

Appendix D

Flood risk assessment data

Location of site: 11a-d Lineside Way, Littlehampton, BN17 7EH

Document created on: 14 April 2025

This information was previously known as a product 4.

Customer reference number: EIR2025/03839

Map showing the location that flood risk assessment data has been requested for.



How to use this information

You can use this information as part of a flood risk assessment for a planning application. To do this, you should include it in the appendix of your flood risk assessment.

We recommend that you work with a flood risk consultant to get your flood risk assessment.

Included in this document

In this document you'll find:

- how to find information about surface water and other sources of flooding
- information on the models used
- definitions for the terminology used throughout
- flood map for planning (rivers and the sea)
- past floods
- flood defences and attributes
- information to help you assess if there is a reduced flood risk from rivers and the sea because of defences
- modelled data
- climate change modelled data
- information about strategic flood risk assessments
- information about this data
- information about flood risk activity permits
- help and advice

Surface water and other sources of flooding

Use the [long term flood risk service](#) to find out about the risk of flooding from:

- surface water
- ordinary watercourses
- reservoirs

Or you can contact your Lead Local Flood Authority for further information.

Your Lead Local Flood Authority is West Sussex County.

For information about sewer flooding, contact the relevant water company for the area.

About the models used

Model name: Arun Coastal Model, 2012
Scenario(s): Undefined tidal
Date: 20 August 2012

Model name: Littlehampton Update 2017 - River Arun Modelling Study
Scenario(s): Defended tidal
Date: 1 March 2017

These models contain the most relevant data for your area of interest.

Terminology used

Annual exceedance probability (AEP)

This refers to the probability of a flood event occurring in any year. The probability is expressed as a percentage. For example, a large flood which is calculated to have a 1% chance of occurring in any one year, is described as 1% AEP.

Metres above ordnance datum (mAOD)

All flood levels are given in metres above ordnance datum which is defined as the mean sea level at Newlyn, Cornwall.

Flood map for planning (rivers and the sea)

Your selected location is in flood zone 3.

Flood zone 3 shows the area at risk of flooding for an undefended flood event with a:

- 0.5% or greater probability of occurring in any year for flooding from the sea
- 1% or greater probability of occurring in any year for fluvial (river) flooding

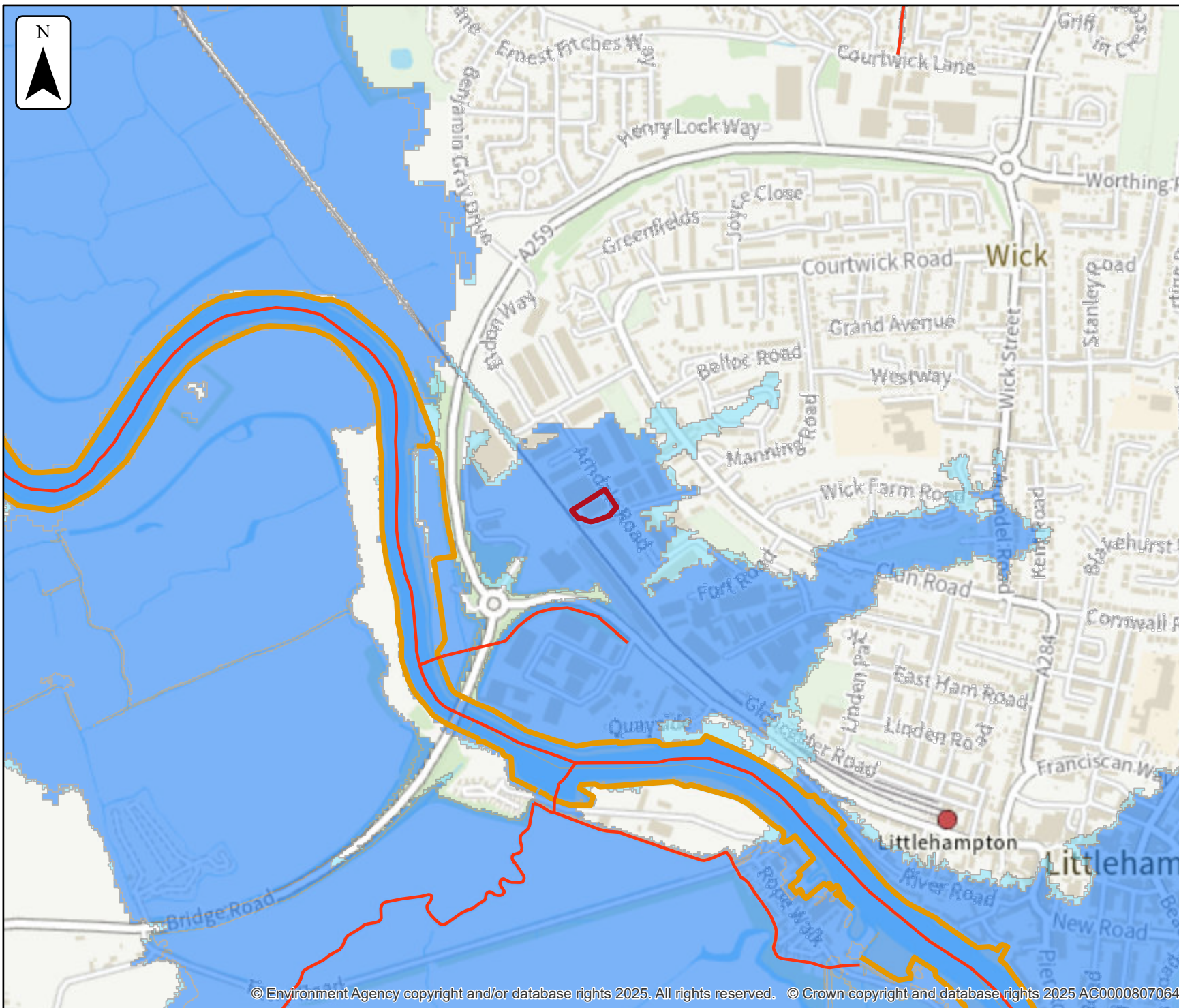
Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- between a 0.1% and 0.5% probability of occurring in any year for flooding from the sea
- between a 0.1% and 1% probability of occurring in any year for fluvial (river) flooding

It's important to remember that the flood zones on this map:

- refer to the land at risk of flooding and do not refer to individual properties
- refer to the probability of river and sea flooding, ignoring the presence of defences
- do not take into account potential impacts of climate change

The flood zones are not currently being updated. The last update was in November 2023. Some of the flood zones may have changed, however all source data is included in the models below.



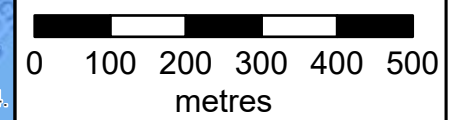
Flood map for planning

Location (easting/northing)
501847/102780

Scale
1:10,000

Created
14 Apr 2025

-  Selected area
-  Main river
-  Flood defence
-  Water storage area
- Flood Zones 2 and 3
- Rivers and Sea
-  Flood Zone 2
-  Flood Zone 3



Past floods

Past flood events included in this document

The recorded flood outlines included in this document are for areas of land local to your site location that have been flooded by any of these sources:

- ephemeral water
- main rivers
- ordinary watercourses
- the sea
- unknown

Data limitations

The outlines do not include flooding from:

- drainage where rainfall has led to surface water ponding or overland runoff
- artificial, water-bearing sewer, water supply and wastewater treatment pipelines

Changes to flood defences

The defences (also known as assets) that were in place may also have changed. For example, assets may have been built more recently than the last recorded flood outline.

What the recorded flood outlines dataset is

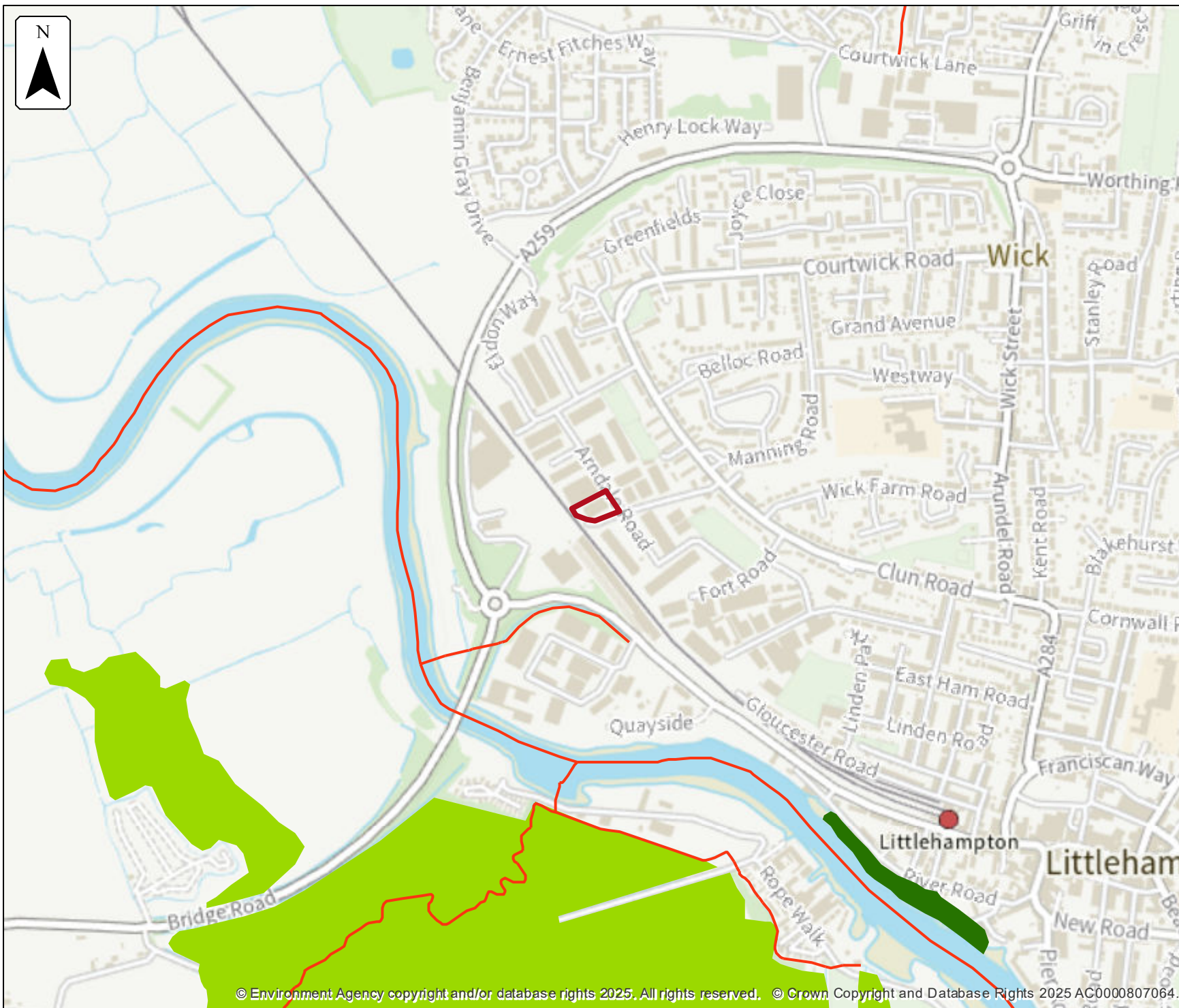
The recorded flood outlines are a geographical information system (GIS) data layer that show our verified records of areas that have flooded in the past from:

- rivers
- the sea
- groundwater
- surface water

[Download the complete recorded flood outlines dataset](#), which includes data quality flags for outlines recorded after April 2020. This indicates the confidence we have in an outline.

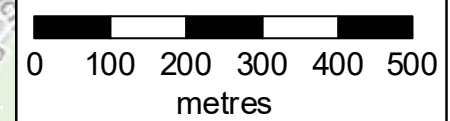
Get flood information from other organisations

Contact West Sussex County Lead Local Flood Authority (LLFA) and your drainage board to get information about past flooding caused by surface water or drainage systems.



Past floods
Location (easting/northing)
501847/102780
Scale
1:10,000
Created
14 Apr 2025

- Selected area
- Main river
- Date of flood event
 - February, 2020
 - February, 1983



Data on past flood events

Start date	End date	Source of flood	Cause of flood	Affects location
1 February 2020	1 February 2020	sea	overtopping of defences	No
2 February 1983	2 February 1983	main river	overtopping of defences	No

Flood defences and attributes

The flood defences map shows the location of the flood defences present.

The flood defences data table shows the type of defences, their condition and the standard of protection. It shows the height above sea level of the top of the flood defence (crest level). The height is in mAOD which is the metres above the mean sea level at Newlyn, Cornwall.

It's important to remember that flood defence data may not be updated on a regular basis. The information here is based on the best available data.

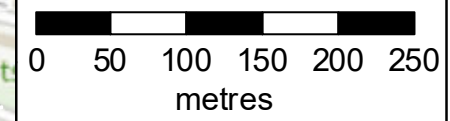
Use this information:

- to help you assess if there is a reduced flood risk for this location because of defences
- with any information in the modelled data section to find out the impact of defences on flood risk



Flood defences
Location (easting/northing)
501847/102780
Scale
1:5,000
Created
14 Apr 2025

-  Selected area
-  Main river
-  Flood defence



Flood defences data

Label	Asset ID	Asset Type	Standard of protection (years)	Current condition	Downstream actual crest level (mAOD)	Upstream actual crest level (mAOD)	Effective crest level (mAOD)
1	144549	Embankment	200		4.0	3.97	
2	125808	Embankment	200		3.97	4.19	
3	144548	Embankment	200		4.30	4.0	
4	98346	Embankment	50		3.97	3.83	
5	98345	Embankment	200		3.94	3.97	
6	144189	Wall	200		3.94	4.30	
7	98344	Embankment	300		4.80	4.80	4.80
8	96992	Wall	300		4.80	4.80	4.80
9	447212	Wall	300		4.80	4.80	4.80
10	447018	Wall	300		4.40	4.40	4.40

Any blank cells show where a particular value has not been recorded for an asset.

Modelled data

This section provides details of different scenarios we have modelled and includes the following (where available):

- outline maps showing the area at risk from flooding in different modelled scenarios
- modelled node point map(s) showing the points used to get the data to model the scenarios and table(s) providing details of the flood risk for different return periods
- map(s) showing the approximate water levels for the return period with the largest flood extent for a scenario and table(s) of sample points providing details of the flood risk for different return periods

Climate change

The climate change data included in the models may not include the latest [flood risk assessment climate change allowances](#). Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

The Environment Agency will incorporate the new allowances into future modelling studies. For now, it's your responsibility to demonstrate that new developments will be safe in flood risk terms for their lifetime.

Modelled scenarios

The following scenarios are included:

- Defended modelled tidal: risk of flooding from the sea where there are flood defences
- Defences removed modelled tidal: risk of flooding from the sea where flood defences have been removed

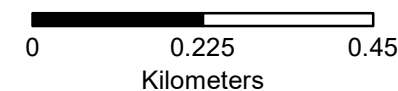


Legend

-  Site Boundary
-  0.5% AEP Defended Tidal
-  0.5% AEP (2065) Defended Tidal
-  0.5% AEP (2115) Defended Tidal
-  0.1% AEP Defended Tidal

Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.

Scale: 1:10,000



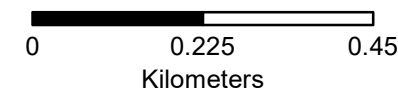


Legend

-  Site Boundary
-  0.5% AEP (2012) (Undefended)
-  0.5% AEP (2070) (Undefended)
-  0.5% AEP (2115) (Undefended)
-  0.1% AEP (2012) (Undefended)

Annual Exceedance Probability
(AEP) The probability of a flood of
a particular magnitude, or greater
occurring in any given year.

Scale: 1:10,000



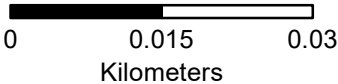


Legend

- Site Nodes
- Site Boundary

Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.

Scale: 1:750



Product 4 Flood Risk Data Requested by: Simon Arbelaez

Site: 11a-d Lineside Way, Littlehampton, BN17 7EH

Table 1: Water Levels: Tidal Undefended

Node Ref	NGR		Modelled Flood Levels in Metres AOD			
	Eastings	Northings	Undefended Annual Exceedance Probability			
			0.5%	0.5% (2070)*	0.5% (2115)*	0.1%
1	501805	102780	3.26	4.23	4.88	3.83
2	501864	102810	3.26	4.23	4.88	3.83
3	501836	102777	3.26	4.23	4.88	3.83
4	501858	102788	3.26	4.23	4.88	3.83
5	501843	102757	3.26	4.23	4.88	3.83
6	501884	102774	3.26	4.23	4.88	3.83

Table 2: Water Levels: Tidal Defended

Node Ref	NGR		Modelled Flood Levels in Metres AOD			
	Eastings	Northings	Defended Annual Exceedance Probability			
			0.5%	0.5% (2065)*	0.5% (2115)*	0.1%
1	501805	102780	-	-	2.98	-
2	501864	102810	-	-	2.98	-
3	501836	102777	-	-	3.03	-
4	501858	102788	-	-	3.10	-
5	501843	102757	-	-	3.38	-
6	501884	102774	-	-	2.93	-

Table 3: Water Depths: Tidal Undefended

Node Ref	NGR		Modelled Flood Depths in Metres			
	Eastings	Northings	Undefended Annual Exceedance Probability			
			0.5%	0.5% (2070)*	0.5% (2115)*	0.1%
1	501805	102780	1.06	2.04	2.68	1.63
2	501864	102810	0.97	1.94	2.59	1.54
3	501836	102777	0.85	1.83	2.47	1.42
4	501858	102788	0.76	1.74	2.38	1.33
5	501843	102757	0.95	1.92	2.57	1.52
6	501884	102774	0.79	1.76	2.41	1.36

Office Address: Guildbourne House, Chatsworth Road, Worthing BN11 1LD.

www.gov.uk/government/organisations/environment-agency

Table 4: Water Depths: Tidal Defended

	NGR		Modelled Flood Depths in Metres			
			Defended Annual Exceedance Probability			
Node Ref	Eastings	Northings	0.5%	0.5% (2065)*	0.5% (2115)*	0.1%
1	501805	102780	-	-	0.83	-
2	501864	102810	-	-	0.71	-
3	501836	102777	-	-	0.60	-
4	501858	102788	-	-	0.66	-
5	501843	102757	-	-	0.72	-
6	501884	102774	-	-	0.58	-

All levels taken from: Arun Coastal Modelling (2012), by JBA Consulting, with updated defended modelling (2017).

Produced on: 14/04/2025

*** The flood risk data provided is based on existing EA hydraulic models with an allowance for climate change. Please note the climate change allowances provided are not up to date. These were updated on 27 July 2021.**

You should refer to ['Flood risk assessments: climate change allowances'](#) for the most up to date allowances. You will need to undertake further assessment of future flood risk using different allowances to ensure your assessment of future flood risk is based on best available evidence.

There is no additional information or health warnings for these levels/depths or the model from which they have been produced.

Strategic flood risk assessments

We recommend that you check the relevant local authority's strategic flood risk assessment (SFRA) as part of your work to prepare a site specific flood risk assessment.

This should give you information about:

- the potential impacts of climate change in this catchment
- areas defined as functional floodplain
- flooding from other sources, such as surface water, ground water and reservoirs

Your Lead Local Flood Authority is West Sussex County.

About this data

This data has been generated by strategic scale flood models and is not intended for use at the individual property scale. If you're intending to use this data as part of a flood risk assessment, please include an appropriate modelling tolerance as part of your assessment. The Environment Agency regularly updates its modelling. We recommend that you check the data provided is the most recent, before submitting your flood risk assessment.

Flood risk activity permits

Under the Environmental Permitting (England and Wales) Regulations 2016 some developments may require an environmental permit for flood risk activities from the Environment Agency. This includes any permanent or temporary works that are in, over, under, or nearby a designated main river or flood defence structure.

[Find out more about flood risk activity permits](#)

Help and advice

Contact the Solent and South Downs Environment Agency team at ssdenquiries@environment-agency.gov.uk for:

- [more information about getting a product 5, 6, 7 or 8](#)
- general help and advice about the site you're requesting data for