Flood risk assessment data

Location of site: 315297 / 478365 (shown as easting and northing coordinates)
Document created on: 24 January 2024
This information was previously known as a product 4.
Customer reference number: D8C9A9A4614B

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)
- 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

Information that's unavailable

This document **does not** contain:

- historic flooding

We do not have historic flooding data for this location.

Please note that:

- flooding may have occurred that we do not have records for
- flooding can come from a range of different sources
- we can only supply flood risk data relating to floodng from rivers or the sea

You can contact your Lead Local Flood Authority or Internal Drainage Board to see if they have other relevant local flood information. Please note that some areas do not have an Internal Drainage Board.

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

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

About the model used

Model name: Duddon Sands_Tidal 2012
Scenario(s): Defended tidal, defences removed tidal, defended climate change tidal, defences removed climate change tidal
Date: 1 July 2013

This model contains 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 occuring 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

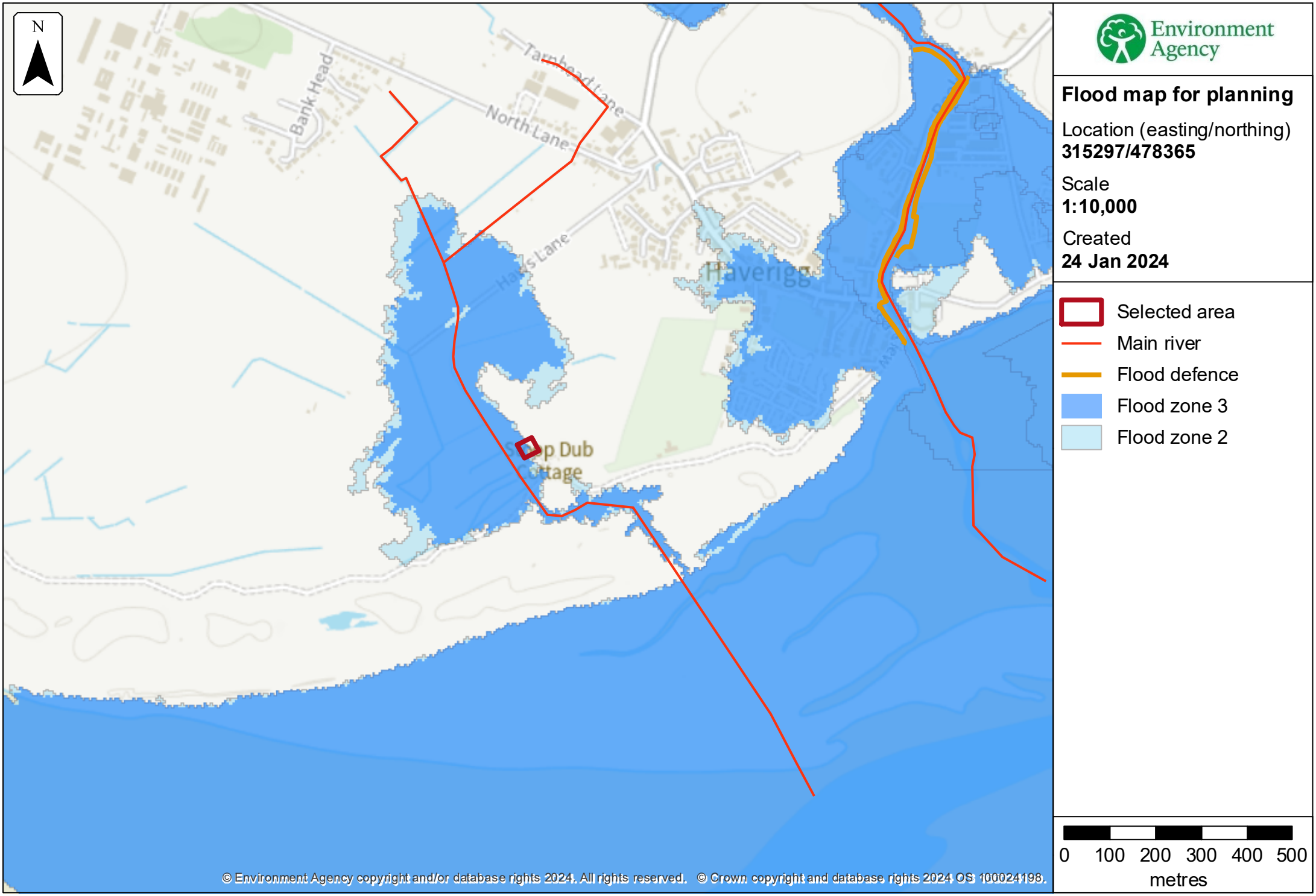
Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- 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

This data is updated on a quarterly basis as better data becomes available.


N
Bank Head
Tarnhead Lane
North Lane
Hall's Lane
Haverigg
Dub
tage
Environment Agency
Flood map for planning
Location (easting/northing)
315297/478365
Scale
1:10,000
Created
24 Jan 2024
Selected area
Main river
Flood defence
Flood zone 3
Flood zone 2
0 100 200 300 400 500
metres
© Environment Agency copyright and/or database rights 2024. All rights reserved. © Crown copyright and database rights 2024 OS 100024198.

Flood defences and attributes

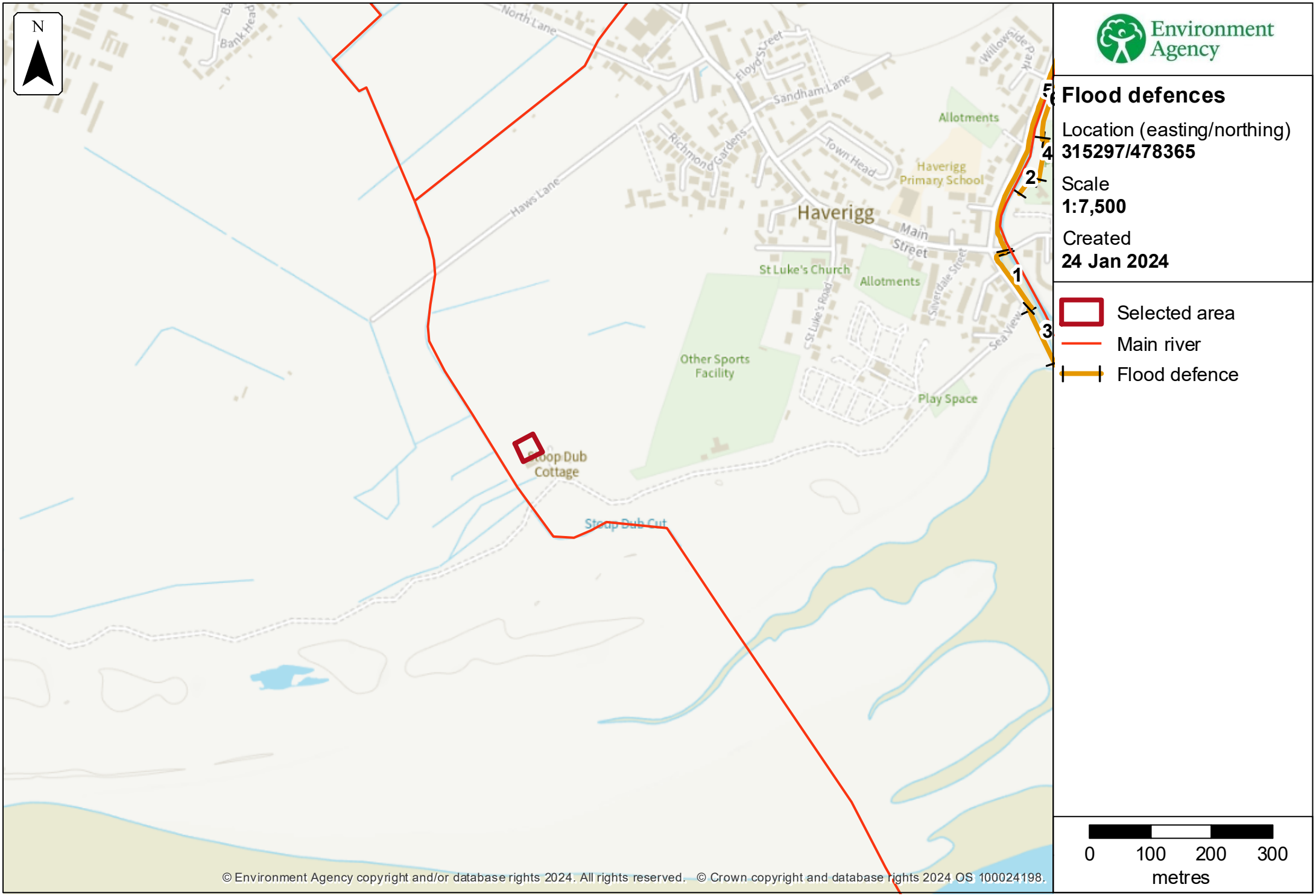
The flood defences map shows the location of the flood defences present.

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


N
North Lane
Floyd Street
Sandham Lane
Willowside Park
Allotments
Richmond Gardens
Town Head
Haverigg Primary School
Haws Lane
Haverigg
Main Street
St Luke's Church
Allotments
St Luke's Road
Silverdale Street
Sea View
Other Sports Facility
Play Space
Stoop Dub Cottage
Stoop Dub Cut
5
4
2
1
3
Environment Agency
Flood defences
Location (easting/northing)
315297/478365
Scale
1:7,500
Created
24 Jan 2024
Selected area
Main river
Flood defence
0
100
200
300
metres
© Environment Agency copyright and/or database rights 2024. All rights reserved. © Crown copyright and database rights 2024 OS 100024198.

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	79170	Wall	100	Good	6.52	6.53	6.52
2	162818	Embankment	100	Good	6.53	6.59	6.53
3	127465	Wall		Good	3.30	4.36	3.30
4	79142	Wall	100	Good	6.59	6.59	6.59
5	79173	Wall	100	Good	6.52	6.51	6.51
6	79533	Embankment	100	Good	6.56	6.43	6.43

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

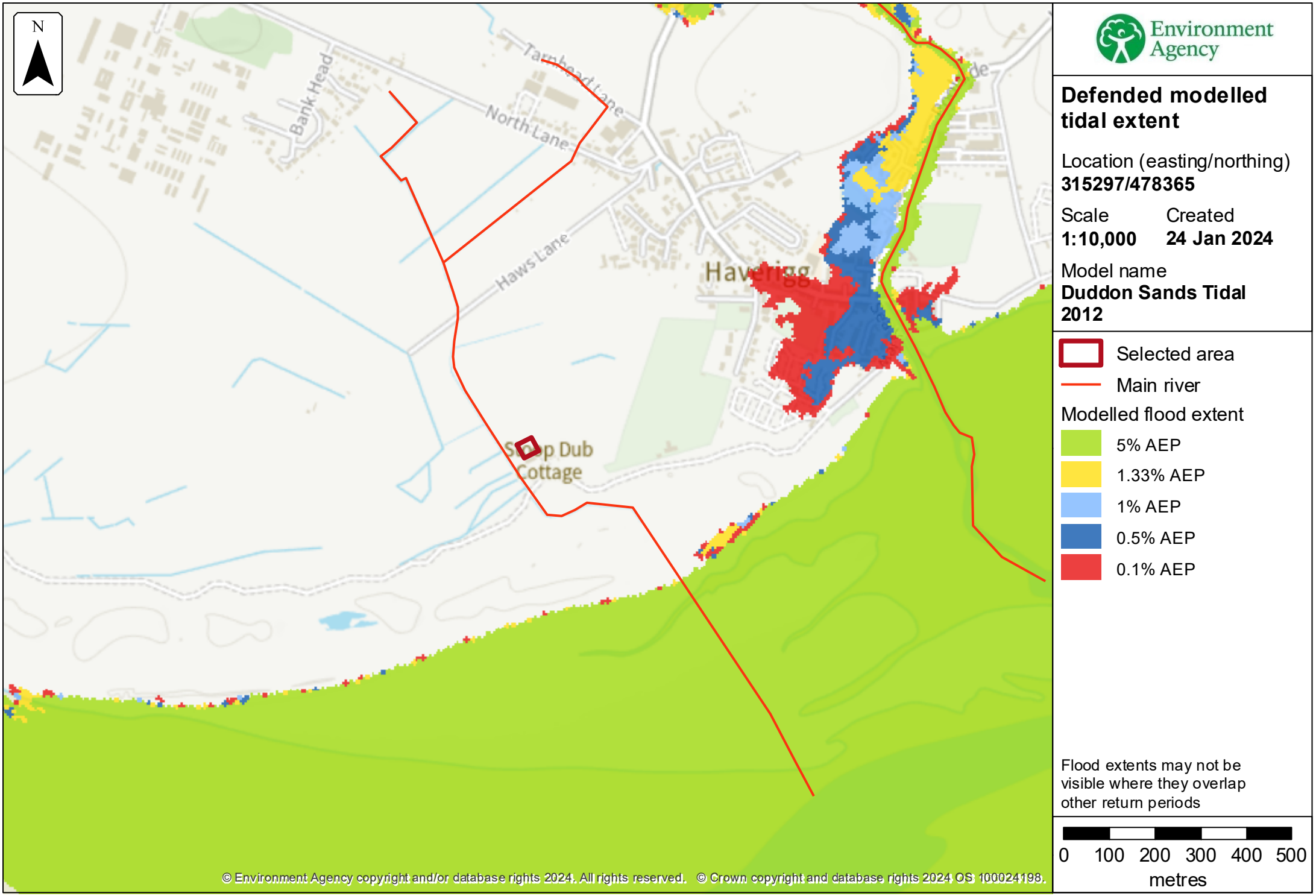
The climate change data included in the models may not include the latest flood risk assessment climate change allowances. Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

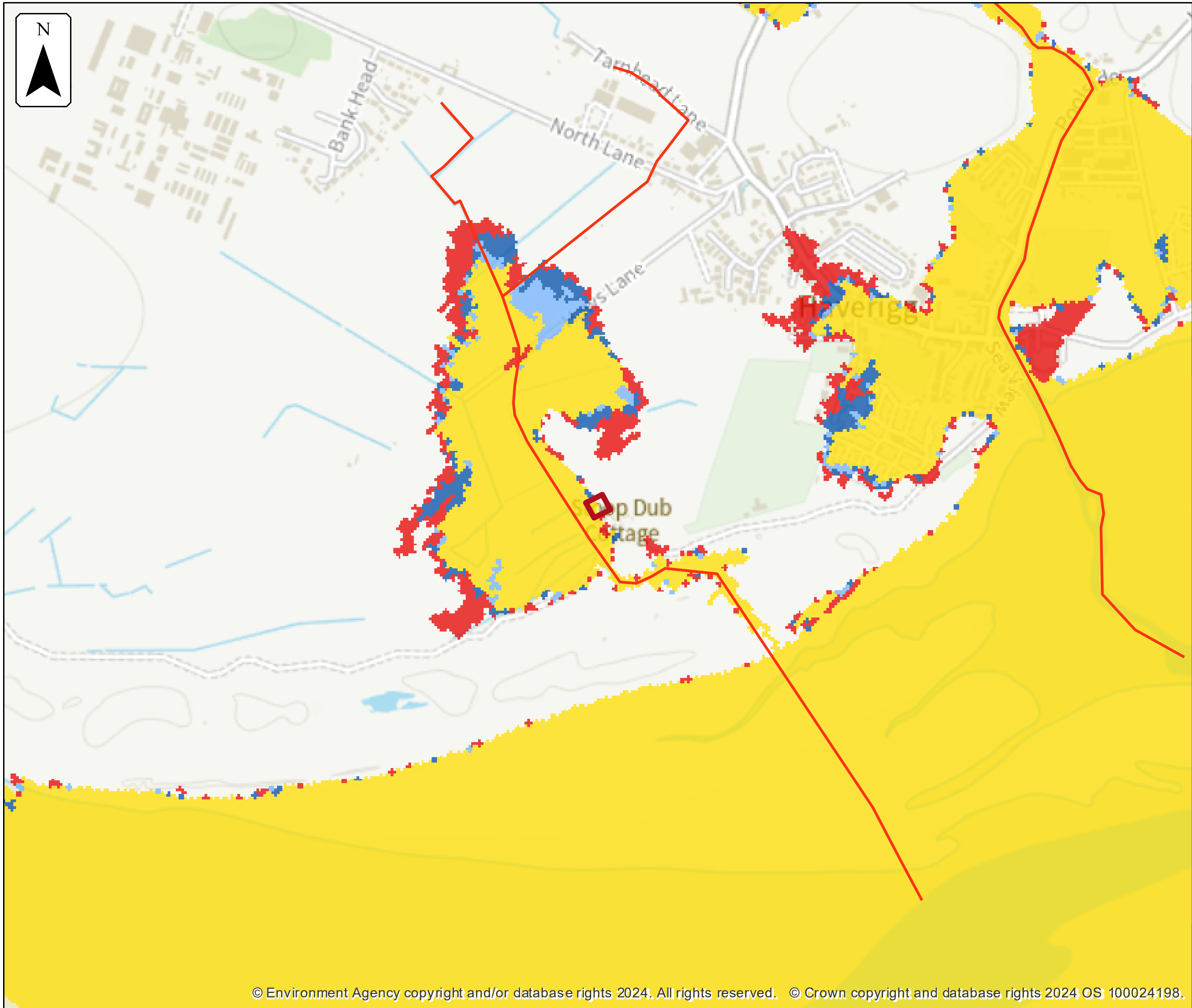
The Environment Agency will incorporate the new allowances into future modelling studies. For now, it's your responsibility to demonstrate that new developments will be safe in flood risk terms for their lifetime.

Modelled scenarios

The following scenarios are included:

- Defences removed modelled tidal: risk of flooding from the sea where flood defences have been removed
- Defences removed climate change modelled tidal: risk of flooding from the sea where flood defences have been removed, including estimated impact of climate change


N
Bank Head
Tarnhead Lane
North Lane
Haws Lane
Haverigg
Cottage
Environment Agency
Defended modelled tidal extent
Location (easting/northing)
315297/478365
Scale
1:10,000
Created
24 Jan 2024
Model name
Duddon Sands Tidal 2012
Selected area
Main river
Modelled flood extent
5% AEP
1.33% AEP
1% AEP
0.5% AEP
0.1% AEP
Flood extents may not be visible where they overlap other return periods
0 100 200 300 400 500
metres
© Environment Agency copyright and/or database rights 2024. All rights reserved. © Crown copyright and database rights 2024 OS 100024198.



Environment Agency

Defences removed modelled tidal extent

Location (easting/northing)
315297/478365

Scale
1:10,000

Created
24 Jan 2024

Model name
Duddon Sands Tidal 2012

Selected area

Main river

Modelled flood extent

1.33% AEP

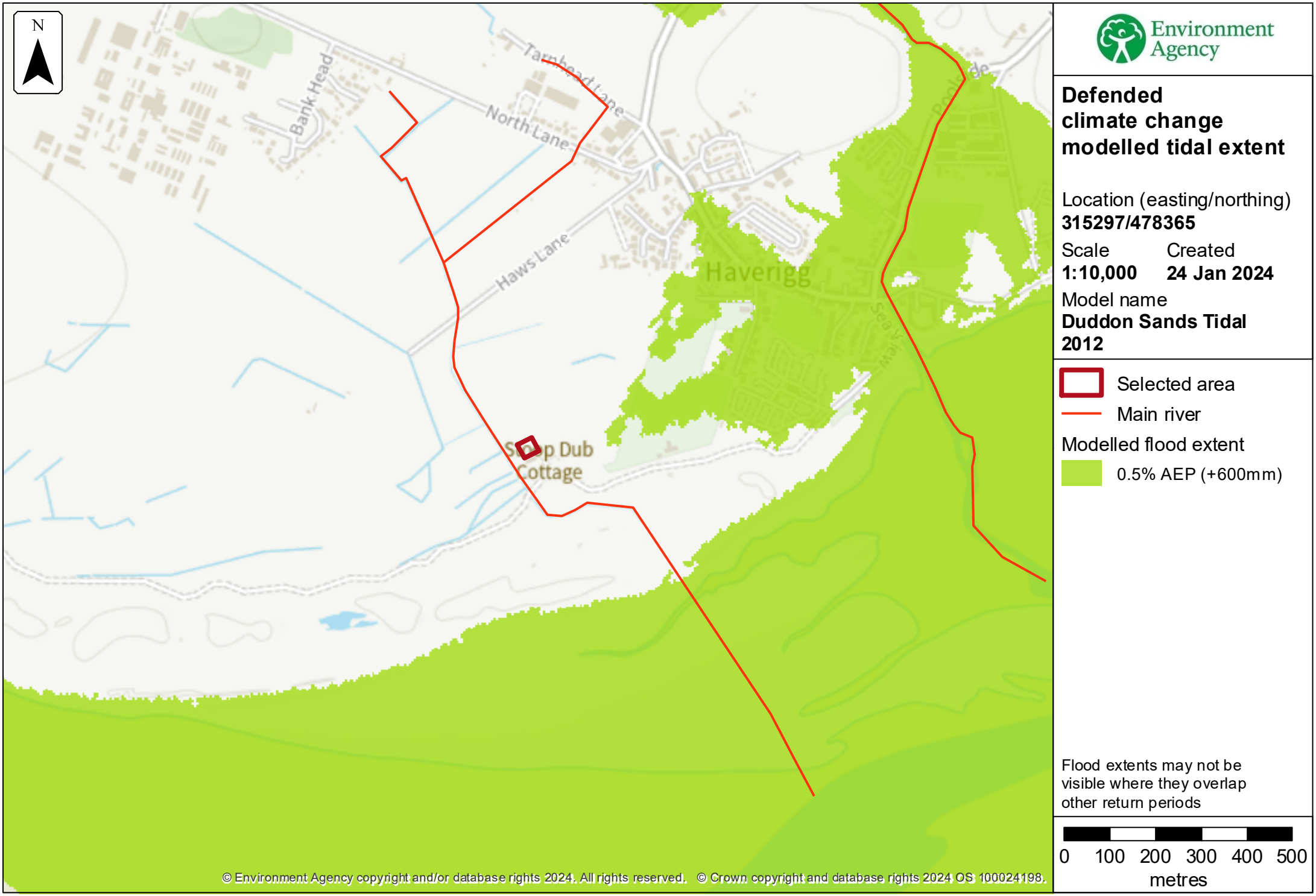
1% AEP

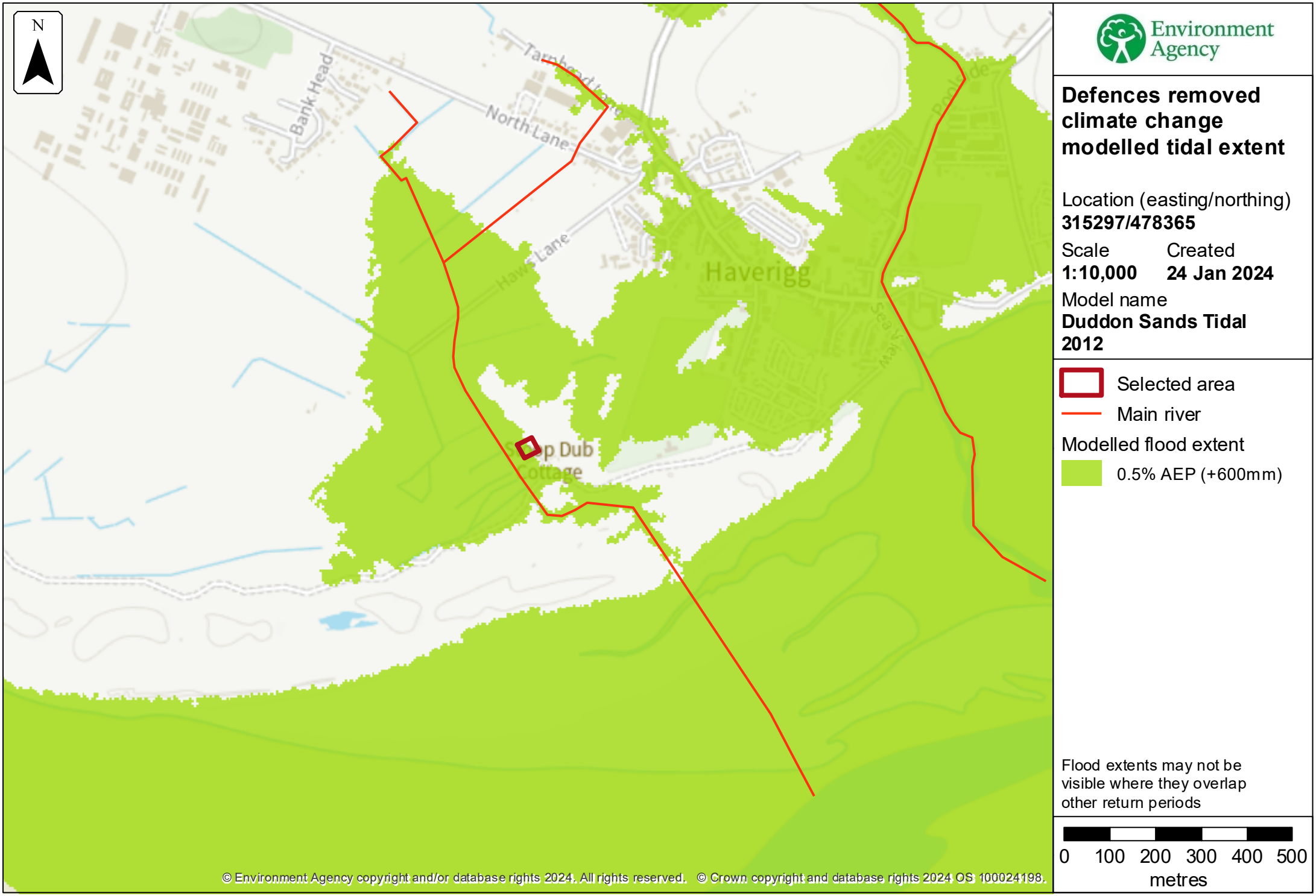
0.5% AEP

0.1% AEP

Flood extents may not be visible where they overlap other return periods

0 100 200 300 400 500
metres


N
Bank Head
Tarnhead Lane
North Lane
Haws Lane
Haverigg
Sandy Way
Cottage
Environment Agency
Defended climate change modelled tidal extent
Location (easting/northing)
315297/478365
Scale
1:10,000
Created
24 Jan 2024
Model name
Duddon Sands Tidal 2012
Selected area
Main river
Modelled flood extent
0.5% AEP (+600mm)
Flood extents may not be visible where they overlap other return periods
0 100 200 300 400 500
metres
© Environment Agency copyright and/or database rights 2024. All rights reserved. © Crown copyright and database rights 2024 OS 100024198.



Environment Agency

Defences removed climate change modelled tidal extent

Location (easting/northing)
315297/478365

Scale
1:10,000

Created
24 Jan 2024

Model name
Duddon Sands Tidal 2012

Selected area

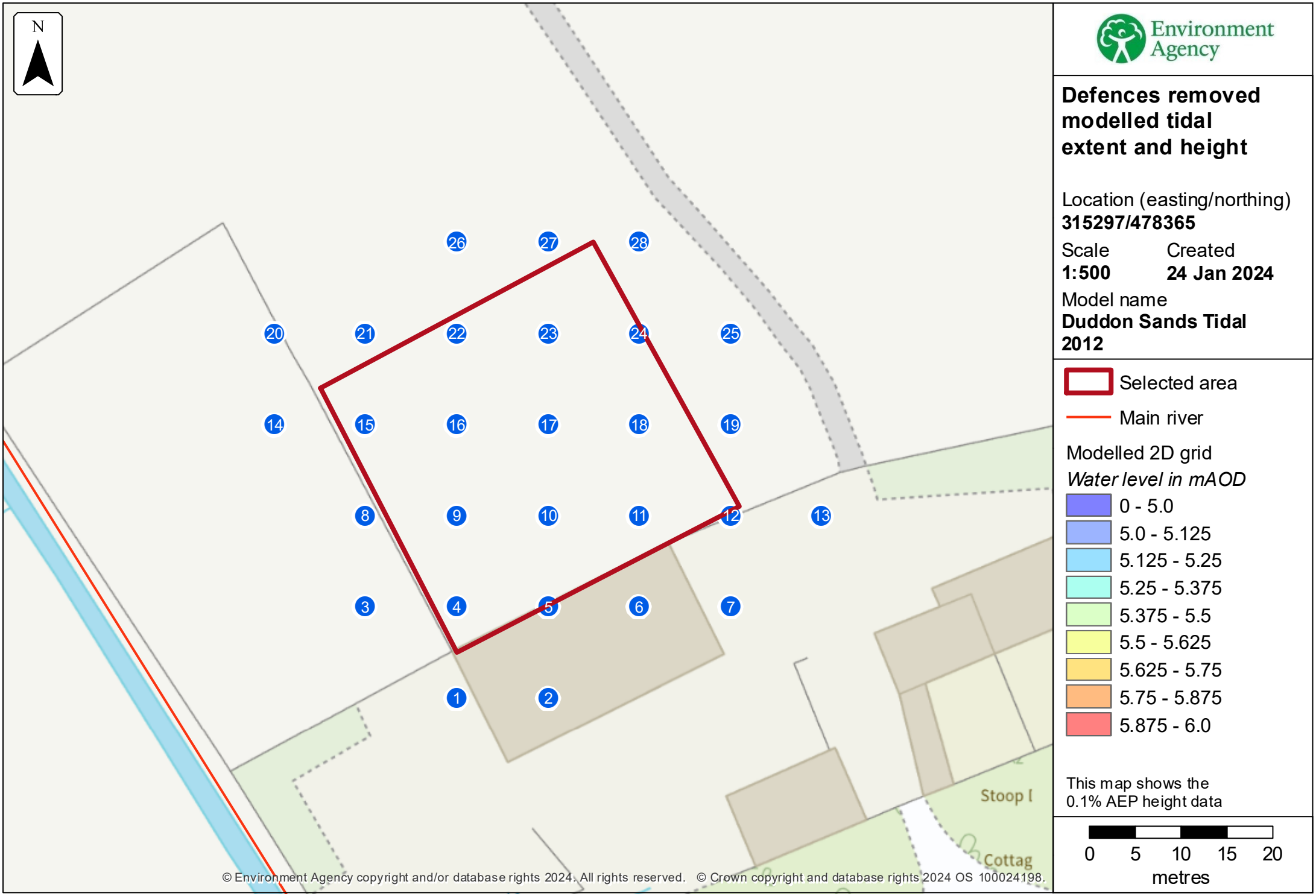
Main river

Modelled flood extent

0.5% AEP (+600mm)

Flood extents may not be visible where they overlap other return periods

0 100 200 300 400 500
metres



Environment Agency

Defences removed modelled tidal extent and height

Location (easting/northing)
315297/478365

Scale
1:500

Created
24 Jan 2024

Model name
Duddon Sands Tidal 2012

Selected area

Main river

Modelled 2D grid

Water level in mAOD

- 0 - 5.0
- 5.0 - 5.125
- 5.125 - 5.25
- 5.25 - 5.375
- 5.375 - 5.5
- 5.5 - 5.625
- 5.625 - 5.75
- 5.75 - 5.875
- 5.875 - 6.0

This map shows the 0.1% AEP height data

0 5 10 15 20
metres

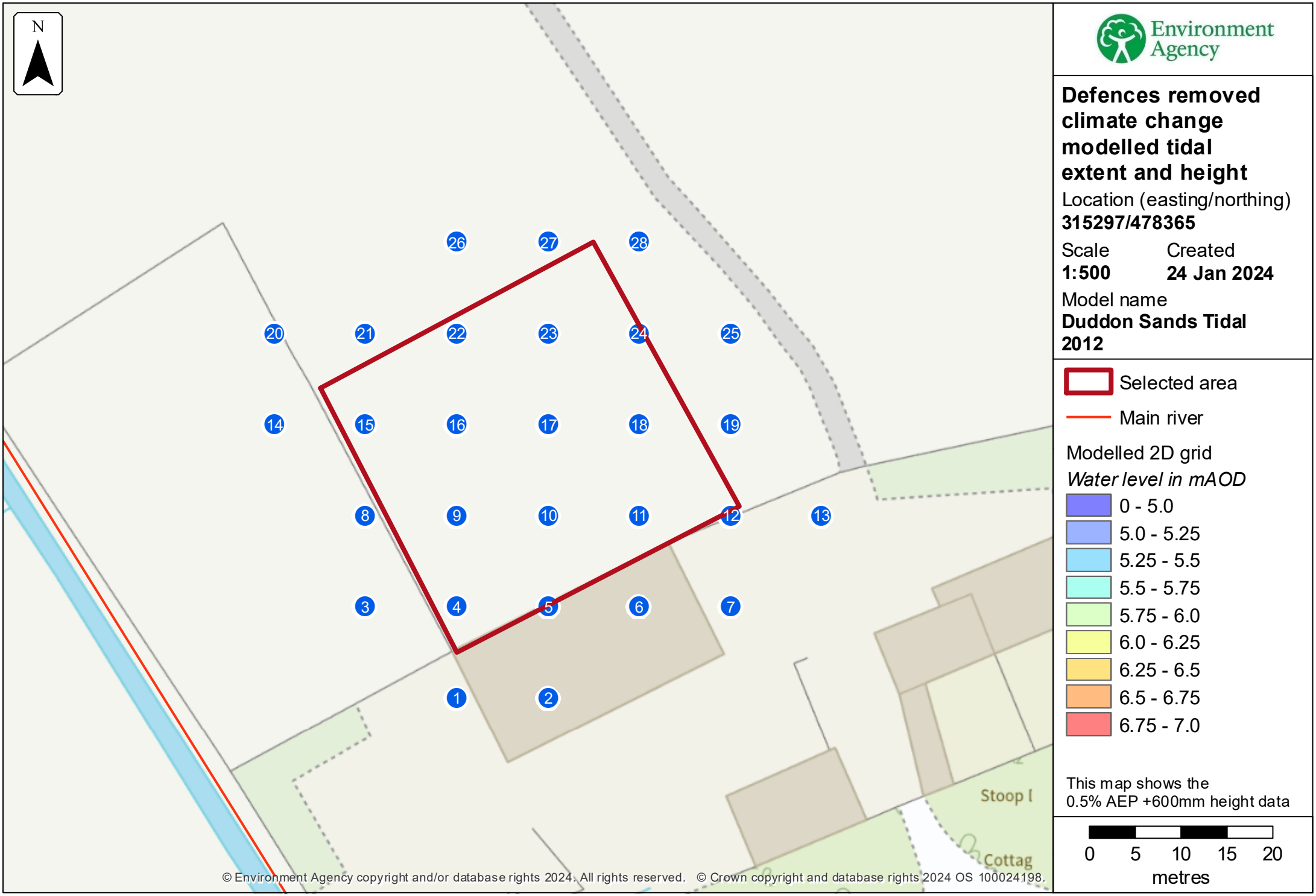
Sample point data

Defences removed

Label	Easting	Northing	5% AEP		2% AEP		1.33% AEP		1% AEP		0.5% AEP		0.1% AEP	
			Depth	Height	Depth	Height	Depth	Height	Depth	Height	Depth	Height	Depth	Height
1	315290	478338					0.56	5.17	0.58	5.19	0.63	5.24	0.76	5.37
2	315300	478338					0.20	5.17	0.21	5.19	0.24	5.24	0.34	5.37
3	315280	478348					0.55	5.17	0.57	5.19	0.62	5.24	0.76	5.37
4	315290	478348					0.34	5.17	0.36	5.19	0.41	5.24	0.54	5.37
5	315300	478348					NoData	NoData	NoData	NoData	NoData	NoData	0.25	5.37
6	315310	478348					NoData	NoData	NoData	NoData	NoData	NoData	0.01	5.37
7	315320	478348					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
8	315280	478358					0.49	5.17	0.51	5.19	0.56	5.24	0.69	5.37
9	315290	478358					0.17	5.17	0.19	5.19	0.24	5.24	0.37	5.37
10	315300	478358					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
11	315310	478358					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
12	315320	478358					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
13	315330	478358					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
14	315270	478368					0.54	5.17	0.56	5.19	0.61	5.24	0.74	5.37
15	315280	478368					0.36	5.17	0.38	5.19	0.43	5.24	0.56	5.37
16	315290	478368					0.10	5.17	0.12	5.19	0.17	5.24	0.29	5.37

Label	Easting	Northing	5% AEP		2% AEP		1.33% AEP		1% AEP		0.5% AEP		0.1% AEP	
			Depth	Height	Depth	Height	Depth	Height	Depth	Height	Depth	Height	Depth	Height
17	315300	478368					0.01	5.17	0.01	5.19	0.02	5.24	0.05	5.37
18	315310	478368					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
19	315320	478368					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
20	315270	478378					0.41	5.17	0.43	5.19	0.48	5.24	0.61	5.37
21	315280	478378					0.23	5.17	0.25	5.19	0.30	5.24	0.43	5.37
22	315290	478378					0.04	5.17	0.06	5.19	0.11	5.24	0.24	5.37
23	315300	478378					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
24	315310	478378					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
25	315320	478378					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
26	315290	478388					NoData	NoData	NoData	NoData	0.03	5.24	0.06	5.37
27	315300	478388					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
28	315310	478388					NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

Data in this table comes from the Duddon Sands Tidal 2012 model.
Height values are shown in mAOD, and depth values are shown in metres.
Any blank cells show where a particular scenario has not been modelled for this location.
Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.



Environment Agency

Defences removed climate change modelled tidal extent and height

Location (easting/northing)
315297/478365

Scale
1:500

Created
24 Jan 2024

Model name
Duddon Sands Tidal 2012

Selected area

Main river

Modelled 2D grid
Water level in mAOD

- 0 - 5.0
- 5.0 - 5.25
- 5.25 - 5.5
- 5.5 - 5.75
- 5.75 - 6.0
- 6.0 - 6.25
- 6.25 - 6.5
- 6.5 - 6.75
- 6.75 - 7.0

This map shows the 0.5% AEP +600mm height data

0 5 10 15 20
metres

Sample point data

Defences removed climate change

Label	Easting	Northing	0.5% AEP (+600mm)	
			Depth	Height
1	315290	478338	1.10	5.71
2	315300	478338	0.67	5.71
3	315280	478348	1.09	5.71
4	315290	478348	0.88	5.71
5	315300	478348	0.54	5.71
6	315310	478348	0.10	5.71
7	315320	478348	NoData	NoData
8	315280	478358	1.02	5.71
9	315290	478358	0.71	5.71
10	315300	478358	0.35	5.71
11	315310	478358	NoData	NoData
12	315320	478358	NoData	NoData
13	315330	478358	NoData	NoData
14	315270	478368	1.07	5.71
15	315280	478368	0.89	5.71
16	315290	478368	0.60	5.71

Label	Easting	Northing	0.5% AEP (+600mm)	
			Depth	Height
17	315300	478368	0.19	5.71
18	315310	478368	NoData	NoData
19	315320	478368	NoData	NoData
20	315270	478378	0.94	5.71
21	315280	478378	0.76	5.71
22	315290	478378	0.58	5.71
23	315300	478378	NoData	NoData
24	315310	478378	NoData	NoData
25	315320	478378	NoData	NoData
26	315290	478388	0.16	5.71
27	315300	478388	NoData	NoData
28	315310	478388	NoData	NoData

Data in this table comes from the Duddon Sands Tidal 2012 model.
Height values are shown in mAOD, and depth values are shown in metres.
Any blank cells show where a particular scenario has not been modelled for this location.
Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.

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

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 Cumbria and Lancashire Environment Agency team at inforequests.cmblnc@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