

Flood risk assessment data

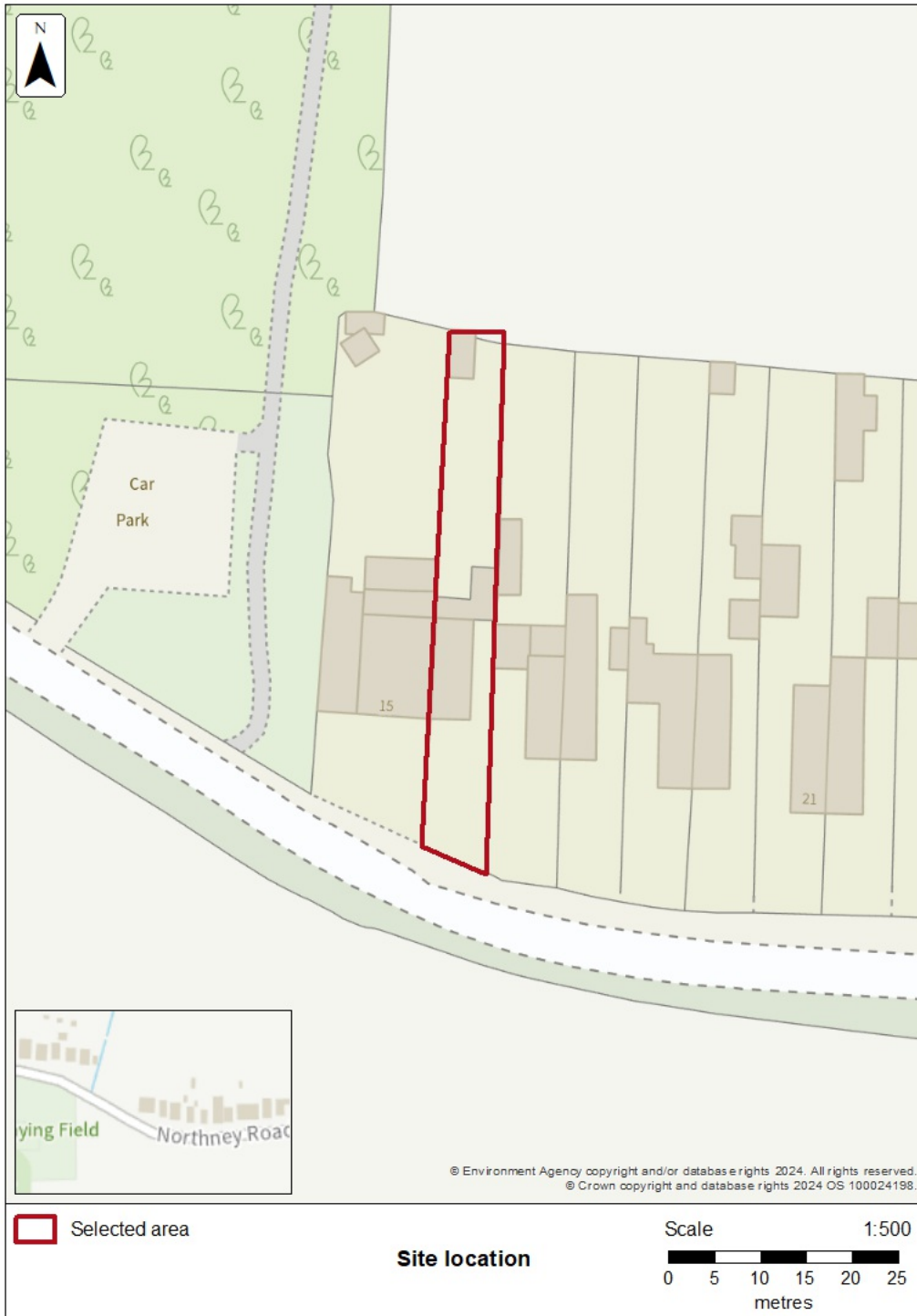
Location of site: 472850 / 103761 (shown as easting and northing coordinates)

Document created on: 14 March 2024

This information was previously known as a product 4.

Customer reference number: SSD/351473HF

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)
- historic flooding
- 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

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

About the models used

Model name: Hayling Island 2018 - East Solent Model

Scenario(s): Defended tidal, defences removed tidal, defended climate change tidal, defended climate change tidal, defences removed climate change tidal, defences removed climate change tidal, defences removed climate change tidal

Date: 1 July 2018

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 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.







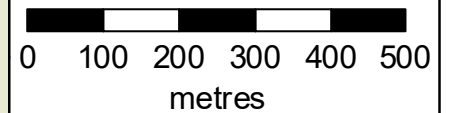
Flood map for planning

Location (easting/northing)
472850/103761

Scale
1:10,000

Created
14 Mar 2024

-  Selected area
-  Main river
-  Flood zone 3
-  Flood zone 2



Historic flooding

This map is an indicative outline of areas that have previously flooded. Remember that:

- our records are incomplete, so the information here is based on the best available data
- it is possible not all properties within this area will have flooded
- other 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 flooding from rivers or the sea

You can also 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.

[Download recorded flood outlines in GIS format](#)








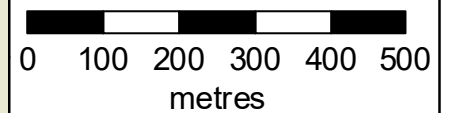
Historic flood map

Location (easting/northing)
472850/103761

Scale
1:10,000

Created
14 Mar 2024

-  Selected area
-  Main river
- Date of flood event
 -  March, 2008
 -  April, 1985
 -  December, 1981



Historic flood event data

Start date	End date	Source of flood	Cause of flood	Affects location
10 March 2008	10 March 2008	sea	other	No
8 April 1985	8 April 1985	unknown	unknown	No
14 December 1981	14 December 1981	other	unknown	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

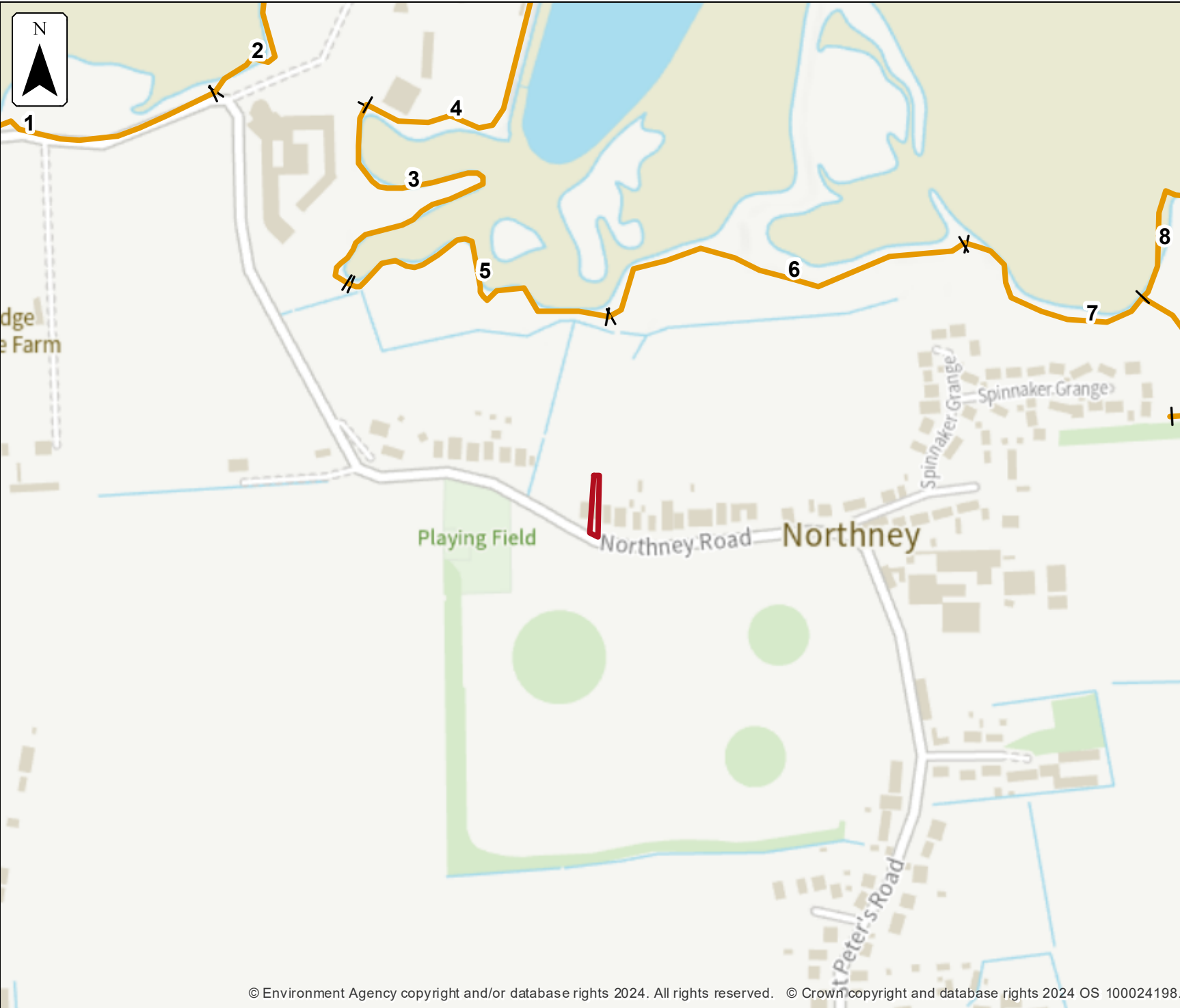
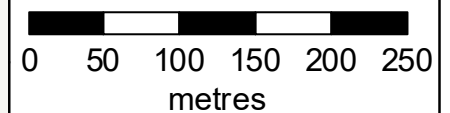
Flood defences

Location (easting/northing)
472850/103761

Scale
1:5,000

Created
14 Mar 2024

-  Selected area
-  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	470294	Engineered High Ground					2.90
2	157907	Embankment	200				3.90
3	470291	Engineered High Ground					3.30
4	470292	Engineered High Ground					4.80
5	470289	Embankment					3.0
6	157908	Embankment	200		3.70	3.70	3.70
7	156612	Embankment	200				4.50
8	87679	Embankment	200	Fair			4.50

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
- map showing the approximate water levels for the return period with the largest flood extent for a scenario and a table 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
- Defended climate change modelled tidal: risk of flooding from the sea where there are flood defences, including estimated impact of climate change
- Defences removed climate change modelled tidal: risk of flooding from the sea where flood defences have been removed, including estimated impact of climate change



Defended modelled tidal extent

Location (easting/northing)
472850/103761


Scale Created
1:10,000 14 Mar 2024


Model name
**Hayling Island 2018
East Solent Model**


 Selected area


 Main river

Modelled flood extent

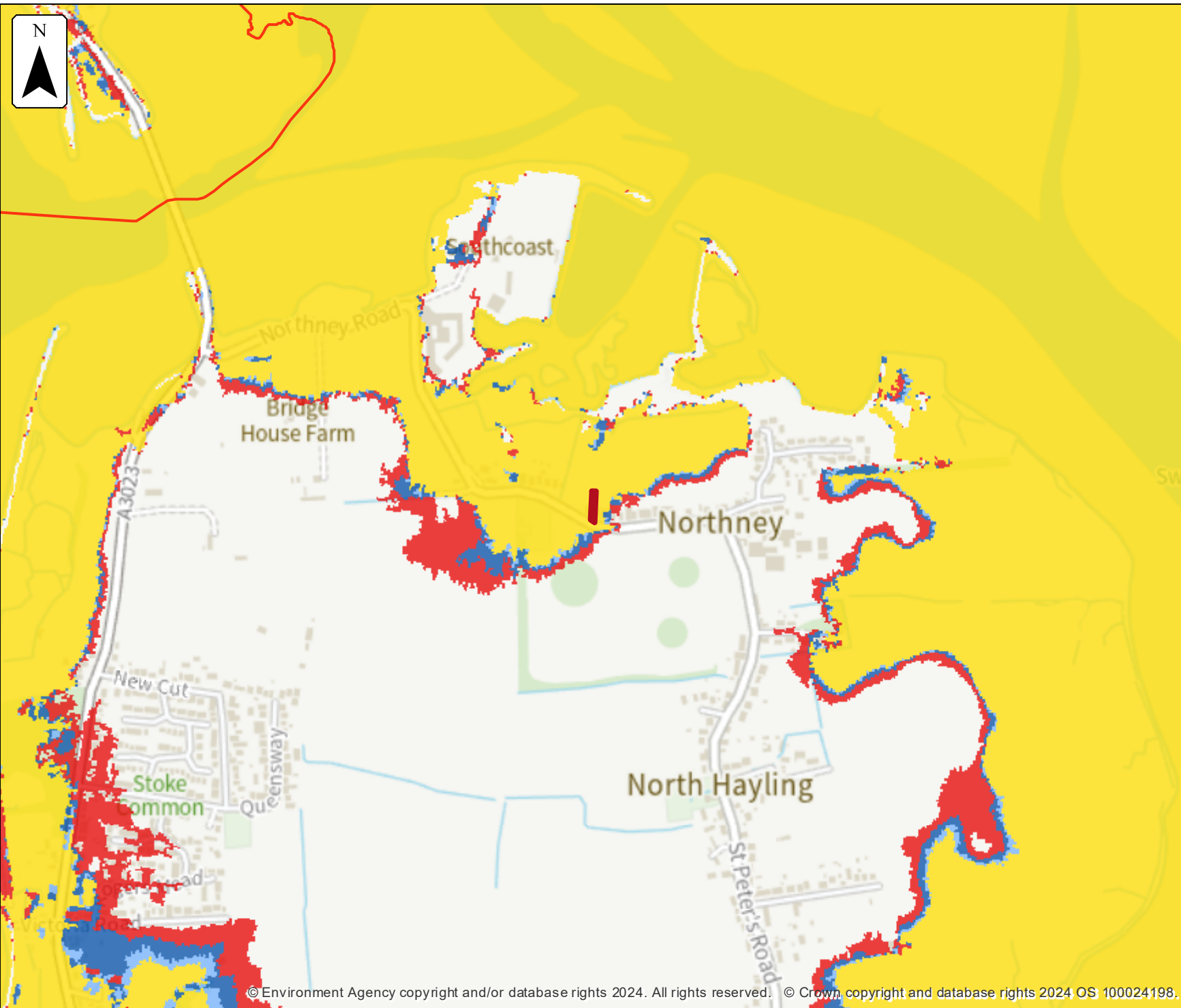
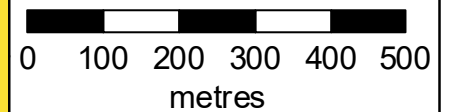
 1.33% AEP

 1% AEP

 0.5% AEP

 0.1% AEP

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





Defences removed modelled tidal extent

Location (easting/northing)
472850/103761


Scale Created
1:10,000 14 Mar 2024


Model name
**Hayling Island 2018
East Solent Model**

 Selected area

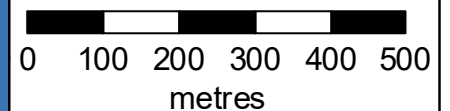
 Main river

Modelled flood extent

 0.5% AEP

 0.1% AEP

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








Defended climate change modelled tidal extent

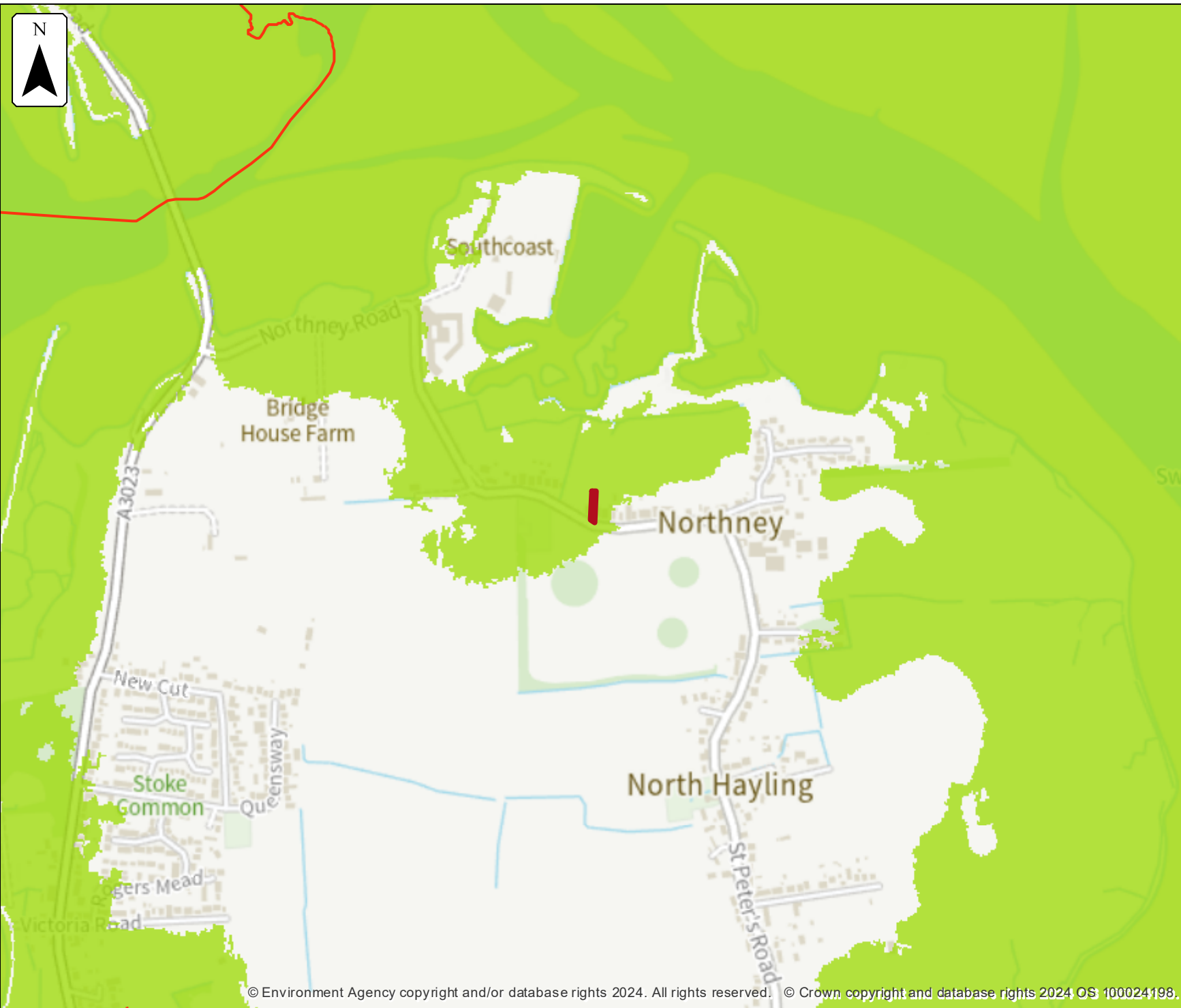
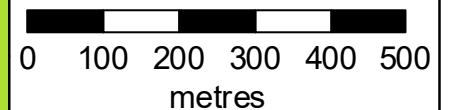
Location (easting/northing)
472850/103761

Scale Created
1:10,000 14 Mar 2024

Model name
**Hayling Island 2018
East Solent Model**

-  Selected area
-  Main river
- Modelled flood extent
-  0.5% AEP (+90mm)

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





Defended climate change modelled tidal extent

Location (easting/northing)
472850/103761

Scale Created
1:10,000 14 Mar 2024

Model name
**Hayling Island 2018
East Solent Model**

 Selected area

 Main river

Modelled flood extent

 0.5% AEP (+320mm)

 0.1% AEP (+320mm)

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





Defended climate change modelled tidal extent

Location (easting/northing)
472850/103761

Scale Created
1:10,000 14 Mar 2024

Model name
**Hayling Island 2018
East Solent Model**

 Selected area

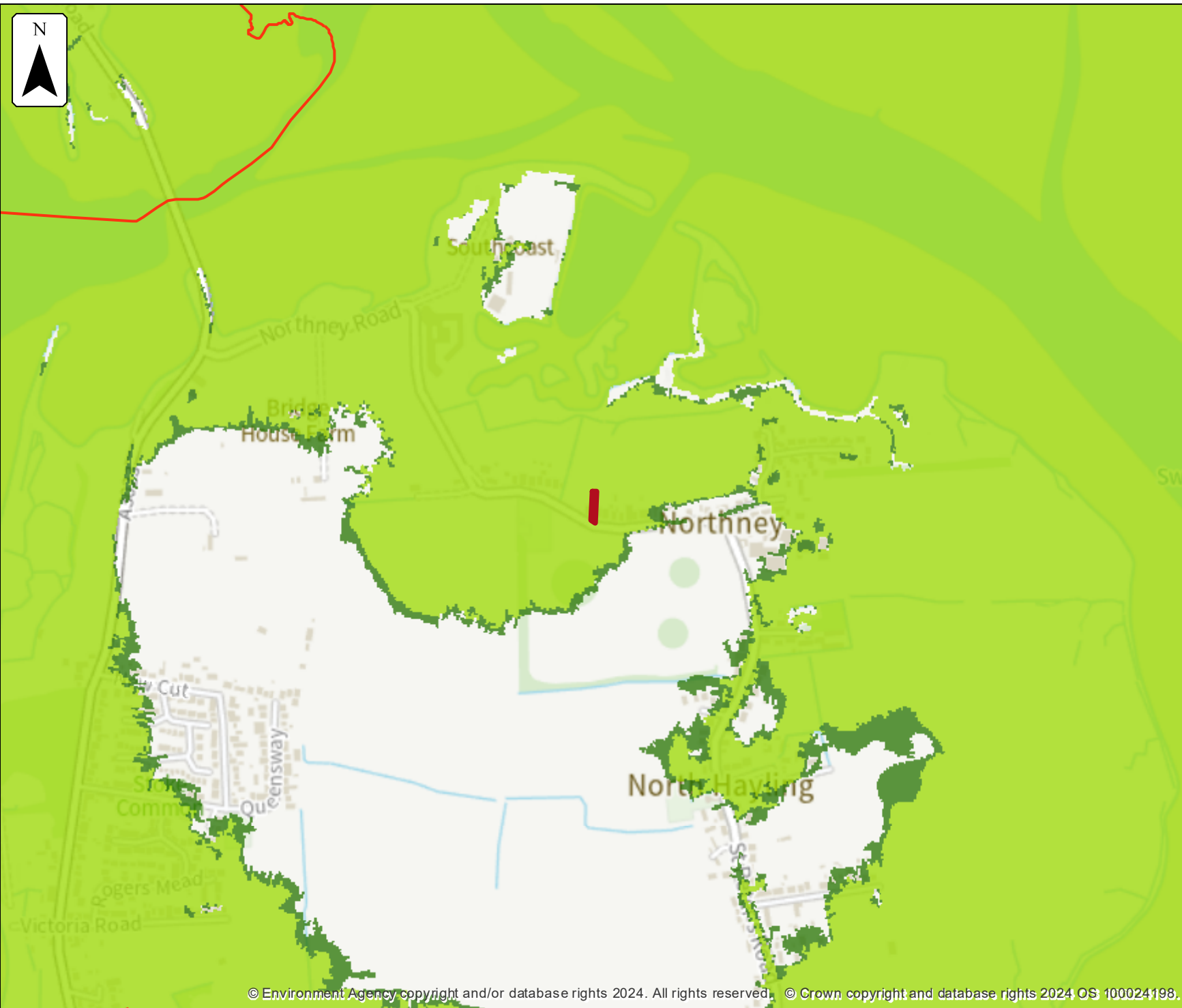
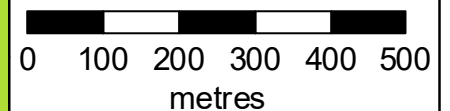
 Main river

Modelled flood extent

 0.5% AEP (+744mm)

 0.1% AEP (+744mm)

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








Defences removed climate change modelled tidal extent

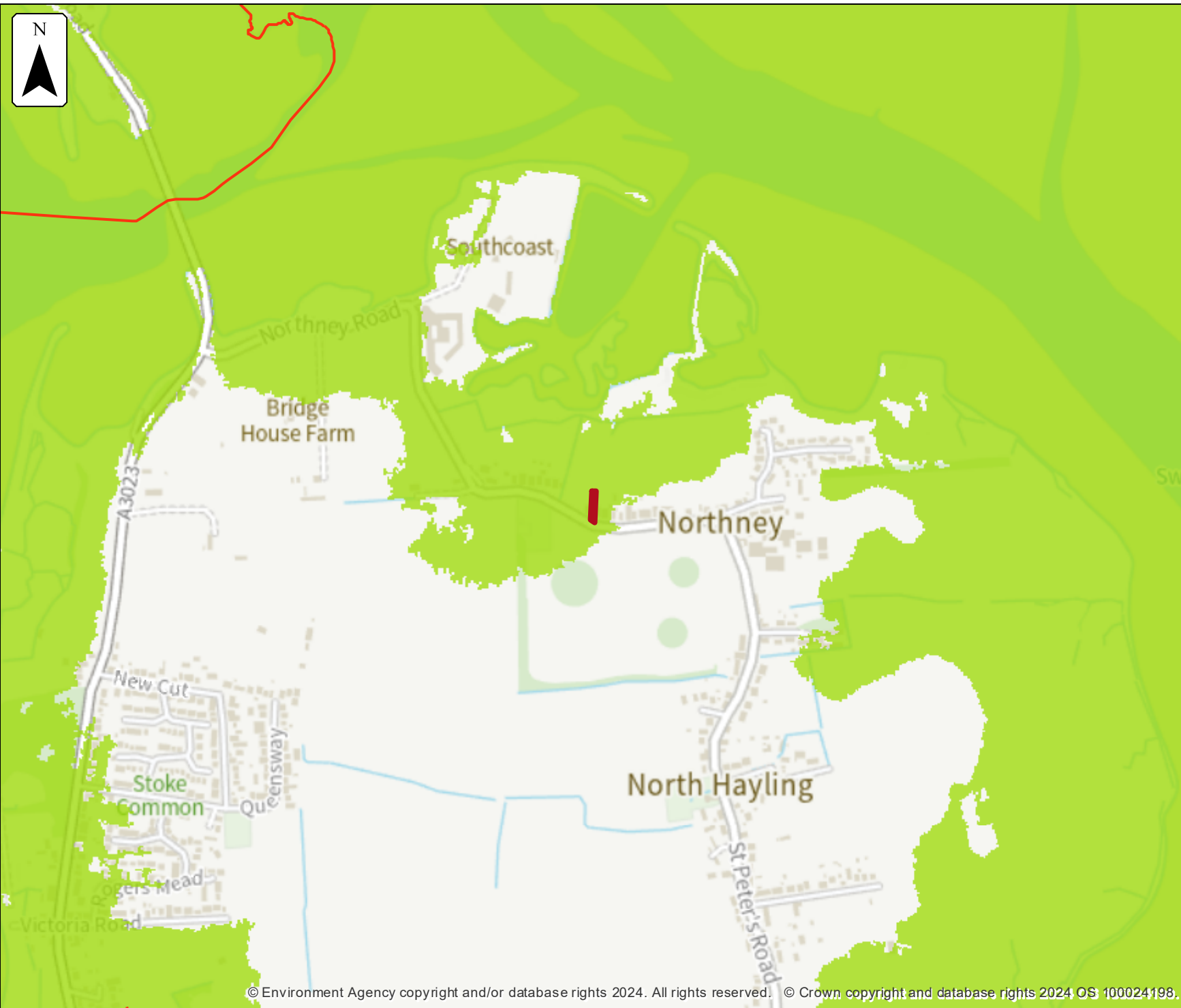
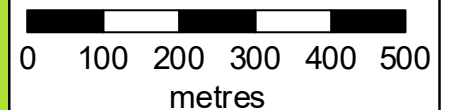
Location (easting/northing)
472850/103761

Scale Created
1:10,000 14 Mar 2024

Model name
**Hayling Island 2018
East Solent Model**

-  Selected area
-  Main river
- Modelled flood extent
 -  0.5% AEP (+90mm)

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






Defences removed climate change modelled tidal extent

Location (easting/northing)
472850/103761

Scale Created
1:10,000 14 Mar 2024

Model name
**Hayling Island 2018
East Solent Model**

 Selected area

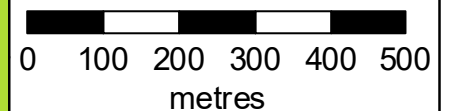
 Main river

Modelled flood extent

 0.5% AEP (+320mm)

 0.1% AEP (+320mm)

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









Defences removed climate change modelled tidal extent

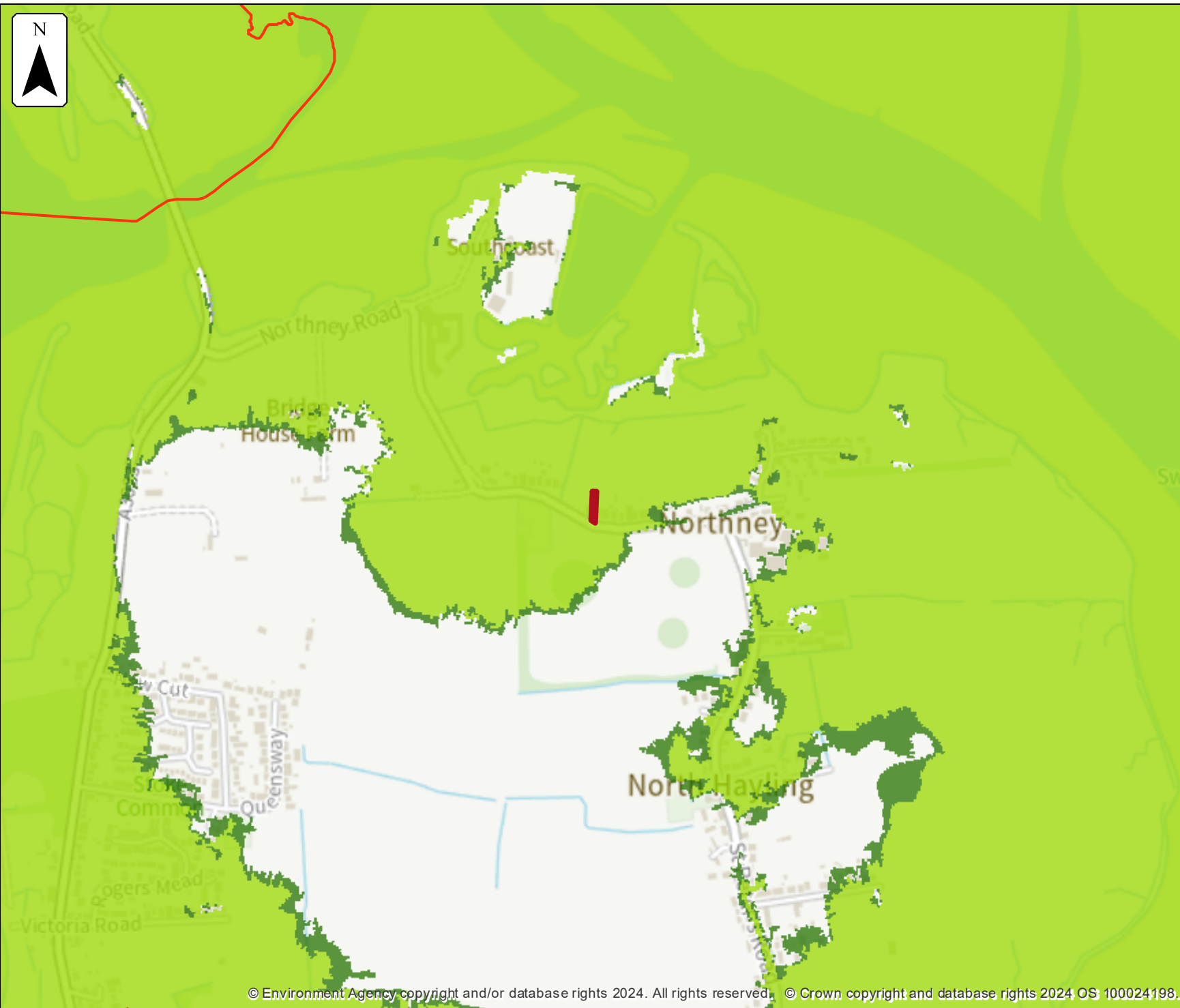
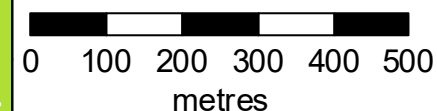
Location (easting/northing)
472850/103761

Scale Created
1:10,000 14 Mar 2024

Model name
**Hayling Island 2018
East Solent Model**

-  Selected area
-  Main river
- Modelled flood extent
-  0.5% AEP (+744mm)
-  0.1% AEP (+744mm)

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



2018 East Solent Coastal Model - Flood Levels Centred on: SU7284803757






Flood Levels Map

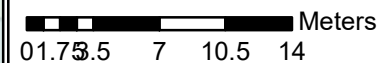
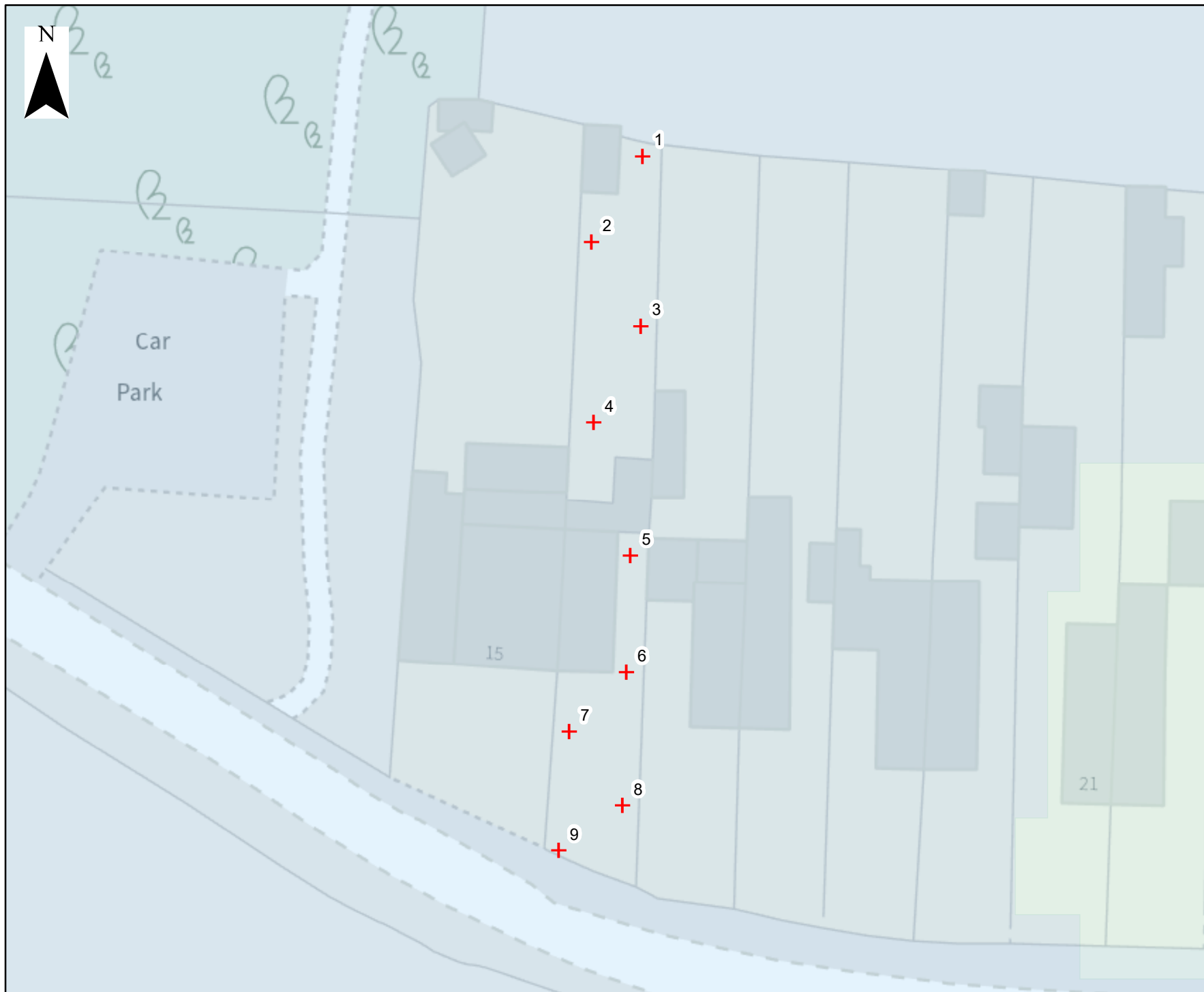
Location (easting/northing)
472848/103757

Scale
1:400

Created
14th March 2024

Legend

-  Location Points
-  flood_zone_3
-  flood_zone_2



Water Depths & Levels for SU7284803757

Point	Water Depth (Metres)		Water Surface Level (mAOD*)		Ground Level
	0.5% Annual Probability/1 in 200 Year (Flood Zone 3)	0.1% Annual Probability/1 in 1000 Year (Flood Zone 2)	0.5% Annual Probability/1 in 200 Year (Flood Zone 3)	0.1% Annual Probability/1 in 1000 Year (Flood Zone 2)	
1	0.74	0.92	3.46	3.64	2.72
2	0.73	0.91	3.46	3.64	2.73
3	0.69	0.87	3.46	3.64	2.77
4	0.74	0.92	3.45	3.63	2.71
5	0.50	0.68	3.45	3.63	2.95
6	0.48	0.66	3.46	3.64	2.98
7	0.61	0.78	3.46	3.63	2.85
8	0.47	0.64	3.46	3.63	2.99
9	0.66	0.83	3.46	3.63	2.80

* Levels in metres above Ordnance Datum Newlyn

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 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