

This document will help you understand and use the modelled fluvial flood depth and climate change depth difference data created in 2004. This data is available for both the 1% and 0.1% annual chance of flooding.

Dataset description

The depth difference dataset (2004) is a depth grid showing the difference between modelled fluvial flood depths and modelled fluvial flood depths under climate change conditions (an increase in peak flows of 20%).

Modelled fluvial flood depth and climate change depth difference data* was created for both the 1% and 0.1% annual chance of flooding situations and was produced as a by-product from the 2004 generalised modelling project. The purpose of the generalised modelling project was to fill the gaps where there was no detailed local modelled data in 2004, in order to define the extents of Flood Zones for spatial planning.

A two-dimensional hydrodynamic model called JFlow was used to produce both the modelled fluvial flood depth and modelled fluvial flood depth with climate change data. This depth difference data, using these 2 datasets, is provided on a 5x5m grid.

Since 2004, some local detailed modelling projects have included scenarios for climate change however this depth difference dataset has not been updated.

Modelled fluvial flood and climate change depth difference data are available for the whole of England, and is provided in 26 100x100km squared blocks which align to the [Ordnance Survey National Grid](#) reference coding system. Follow the link to identify the relevant national grid reference of interest to you.

INFORMATION WARNING: This data is **not suitable** for identifying whether an individual property will flood due to climate change, for detailed decision making or for use in site specific Flood Risk or Strategic Flood Risk Assessments. Where this data is used further evidence, verification and studies should be undertaken. Climate change allowances have changed since this work was completed in 2004.

More recent, accurate and local detailed modelling depth data is available for some places. Please contact your [local Environment Agency office](#) to see if detailed modelling is available for your area of interest.

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Update frequency

This data has not been updated since 2004 and will not be updated, although in future we may release other flood depth difference data, which supersedes this data.

Related datasets

Other datasets you may wish to use to understand the present day areas at risk from flooding are:

1. Risk of Flooding from Rivers and Sea (RoFRS) products
2. Risk of Flooding from Surface Water (RoFSW) products
3. Flood Map for Planning (Rivers and Sea) Flood Zone 2 & Flood Zone 3

Companion datasets are:

1. Modelled fluvial flood depth data created in 2004
2. Modelled fluvial flood depth data with climate change created in 2004



Common questions & known issues

- flood depth difference data are only available in areas where modelled fluvial flood depth data exists and not across the whole OS national grid block; or where the climate change flood depth data extends further than the modelled fluvial flood depth data.
- We currently have no information on the accuracy of this data since the modelling methods were only tested and reviewed for the production of the 2004 Flood Zone extents. We have never made use of this data in the production of any of our Flood Risk products.
- The table below explains the key differences between local detailed modelling and national generalised 2004 modelling to illustrate why local detailed modelling data may be suitable for detailed decision making and these model fluvial flood depth data are not unless verified. The local detailed modelling, where it exists, is likely to be more up to date than the 2004 national generalised flood depths.

Model Parameter	Local Detailed Model	National Generalised 2004 Model
Ground Levels	Detailed site survey / LiDAR / Photogrammetry	National Digital Terrain Model (DTM) – broad scale
Data Quality Assured (Calibrated & verified)	Yes	No
Input Data Quality Assurance	Locally	Nationally
Mannings 'n'	Locally set	Globally set
Schematisation	Detailed using local knowledge	Simple
Structures	Takes account of existing infrastructure	Bare earth simplification

- Climate change allowances have changed since this work was completed in 2004.
- Before use we recommend additional checks are done to verify the data, such as checking climate change data from more recent local detailed modelling projects and surveyed ground levels on site, to prove that they are suitable and within acceptable tolerances.
- To find out if you are in an area at risk of flooding, please go to gov.uk to complete a search.

Note: We do our best to avoid quality problems but this dataset reflects the data we hold. Our datasets may contain errors.

Dataset Content

Field name	Description	Data type
VALUE	Modelled fluvial flood depth and climate change depth difference	Float