

73 PARK AVENUE, RUISLIP, HA4 7UL

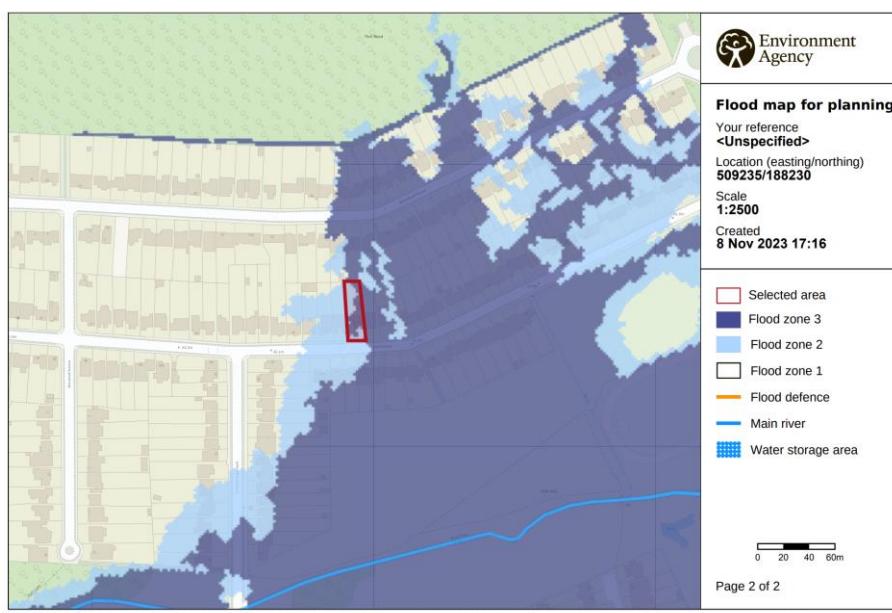
PLANNING APPLICATION FOR SINGLE STOREY AND TWO STOREY REAR EXTENSION

FLOOD RISK ASSESSMENT

(REVISED TO MEET MINOR DEVELOPMENT FLOOD RISK ASSESSMENT REQUIREMENTS)

The proposed extension to the existing house replaces an existing garage and area of non-permeable hardstanding.

According to the Environment Agency mapping tool, the subject site is just within fluvial Flood Zone 2 and 3, resulting in a medium to high probability of surface water flooding. It should be noted that around 50% of the rear garden, the area in which we proposed to extend the house, is within flood zone 2. The site is not within a the functional flood plain (flood zone 3b).

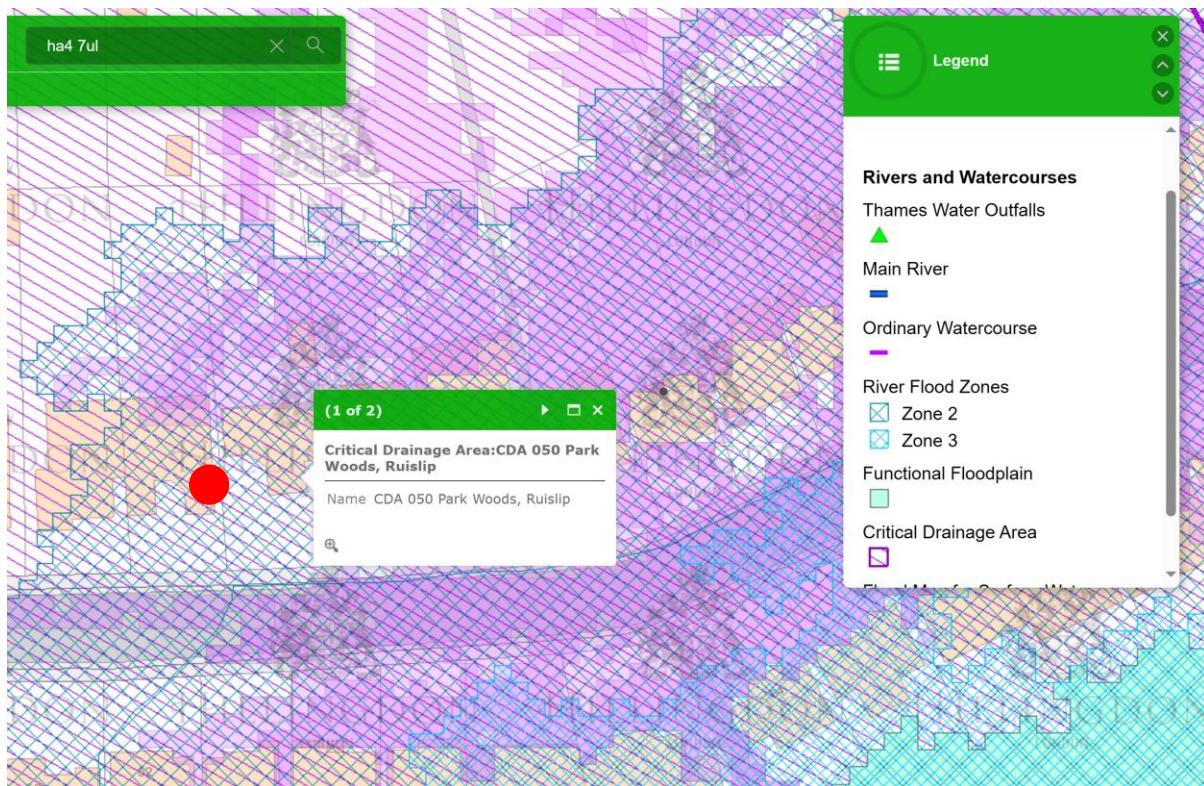


The environment agency map for surface water flooding at 73 Park Avenue, accessed via the government website.

The more accurate data provided by the Hillingdon Arc GIS mapping tool shows the site to be within River Flood Zone 2 and Hillingdon Critical Drainage Area 050.



The blowup of the environment agency maps, shows how the site lies within both flood zone 2 and 3.



The Hillingdon ARC GIS map showing River Flood Zone 2 and Critical Drainage Area 050 (Park Woods, Ruislip) at 73 Park Avenue, accessed via Hillingdon Council website.

As such, there is a requirement to submit a Flood Risk Assessment to review the risk of flooding to the property, as well as considering the impact of the development on the risk of flooding elsewhere.

Description of Critical Drainage Area 050

Despite being listed on the ARC Gis software, no official records of Critical Drainage Area 050 are evident or available within the Hillingdon Surface Water Management Plan or their maps. Regardless, our proposal has been developed with the flood zone 2 risk in mind which should be adequate to negate any worsening of the surface water flooding probability.

Existing Building & Site Levels

The site level at the front of the property is around 41.65m AOD, raising up by around 75mm to 41.725m AOD at the rear of the property. This change in level can be seen on-site with the 75mm difference between threshold and external ground levels, seen in the image below.



Level difference between the internal and external level is around 225mm at the front of the property.



Level difference between the internal and external level is around 150mm at the rear of the property.

Fluvial Flood Levels

The below data summary relating to the river Pinn shows that the fluvial flood level ranges from 0.23m (current) to 1.83m (2016).

River Pinn level at Ruislip

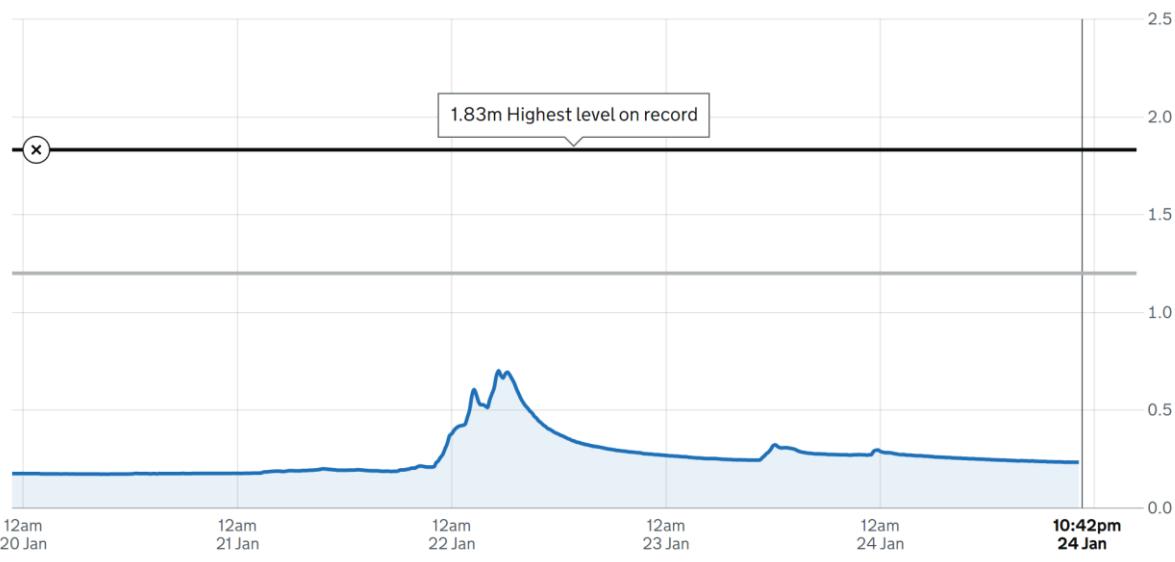
[Map](#) [Upstream](#) [Downstream](#) [Nearby levels](#)

Latest at 10:15pm on 24 January ^①

Height 0.23m ^①	Trend Steady ^①	State Normal ^①
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Normal range 0.14m to 1.20m

Height in metres over the last 5 days

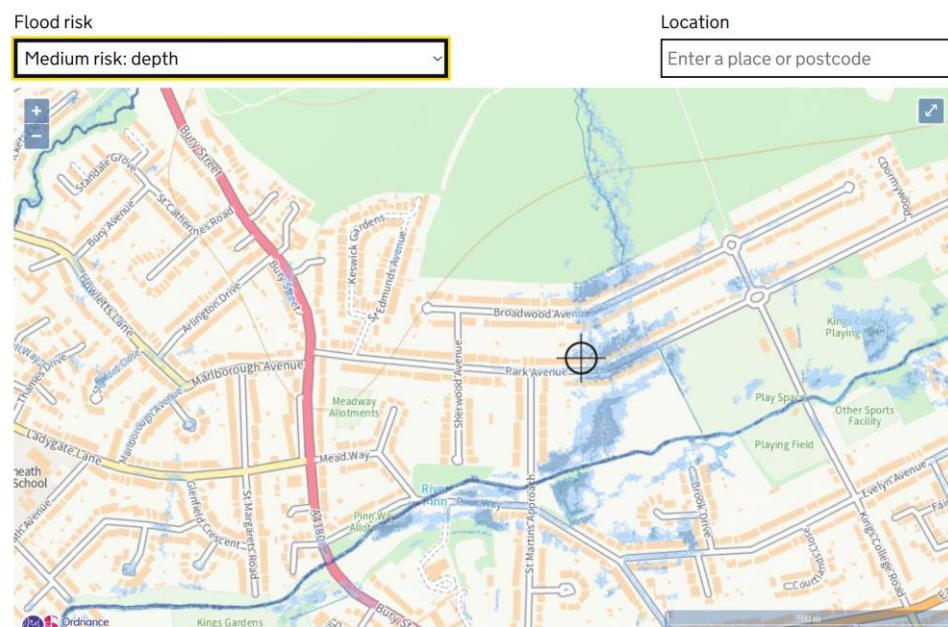
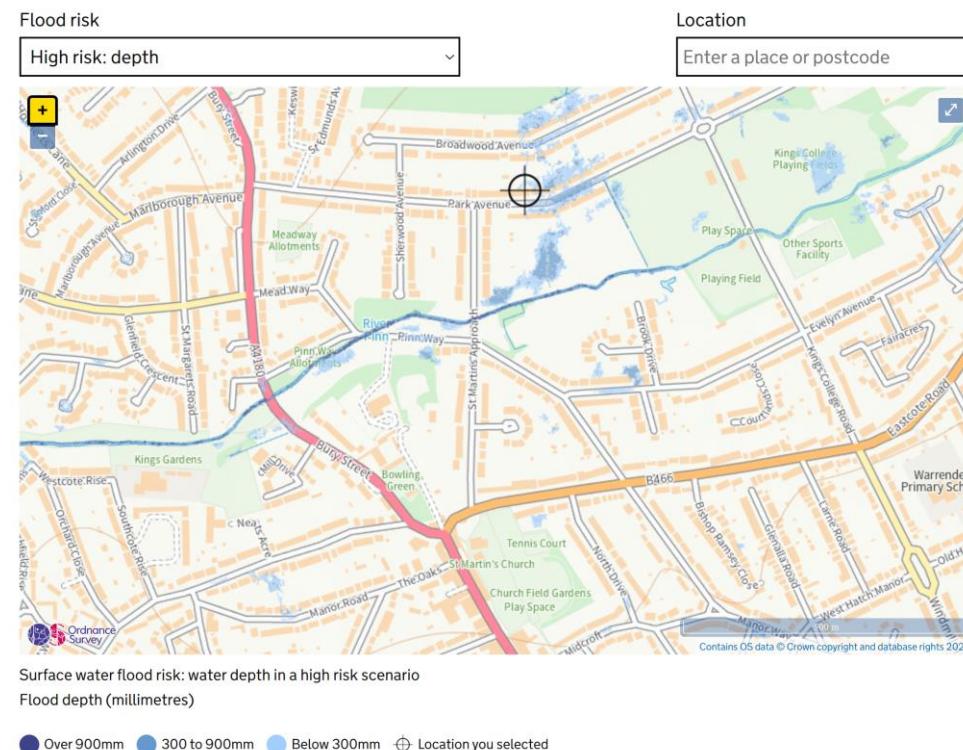


How levels here could affect nearby areas

1.83m	Water reaches the highest level recorded at this measuring station (recorded on 23 June 2016)	Show on chart
1.60m	Property flooding is possible above this level. One or more flood warnings may be issued	Show on chart
1.20m	Low lying land flooding is possible above this level. One or more flood alerts may be issued	Show on chart
	This is the top of the normal range	Show on chart
0.23m	Latest level	

Surface Water Flood Depth

Government data places the subject site at high risk of flooding and suggests a likely surface water flood depth of less than 300mm, in both high and medium risk scenarios. Map data has been pasted into this report below.



Over 900mm 300 to 900mm Below 300mm Location you selected

Proposed Building Levels & Flood Resistant/Resilient Construction

The new proposed extension will match the existing finished floor level and will be constructed from flood resilient construction methods. It is not possible in this instance, to raise new levels to the required 300mm as it will differ from the existing levels and create non-wheelchair friendly access within the dwelling. The proposed flood resilient construction methods are as follows: -

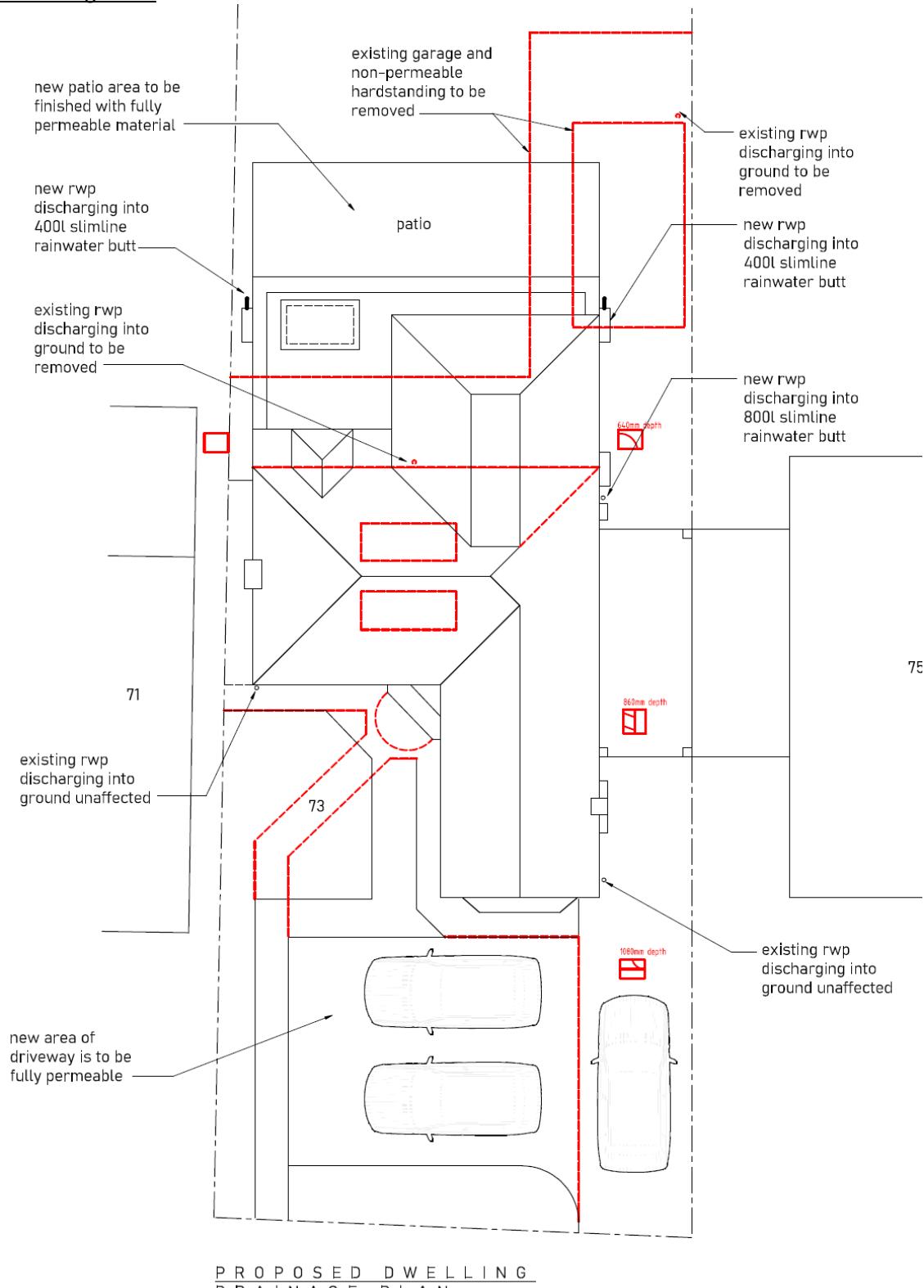
- External and internal masonry up to 300mm above ground level will be constructed from engineering bricks;
- Apply a waterproof tanking slurry to the external face of the engineering brickwork up to 300mm above ground level;
- Install a solid concrete floor slab within the new extension;
- Provide a liquid dpm to the top of the concrete slab, lapping to the internal skin of masonry;
- Fit air brick covers to existing air bricks;
- Set electrical sockets 450mm above floor level;
- Fit water resistant skirting boards;
- Install water resistant plasterboard 450mm above finished floor level;

Proposed Action Plan

Our client and owner of the building will be supplied with a flood action plan before the project starts to ensure they understand the risks they are facing. The plan gives specific information regarding what they should do and importantly when the actions should be taken. We will advise them to sign up to the EA Floodline service, in the event that they are within a flood warning are in the future and require assistance.

A flood action plan has been supplied at the end of this document.

Proposed Drainage Plan



NOTE: NO NEW RWP CONNECT TO THE SURFACE WATER SEWER NETWORK

Proposal Summary

1. The proposed extension is 45m2. The existing garage to be demolished is 16m2 and around 25m2 of non-permeable hardstanding exists in the area of the proposed extension. All new hardstanding is to be permeable patio where practical to do so.
2. This site sits within flood zone 2 and 3 (as defined by the Environmental Agency's Flood Map and Critical Drainage Area 50).
3. The more accurate data taken from the ARC GIS maps provided by Hillingdon place the site within Flood Zone 2.
4. The site is not within a functional flood plain (flood zone 3b).
5. This site's existing ground level at the front of the property currently sits at approximately 41.65m Above Ordnance Datum (AOD) with the rear of the property slightly higher at 41.725 AOD. The finished floor level of the house is set at approximately 41.875 AOD.
6. Fluvial flood levels at the nearby River Pinn are between 0.23m (current) and 1.83m, taken at the time of a worst case scenario in 2016.
7. The exact flood level is not known, although the location is defined at high flood surface water flood risk, according to government data. The associated surface water flood depth in high risk and medium risk scenarios for this location is below 300mm.
8. This site does not benefit directly from flood defences.
9. The proposed finished floor level of the extension element of this development will be between 150-225mm above external ground levels as per existing. The internal finished will match the internal ffl of the existing.
10. Flood protection will be provided to the new extension area by the use of flood resistant construction methods for the first metre above floor level.
11. An action plan has been supplied within this document.
12. A drainage plan has been supplied. New rainwater discharge points will be introduced for new extension roof and will link to above ground rainwater butts within the garden. It is believed that currently rainwater collected by existing rainwater pipes is discharged to the ground. It would not be practical to create a soakaway for rainwater discharge as the soil in this area is predominantly clay and would not therefore be effective.

Household Flood Plan including Checklist

Household Flood Plan



Pre-populated Plan

This pre-populated plan can be used as it is, or as a guide to help you create your own flood plan using one of our blank templates.

Trigger 1





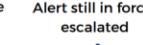
What to do at this stage

Flooding is possible.
Stay vigilant and make early preparations for a potential flood.

- Monitor the situation through forecasts, the Environment Agency's 'Check for Flooding' service, local radio stations and monitoring stations.
- Locate flood kit, check it is complete and ready if needed.
- Check reverse of sheet is completed and you know what to do if the situation gets worse.
- Ensure that your property flood resilience is in working order and ready to install.



Alert no longer in force



Alert still in force/escalated



Stand down



Trigger 2





What to do at this stage

Flooding is expected.
Immediate action is required to protect yourself and your property.

- Continue to monitor the situation.
- Move valuables, important documents, electrical equipment and furniture upstairs or to a high place.
- Hang curtains over rails, roll up rugs and carpets and move upstairs.
- Deploy property flood resilience e.g. air brick covers, door barriers.
- Ensure family, neighbours and vulnerable people are alerted and pets moved to safety.
- Move vehicles to high ground out of the flood risk area.

Trigger 3





What to do at this stage

Severe flooding is expected and is likely to cause significant risk to life and destruction of property.

- Prepare to evacuate and cooperate with emergency services.
- Check on vulnerable family, friends and neighbours.
- If safe to do so, turn off utility supplies (see reverse of this sheet).
- Continue to monitor the situation using Floodline, local radio stations etc.
- Evacuation is likely. Gather your flood kit and cooperate with the emergency services.
- Ring 999 if you are in immediate danger.

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This resource has been produced by Newground who work in partnership with the Environment Agency

For further information on being prepared, please visit The Flood Hub website: www.thefloodhub.co.uk

To sign up for flood warnings visit: <https://flood-warning-information.service.gov.uk/warnings>

Last reviewed: December 2021

For more information visit: www.thefloodhub.co.uk

  @TheFloodHub

Household Flood Plan



Pre-populated Plan

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ADDRESS OF EVACUATION CENTRE

FLOOD PLAN CHECKLIST:

- Fill in this plan and keep it up to date.
- Sign up to Environment Agency flood alerts and warnings and understand what they mean.
- Check your home insurance covers flooding.
- Investigate Property Flood Resilience (PFR) options (e.g. door barriers, air brick covers).
- Put important documents in a safe place, out of flood risk (e.g. passports, insurance documents, birth certificates).
- Make a flood kit using the checklist.

CONTACT LIST

CONTACT LIST	PHONE NUMBERS	ADDITIONAL INFORMATION
Environment Agency Floodline	0345 988 1188	@EnvAgencyNW 
Electricity North West	0800 195 4141	@electricityNW 
Electricity Helpline	105	
National Grid	0800 111 999	@nationalgriduk 
United Utilities (sewer flooding)	0345 672 3723	@unitedutilities 
Local Council		
Lead Local Flood Authority (LLFA)		
Insurance Company		
Local radio station		
Evacuation centre		
Gauge Map monitoring station		https://www.gaugemap.co.uk/
Flood Warden		

FLOOD KIT CHECKLIST:

<input type="checkbox"/> Torch (check batteries)	<input type="checkbox"/> Mobile phone + phone chargers
<input type="checkbox"/> Food and drinking water	<input type="checkbox"/> Battery operated radio
<input type="checkbox"/> Medication + First Aid Kit	<input type="checkbox"/> Insurance documents
<input type="checkbox"/> Toys for children and pets	<input type="checkbox"/> Keys e.g. house, car
<input type="checkbox"/> Rubber gloves and wellingtons	<input type="checkbox"/> Purse/wallet (cash and cards)

PROPERTY FLOOD RESILIENCE (PFR) AND EQUIPMENT LIST

ITEM:

WHERE IT IS KEPT:

HOW TO INSTALL IT:

WHERE IS THE...?

<input type="checkbox"/> Location of electricity cut off:	
<input type="checkbox"/> Location of water cut off:	
<input type="checkbox"/> Location of gas cut off:	
<input type="checkbox"/> Location of flood kit:	

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This resource has been produced by Newground who work in partnership with the Environment Agency

Contact your supplier if you are unsure of where or how to turn off your electricity, water or gas supplies. Mark taps and switches with labels to help you remember.

Last reviewed: December 2021

For more information visit: www.thefloodhub.co.uk

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