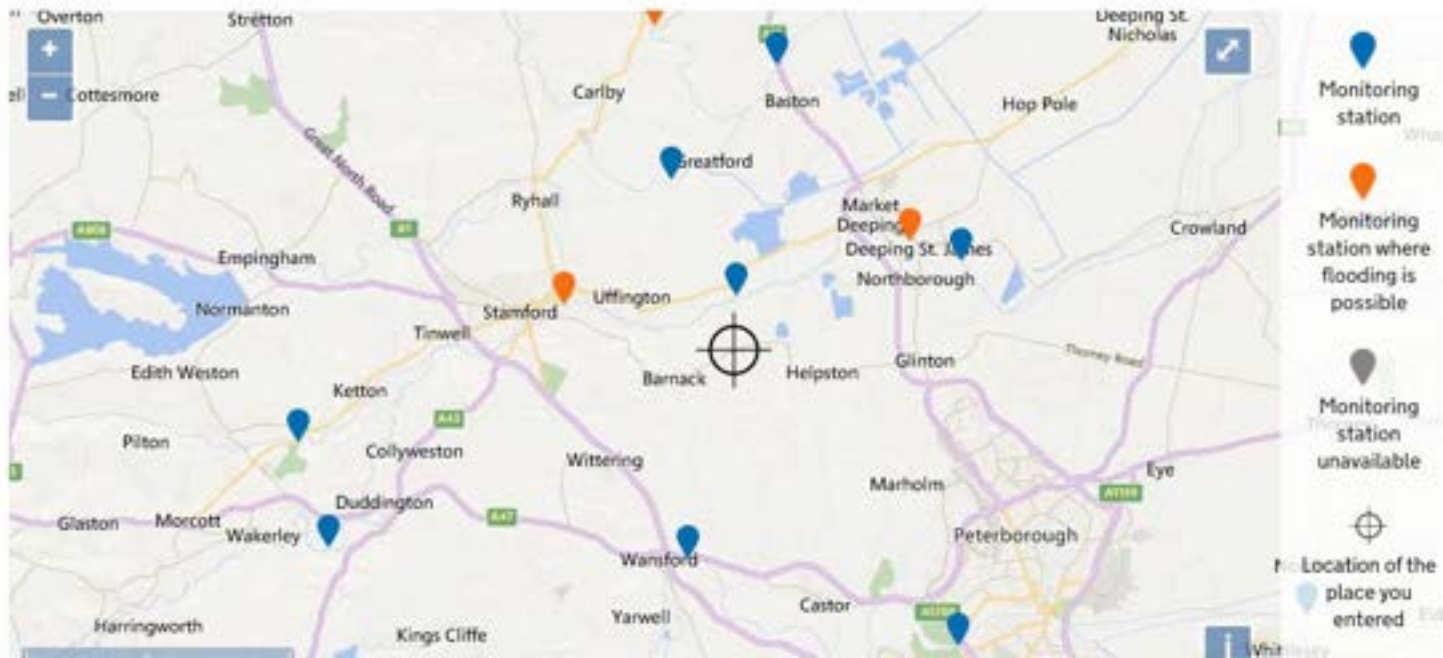
5-day river level information for this area

You can get more information about local river and sea levels.
Select a monitoring station from this list, or use the map.

- ▶ River Glen
- ▶ River Nene
- ▶ River Welland
- ▶ West Glen River

Action:

During an event observe changing upstream water levels since this will drive the downstream peaks and give a couple of hours notice



Action: Understand changing upstream water levels, this give some forewarning

New river level site here:

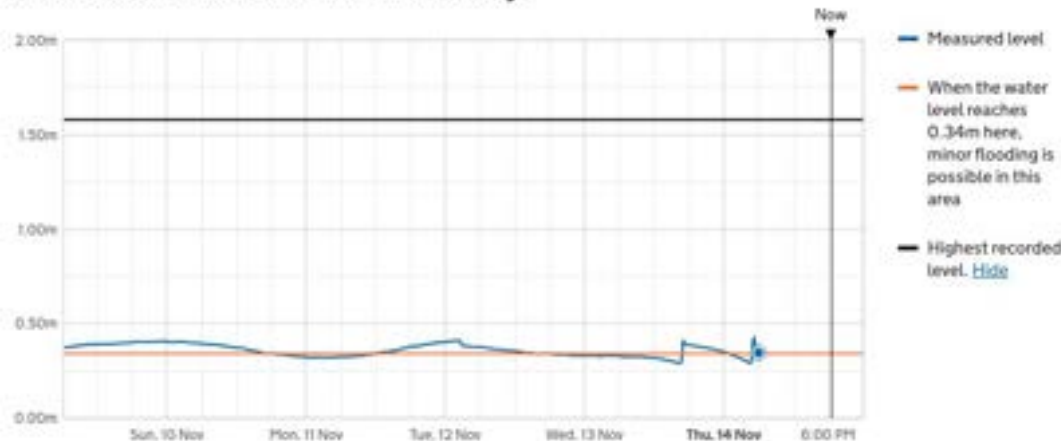
Note: The data can be between 15 minutes and 1 hour out of date

<https://flood-warning-information.service.gov.uk/station/6030> Hudds Mill Stamford

<https://flood-warning-information.service.gov.uk/station/6020> Tallington



River levels at this location in the last 5 days

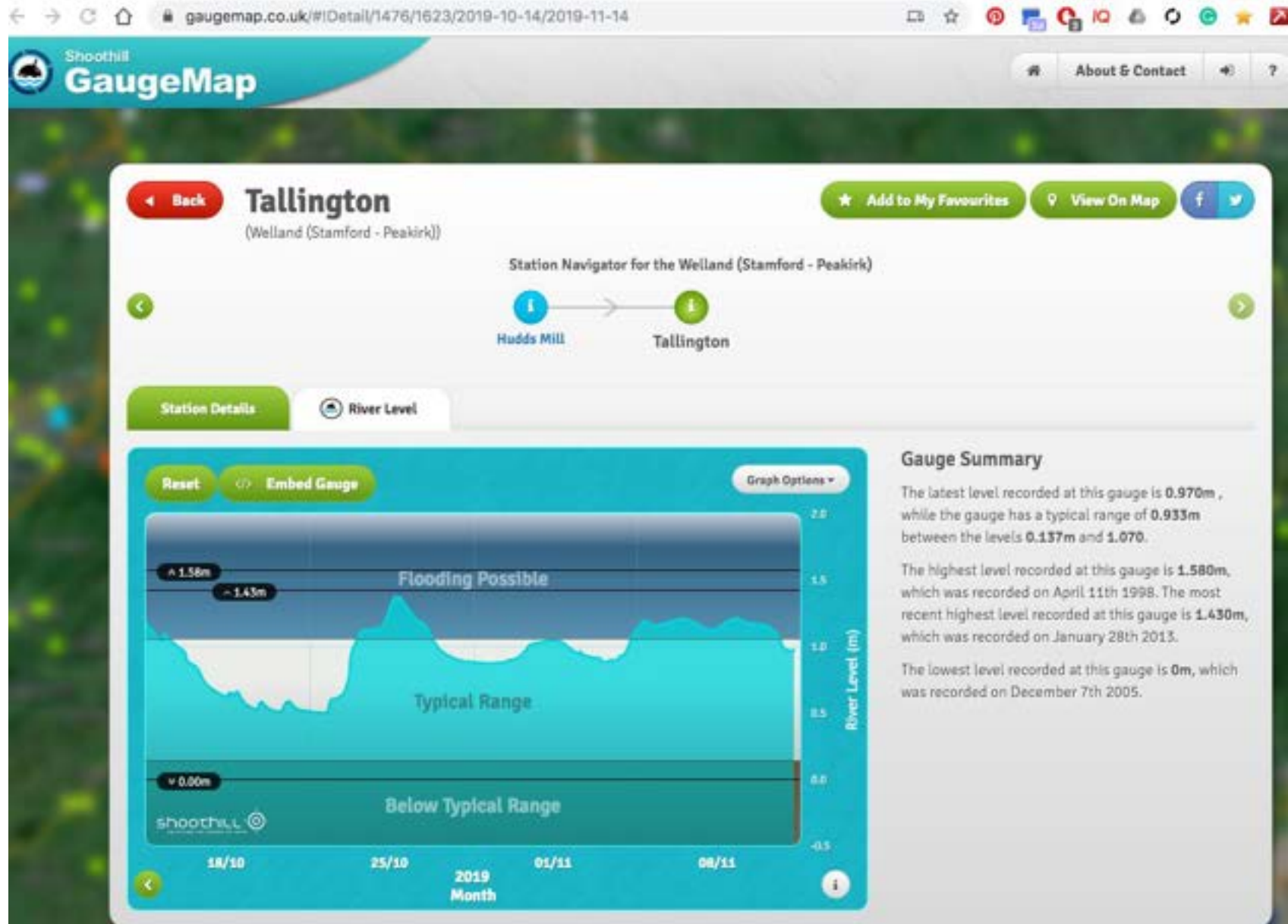


[Follow on Twitter](https://twitter.com/riverlevel_1596)

https://twitter.com/riverlevel_1596?ref_src=twsrc%5Etfw%7Ctwcamp%5Eembeddettimeline%7Ctwterm%5Eprofile%3Ariverlevel_1596%7Ctwgr%5E363937393b70726f64756374696f6e&ref_url=https%3A%2F%2Fwww.gaugemap.co.uk%2F%23!Detail%2F2005

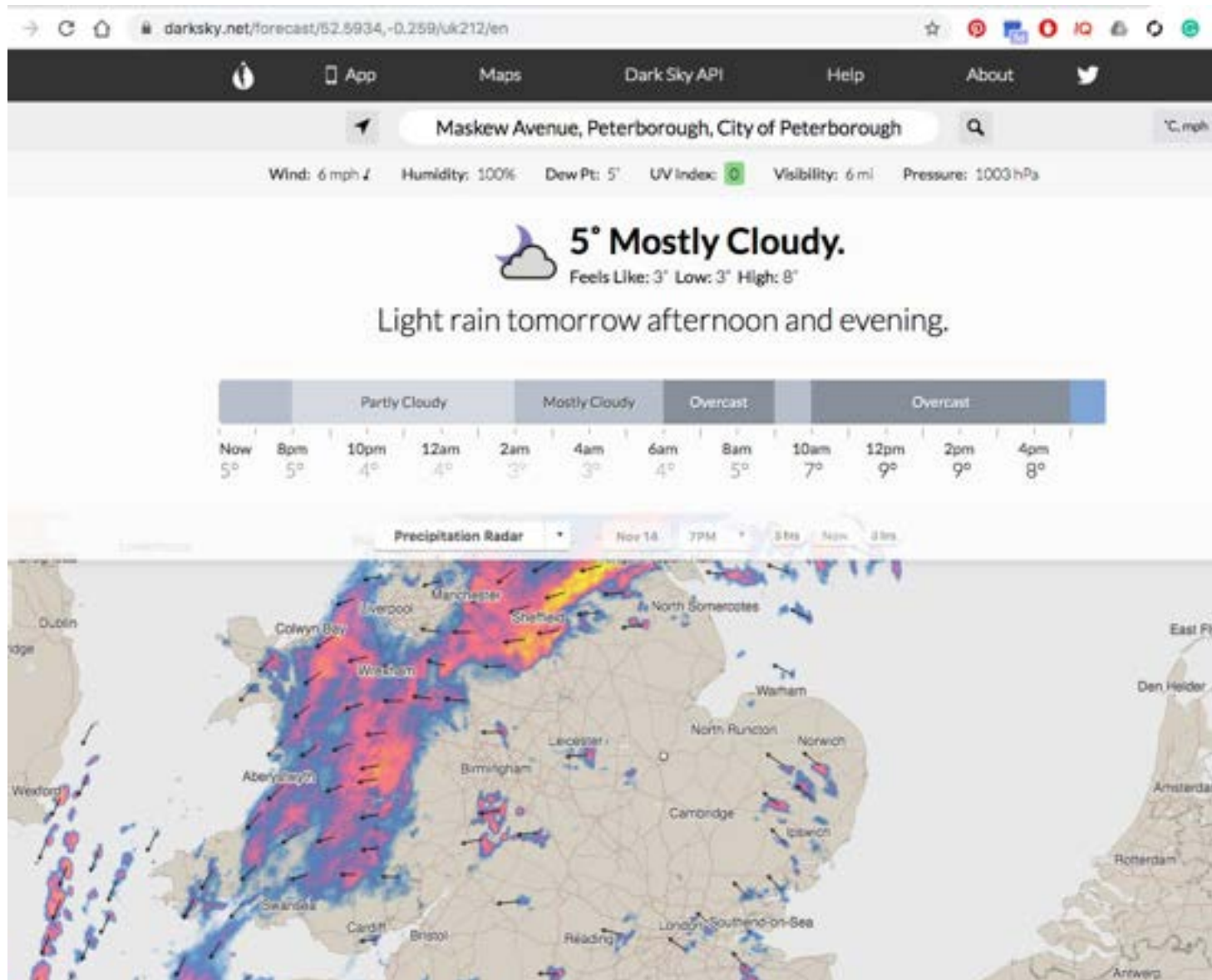
An alternative source of information: this one is Tallington

<https://www.gaugemap.co.uk/#!Detail/1476/1623/2019-10-14/2019-11-14>



Weather Radar... early warning of approaching storm

+ gives emails of rain in the upstream catchment <http://forecast.io/#/f/53.7907,-1.5380>



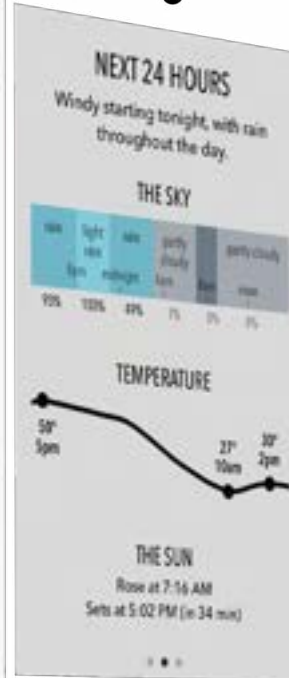
[The Darksky app is worth having http://darkskyapp.com/](http://darkskyapp.com/)

Set up an alert to tell you when rain is happening at critical times

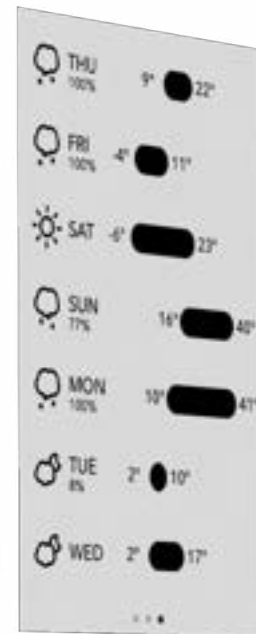
Other apps
are of
course
available



Know when it will rain,
down to the minute



Detailed outlook
for the next 24



Day-by-day summary
of the next week

Important Dynamics of floods to think about in the preparation and during an event

Facts about the flood risk

There are four facts about the flood water that are of particular importance:



Flood depths expected at your house. Low depths, for example 100mm, are unlikely to put people at risk but water damage to buildings and contents may be significant without any flood protection. High water depths, for example 1m, may severely threaten the safety of people and may cause extensive damage to buildings. It may be dangerous to keep deep floods out of a building because of the large weight of water pressing against the walls.



Flood duration is the time that flood water is expected to stay at your house. Temporary flood defences may successfully keep water out if flooding is expected to last for just a couple of hours, whereas, long flood durations may give time for water to penetrate into the building. It may be safe to take refuge and stay in a building for short duration floods but this will depend on the other factors.



Flood onset is the time for flood water to reach your house from its source. Short onset flooding (flash floods) are particularly dangerous as there is little time available to get people to safety or to protect buildings.



Flood annual probability is a measure of the chance of flooding to your house over the course of 1 year. Different approaches to flood protection may be needed depending upon how likely flooding is expected.

{ **Dark blue** indicates strong applicability of products in dealing with flooding, with **light blue** indicating reducing applicability. }

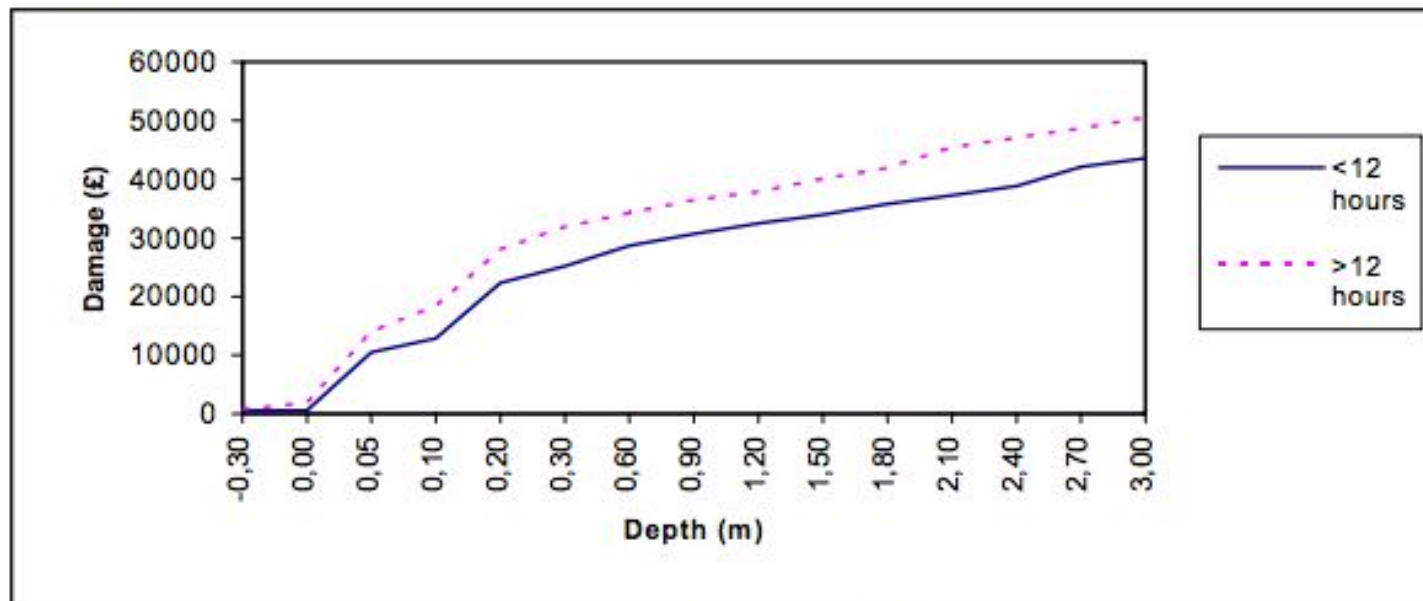
What does it cost to fix?

(the aim is to outperform this by good preparation, response and recovery)

According to a report prepared for Defra, repairing a house after a flood was estimated to cost between £10,000 and £50,000 depending on the flood depth.

(NB This will now have increased further, owing to inflation since data in 2003.)

Figure 3.6 Example from the UK for Depth-Damage-Duration Data for Residential Properties (Sector Mean)



Source: Penning-Rowsell et al. 2003

3. Smart Response

What are you going to do?

What can you do to:

- Lessen the impact of the event
- Reduce risk of injury/loss of life
- Protect critical resources
- Shorten time to recovery

In the case of Bainton and Ashton we are generally on the edge of significant things so the actions would be influenced by specific location risk and the value of the impact if things went beyond the flood zone predictions.

Sometimes
solutions are
simple!

Just work around
the water



Smart Response : Protect things before, during and after an event



Action: Sometimes flood products might be worth it:



Flood Doors



Flood Barriers



Flood Defence
Products



<http://thefloodcompany.co.uk/>
<http://stopmeflooding.co.uk/>



<http://www.flood-products.co.uk/hydrosack-flood-protection-p-43288.html?gclid=CMmwnb7r0MkCFWsJwwodGaUDqg>



<https://www.google.co.uk/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=flood+protection+products+uk&tbm=shop>

A serious Flood Response Kit includes:

What		Status
1	Communication (Phones & Laptops)	-
2	Power: Batteries & Generators & fuel	
3	Food & Water: 3 days supply	
4	Comfort: bedding & warm clothes	
5	Medical: Move First aid & add current medicines	
6	Tools: (move selection from workshop)	
7	Polythene sheeting	
8.	Small Pump	
9	Small Generator	
10	Portable toilet	
11	Expanding foam to fill small holes (airbricks)	
12	Sanbags/Hydrobags	
13	Hole blockers (Toilet & Drains)	
14		

A 24 hour plan when the risk is high

1. Assess the flood risk by looking at the dynamics of the storm:
 1. What is the **duration** of flood (is it fast or slow moving storm)
 2. What are the likely **depths** based on similar storms
 3. What is the '**onset**', that is how quickly will the peak arrive?
 4. What is the **probability** of your prediction?
2. Check drains outside for blockages
3. Create 1m high spaces and move key things ahead of time
4. Check Live-in resource kit: Power, water, food, communications, bedding, lighting, first aid, 3 day toilet kit, medication...etc

HOME EMERGENCY KIT

You should try to put an emergency kit together. If you do, ensure it is kept somewhere safe. It may be useful if you have to stay in your house, or leave in a hurry. If not, at least make a note of where important items are in the space allocated below.

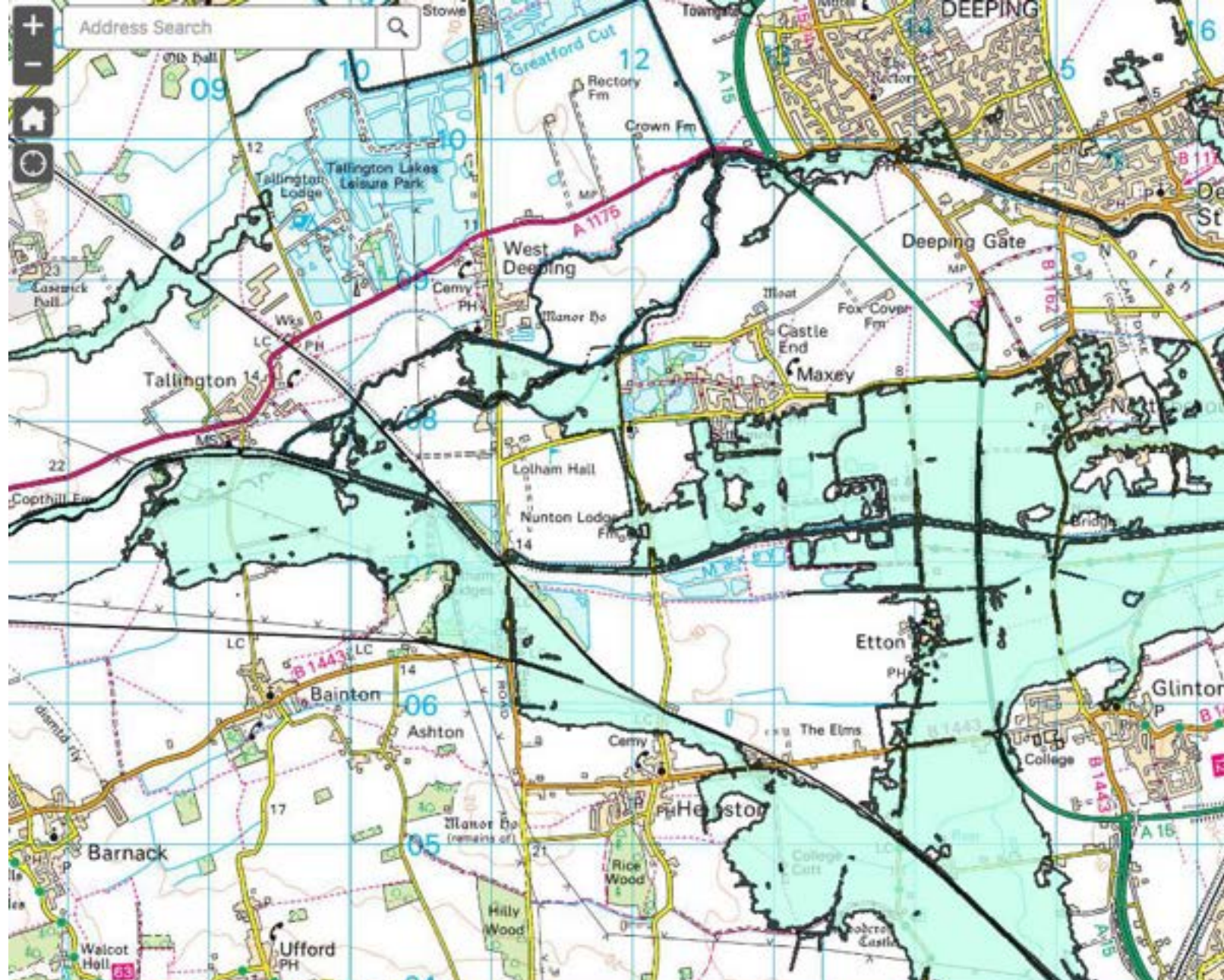
What goes into your kit is a personal decision!

Medication and prescriptions	
Tinned or dried food, water and children's essentials for three days (remember to check and change water and food regularly)	
Pet food	
Basic cutlery and tin opener	
Wind up or battery powered torch and radio (with spare batteries)	
Blankets and first aid kit	
Copies of important documents (birth certificates, insurance papers etc)	
Extra set of house and car keys	
Change of warm clothing, footwear and sleepwear	
A small amount of cash including change	
Important contact details i.e. family, relatives, friends, doctors, banks etc	
Your emergency plan	

Appendix: Some additional flood zone maps



• • •



▶ ☒ Flood Zone 2

