









Tionscadal Éireann

Project Ireland

2040

Predictive Fluvial Flood Extent Map



Fluvial (River) Flooding

Fluvial flooding occurs when rivers and streams break their banks and water flows out onto the adjacent low-lying areas.

The fluvial flood risk to Midleton Town is from the Owenacurra River, its tributaries (Elfordstown and Glenathonacash Streams), the Owenacurra Millrace and the Dungourney River.

The fluvial flood risk to Ballinacurra is from the Ballinacurra Stream. The fluvial flood risk to the Water Rock area is from the Water Rock Stream.

The 'predictive' flood map shows areas that are predicted to be flooded during a theoretical or 'design' flood event with an estimated probability of occurrence. In other words, a computer model has predicted that these areas would flood in a design flood event. It is not based on flood records from actual flood events in the past.

Annual Exceedance Probability Definition

The size of a flood is described in terms of its probability (or how likely it is to occur).

Take the example of the 1 in 100 year flood:

The 1 in 100 year flood is the same as the 1% AEP flood.

This is a large flood with ;
Very large volumes of flood water
Very high flood levels
A large area of land, not normally covered by water is covered by flood water

The map refers to flood event probabilities in terms of a percentage Annual Exceedance Probability, or 'AEP'.

Annual Exceedance Probability	Odds of Occurrence in a Given Year	Return Period (Years)
10% (High Probability)	10:1	10
1% (Medium Probability)	100:1	100
0.1% (Low probability)	1000:1	1000

But the probability (or likelihood) of this flood occurring is low; •Every single year there is a 1 in 100 chance or 1% probability of this flood occurring

And compare to the example of the 1 in 10 year flood:

The 1 in 10 year flood is the same as the 10% AEP flood.

This is a much lower sized flood with;

•A volume of flood water, greater than normal conditions, but much less than during the 1 in 100 year flood

Flood levels higher than normal conditions, but much less than during the 1 in 100 year flood
An area of land not normally covered by water is covered by flood water, but much less than during the 1 in 100 year flood

And the probability (or likelihood) of this flood occurring is much higher than the 1 in 100 year flood; •Every single year there is a 1 in 10 chance or 10% probability of this flood occurring