Flood risk assessment data

Location of site: 302081 / 514068 (shown as easting and northing coordinates)
Document created on: 24 June 2022
This information was previously known as a product 4.
Customer reference number: 2A2Y4VDG4JT5

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)
- areas benefiting from defences
- historic flooding
- flood defences and attributes
- 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: Cleator Moor 2009
Scenario(s): No defences exist fluvial
Date: 1 March 2009

Model name: Ehen 2015
Scenario(s): Defended fluvial, defences removed fluvial, defended climate change fluvial, defences removed climate change fluvial
Date: 11 July 2016

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 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

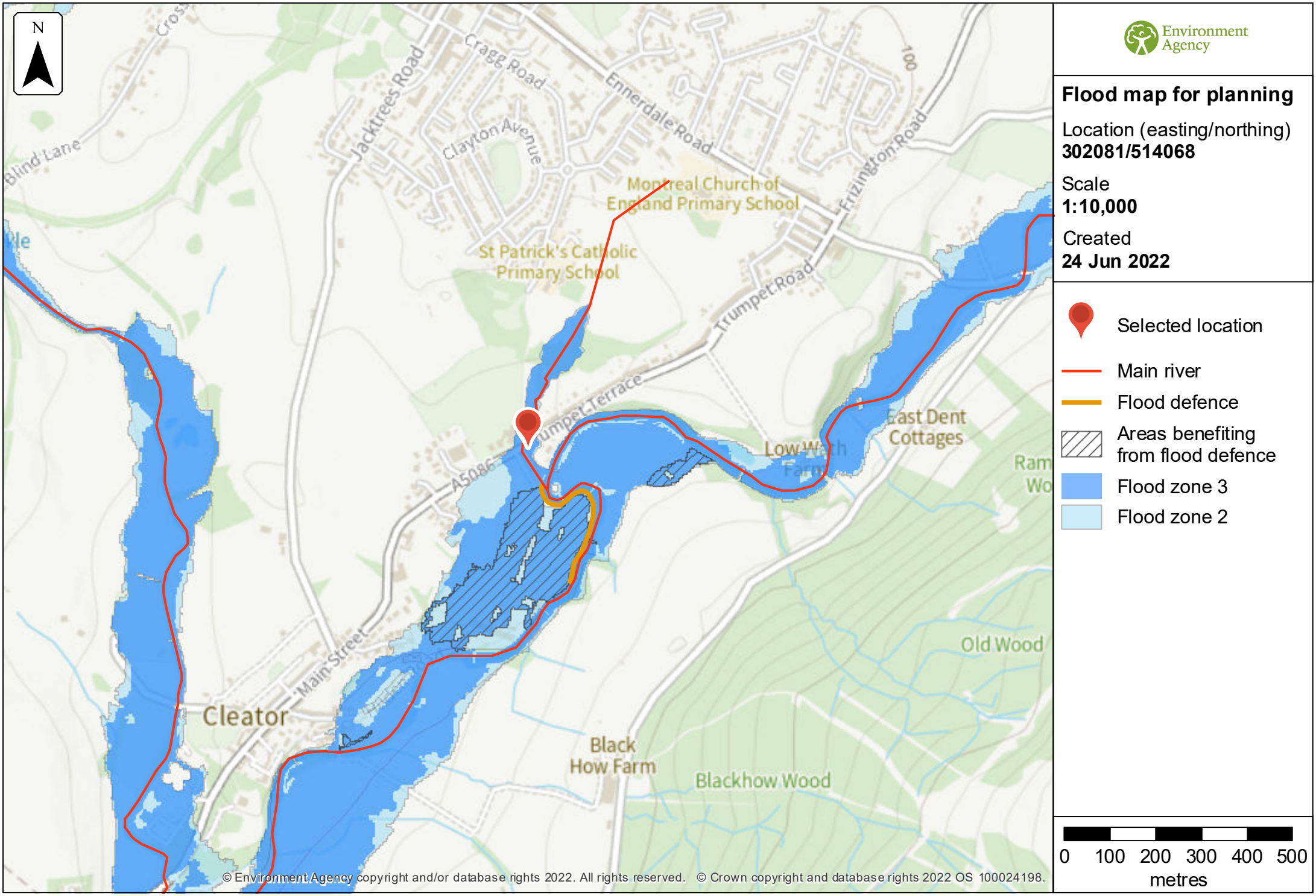
This data is updated on a quarterly basis as better data becomes available.

Areas benefiting from defences

This map shows the areas benefiting from defences for 2 possible events:

- fluvial (river flooding) event that has a 1% annual exceedance probability (AEP), this means a 1% chance of occurring in any one year
- tidal or coastal event that has a 0.5% annual exceedance probability (AEP), this means a 0.5% chance of occurring in any one year

Download the GIS dataset for areas benefiting from defences


N
Environment Agency
Flood map for planning
Location (easting/northing)
302081/514068
Scale
1:10,000
Created
24 Jun 2022
Selected location
Main river
Flood defence
Areas benefiting from flood defence
Flood zone 3
Flood zone 2
0 100 200 300 400 500
metres
Jacktrees Road
Cragg Road
Ennerdale Road
Clayton Avenue
Blind Lane
Frizington Road
Montreal Church of England Primary School
St Patrick's Catholic Primary School
Trumpet Road
Trumpet Terrace
A5086
East Dent Cottages
Low Wath Farm
Main Street
Cleator
Black How Farm
Blackhow Wood
Old Wood
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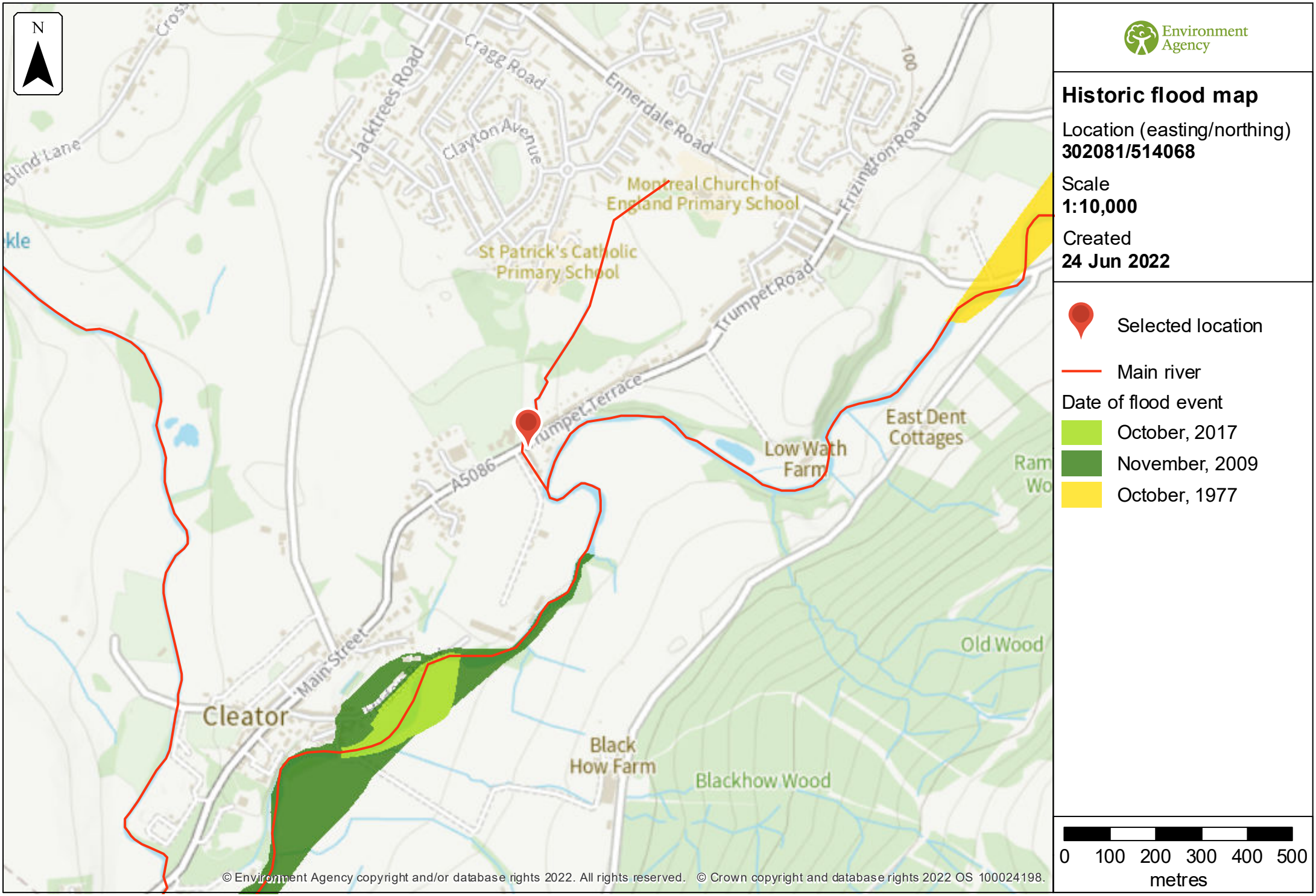
Historic flooding

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


N
Environment Agency
Historic flood map
Location (easting/northing)
302081/514068
Scale
1:10,000
Created
24 Jun 2022
Selected location
Main river
Date of flood event
October, 2017
November, 2009
October, 1977
Jacktrees Road
Cragg Road
Ennerdale Road
Clayton Avenue
Frizington Road
Montreal Church of England Primary School
St Patrick's Catholic Primary School
Trumpet Road
Trumpet Terrace
A5086
East Dent Cottages
Low Wath Farm
Main Street
Cleator
Black How Farm
Blackhow Wood
Old Wood
Blind Lane
0 100 200 300 400 500
metres
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Historic flood event data

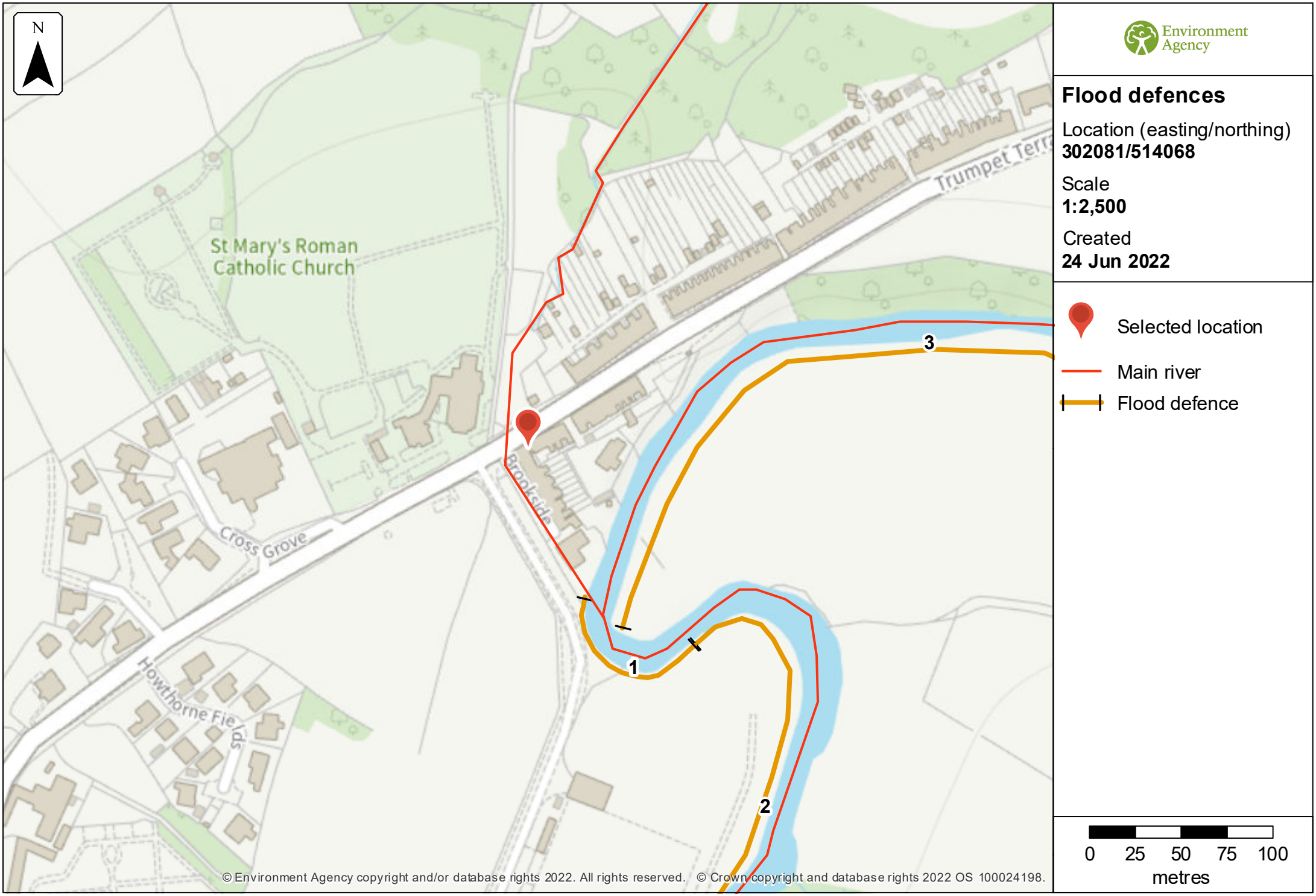
Start date	End date	Source of flood	Cause of flood	Affects location
11 October 2017	12 October 2017	main river	channel capacity exceeded (no raised defences)	No
19 November 2009	22 November 2009	main river	channel capacity exceeded (no raised defences)	No
24 October 1977	24 October 1977	unknown	unknown	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.



Environment Agency

Flood defences

Location (easting/northing)
302081/514068

Scale
1:2,500

Created
24 Jun 2022

Selected location

Main river

Flood defence

0 25 50 75 100
metres

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	37628	Embankment	100	Fair	64.52	64.52	64.52
2	37627	Embankment	100	Fair	62.49	63.40	62.49
3	80487	Embankment	5	Poor	63.84	65.35	63.84

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

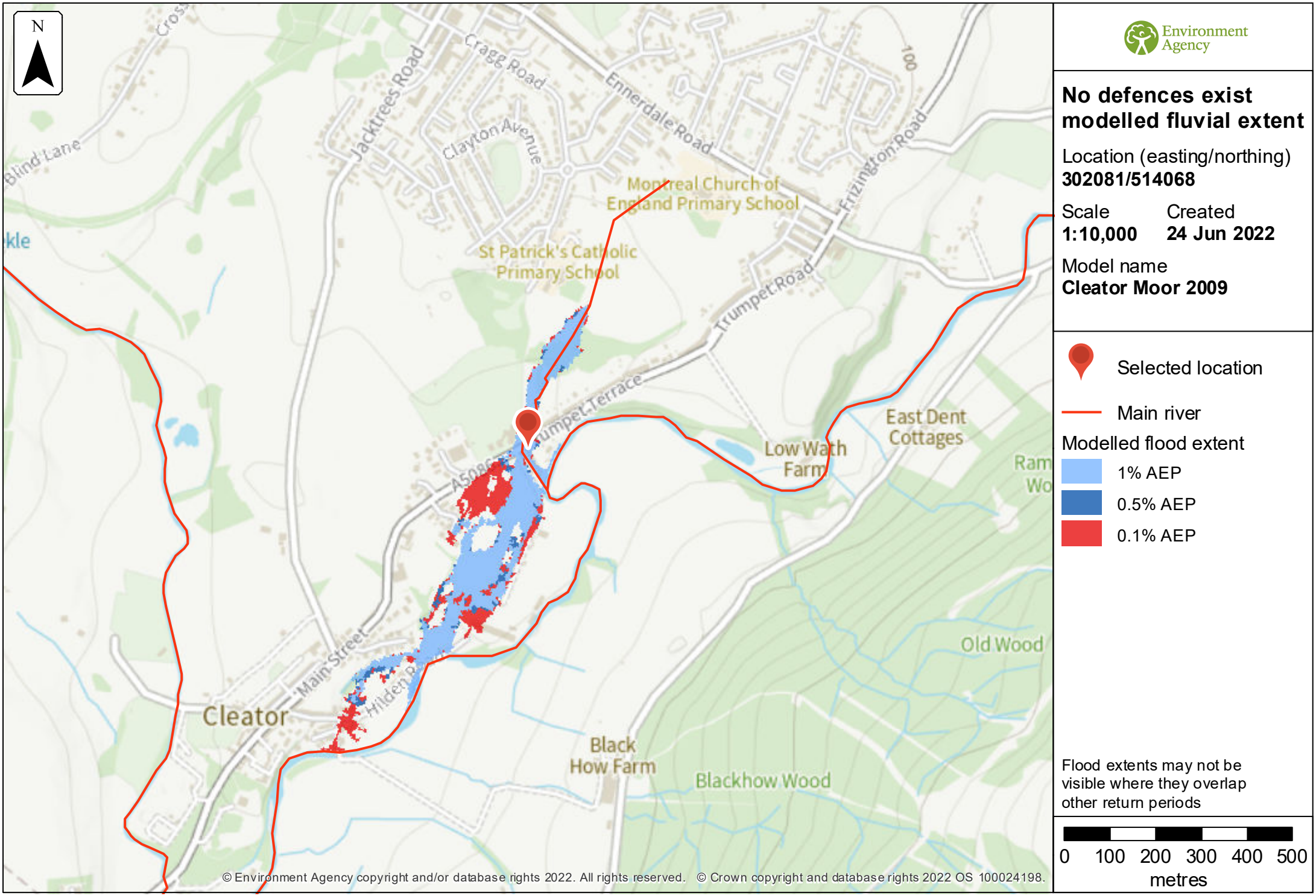
The climate change data included in the models may not include the latest flood risk assessment climate change allowances. Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

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 fluvial: risk of flooding from rivers where there are flood defences
- Defences removed modelled fluvial: risk of flooding from rivers where flood defences have been removed
- No defences exist modelled fluvial: risk of flooding from rivers where there are no flood defences
- Defended climate change modelled fluvial: risk of flooding from rivers where there are flood defences, including estimated impact of climate change
- Defences removed climate change modelled fluvial: risk of flooding from rivers where flood defences have been removed, including estimated impact of climate change


N
Environment Agency
No defences exist modelled fluvial extent
Location (easting/northing)
302081/514068
Scale
1:10,000
Created
24 Jun 2022
Model name
Cleator Moor 2009
Selected location
Main river
Modelled flood extent
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
Jacktrees Road
Cragg Road
Ennerdale Road
Clayton Avenue
Blind Lane
Montreal Church of England Primary School
St Patrick's Catholic Primary School
Trumpet Road
Frizington Road
Trumpet Terrace
East Dent Cottages
Low Wath Farm
A5086
Main Street
Cleator
Black How Farm
Blackhow Wood
Old Wood
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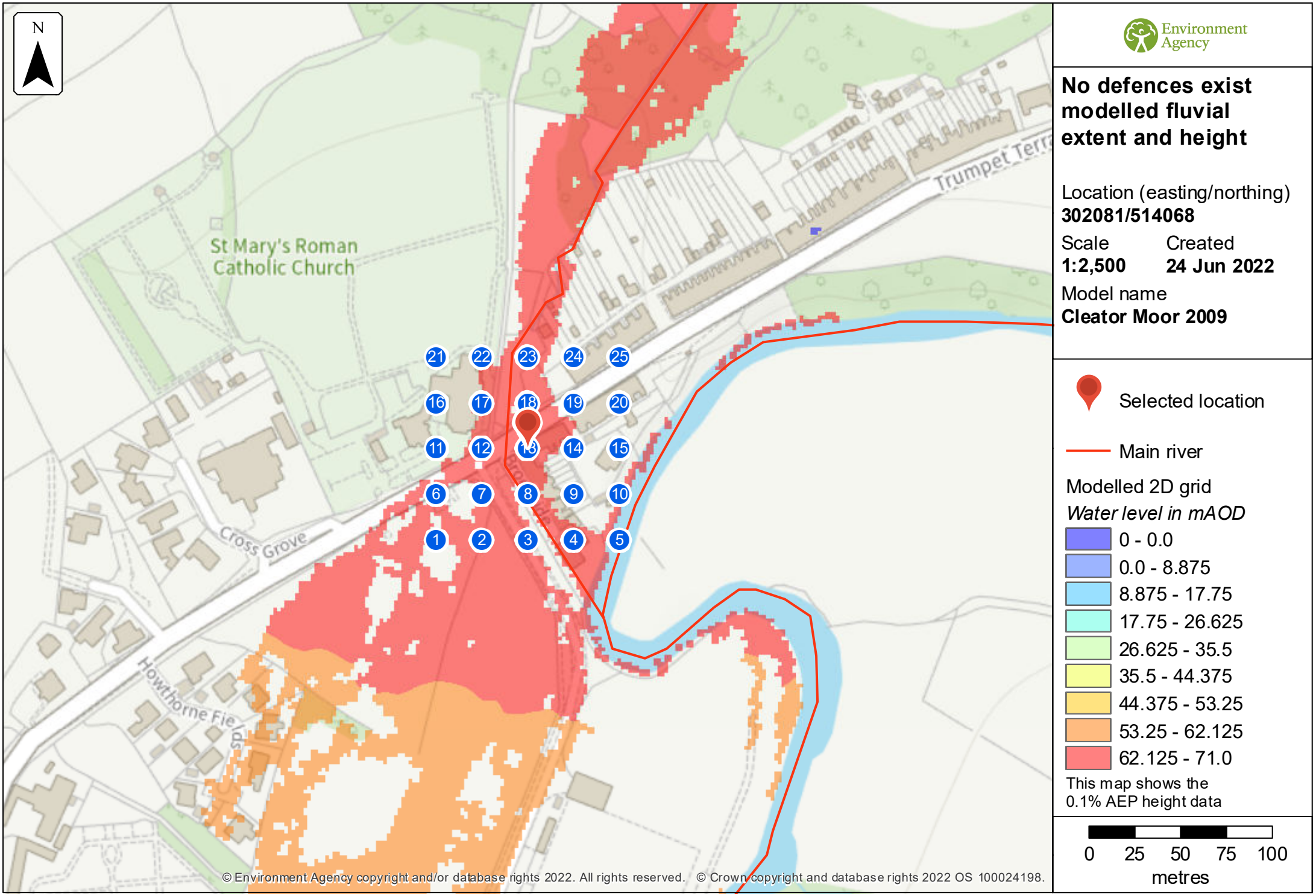


Environment Agency

No defences exist modelled fluvial extent and height

Location (easting/northing)
302081/514068

Scale
1:2,500

Created
24 Jun 2022

Model name
Cleator Moor 2009

Selected location

Main river

Modelled 2D grid
Water level in mAOD

- 0 - 0.0
- 0.0 - 8.875
- 8.875 - 17.75
- 17.75 - 26.625
- 26.625 - 35.5
- 35.5 - 44.375
- 44.375 - 53.25
- 53.25 - 62.125
- 62.125 - 71.0

This map shows the 0.1% AEP height data

0 25 50 75 100
metres

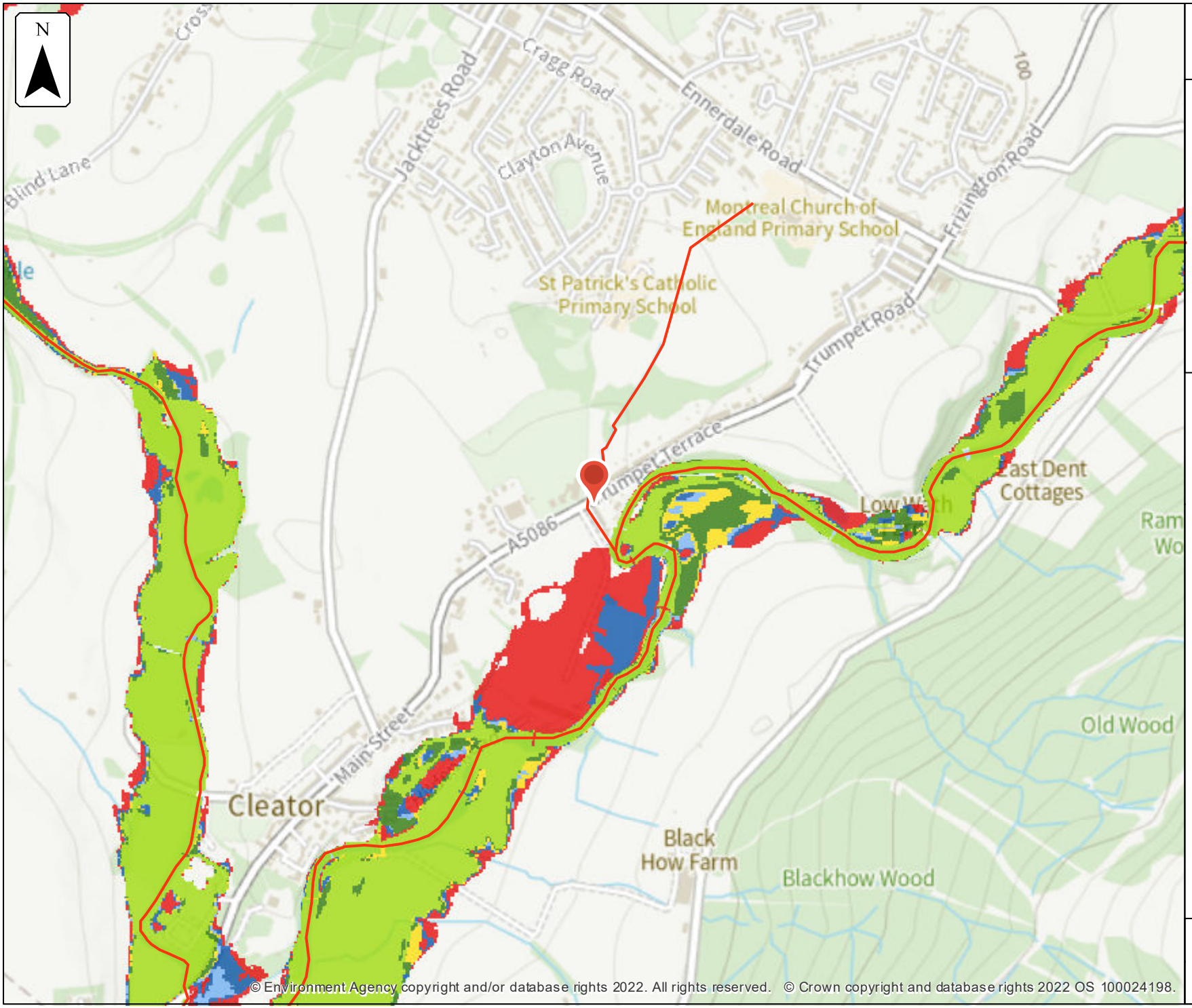
Sample point data

No defences exist

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	302031	514018							NoData	NoData	NoData	NoData	NoData	NoData
2	302056	514018							0.01	64.62	0.01	64.63	0.02	64.65
3	302081	514018							NoData	NoData	0.02	64.46	0.03	64.47
4	302106	514018							0.11	65.60	0.12	65.61	0.15	65.63
5	302131	514018							NoData	NoData	NoData	NoData	NoData	NoData
6	302031	514043							0.00	65.56	0.00	65.55	0.00	65.56
7	302056	514043							0.08	65.44	0.10	65.46	0.12	65.48
8	302081	514043							0.01	65.69	0.01	65.71	0.02	65.76
9	302106	514043							NoData	NoData	NoData	NoData	NoData	NoData
10	302131	514043							NoData	NoData	NoData	NoData	NoData	NoData
11	302031	514068							NoData	NoData	NoData	NoData	NoData	NoData
12	302056	514068							0.03	65.92	0.03	65.93	0.04	65.95
13	302081	514068							0.16	65.92	0.17	65.93	0.21	65.97
14	302106	514068							NoData	NoData	NoData	NoData	NoData	NoData
15	302131	514068							NoData	NoData	NoData	NoData	NoData	NoData
16	302031	514093							NoData	NoData	NoData	NoData	NoData	NoData

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	302056	514093							0.05	66.49	0.08	66.51	0.11	66.54
18	302081	514093							0.13	66.61	0.15	66.62	0.17	66.64
19	302106	514093							NoData	NoData	NoData	NoData	NoData	NoData
20	302131	514093							NoData	NoData	NoData	NoData	NoData	NoData
21	302031	514118							NoData	NoData	NoData	NoData	NoData	NoData
22	302056	514118							NoData	NoData	NoData	NoData	NoData	NoData
23	302081	514118							0.15	66.93	0.15	66.94	0.18	66.97
24	302106	514118							NoData	NoData	NoData	NoData	NoData	NoData
25	302131	514118							NoData	NoData	NoData	NoData	NoData	NoData

Data in this table comes from the Cleator Moor 2009 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

Defended modelled fluvial extent

Location (easting/northing)
302081/514068

Scale
1:10,000

Created
24 Jun 2022

Model name
Ehen 2015

Selected location

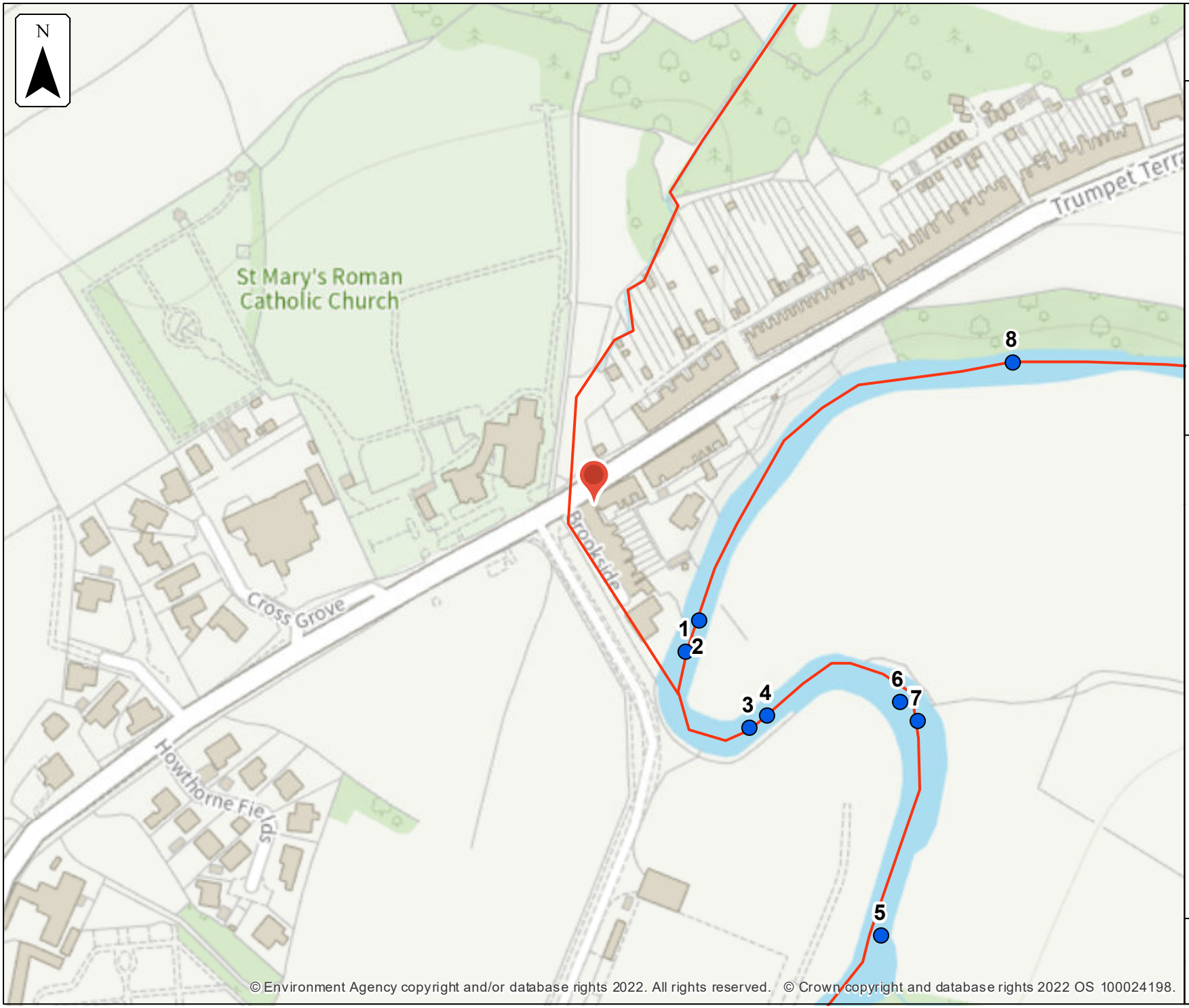
Main river

Modelled flood extent

- 5% AEP
- 2% 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

Defended modelled fluvial node locations

Location (easting/northing)
302081/514068

Scale
1:2,500

Created
24 Jun 2022

Model name
Ehen 2015

Selected location

Modelled location

Main river

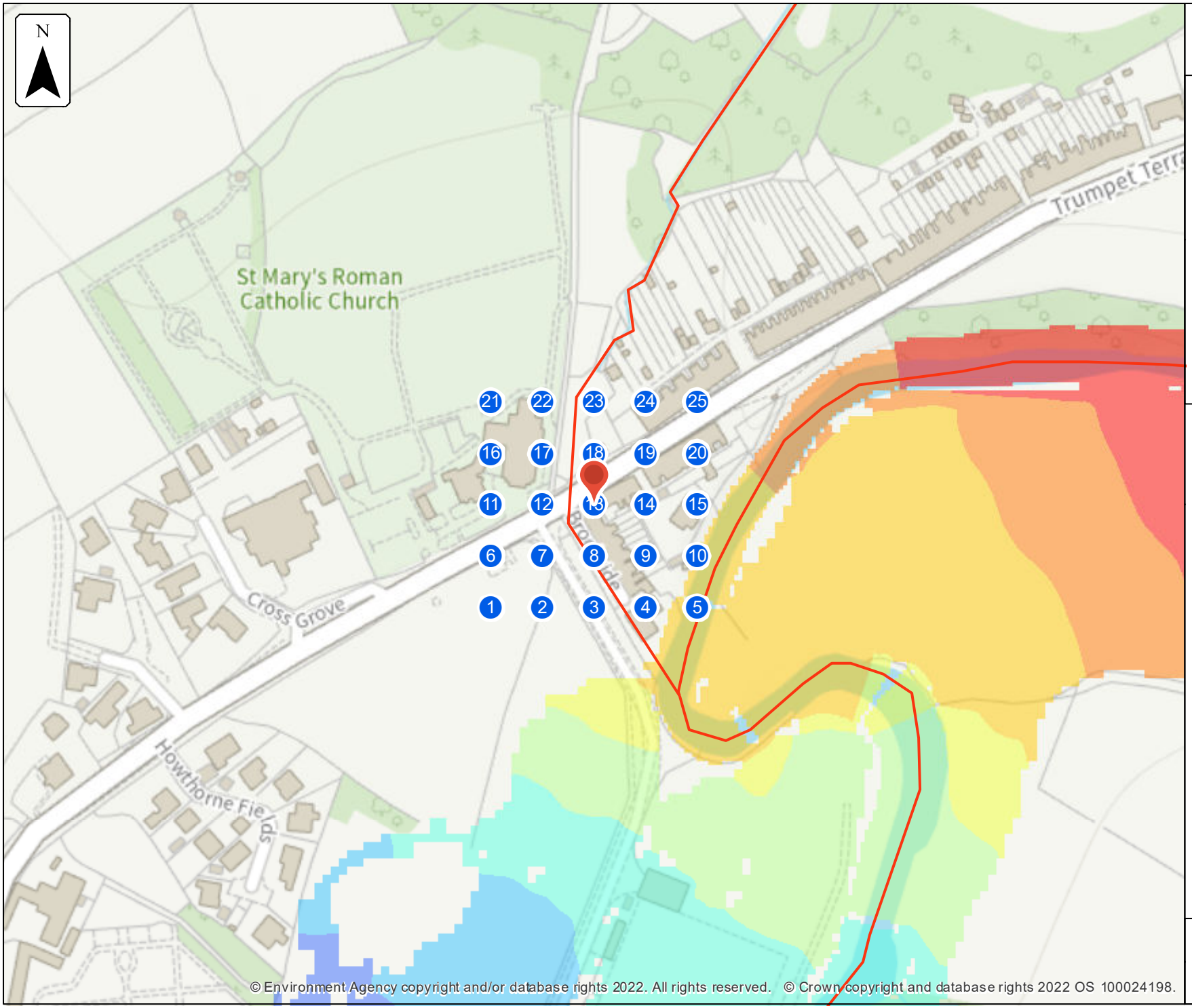
0 25 50 75 100
metres

Modelled node locations data

Defended

Label	Modelled location ID	Easting	Northing	5% AEP		2% AEP		1.33% AEP		1% AEP		0.5% AEP		0.1% AEP	
				Level	Flow	Level	Flow	Level	Flow	Level	Flow	Level	Flow	Level	Flow
1	1204197	302126	513995	63.83	85.08	63.90	92.13	63.94	95.29	63.97	96.51	64.02	100.49	64.15	115.41
2	1204003	302132	514010	64.05	83.59	64.15	90.07	64.19	92.97	64.22	94.06	64.28	97.70	64.45	111.41
3	1204552	302156	513958	63.23	84.31	63.42	89.70	63.55	91.20	63.62	91.36	63.78	92.75	64.13	99.83
4	1203893	302165	513964	63.23	84.31	63.42	89.70	63.55	91.20	63.62	91.36	63.78	92.75	64.13	99.83
5	1204634	302221	513857	61.71	97.06	61.88	111.01	61.99	121.17	62.05	126.74	62.19	141.56	62.54	184.17
6	1204739	302230	513970	62.92	97.31	63.09	111.80	63.20	122.09	63.25	127.21	63.38	140.22	63.68	172.62
7	1204329	302239	513961	62.18	97.31	62.32	111.80	62.42	122.09	62.47	127.21	62.64	140.22	63.14	172.62
8	1203899	302285	514136	65.13	95.36	65.25	106.74	65.31	113.71	65.34	117.14	65.40	126.07	65.54	157.11

Data in this table comes from the Ehen 2015 model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.



Environment Agency

Defended modelled fluvial extent and height

Location (easting/northing)
302081/514068

Scale
1:2,500

Created
24 Jun 2022

Model name
Ehen 2015

Selected location

Main river

Modelled 2D grid
Water level in mAOD

- 0 - 60.0
- 60.0 - 60.75
- 60.75 - 61.5
- 61.5 - 62.25
- 62.25 - 63.0
- 63.0 - 63.75
- 63.75 - 64.5
- 64.5 - 65.25
- 65.25 - 66.0

This map shows the 0.1% AEP height data

0 25 50 75 100
metres

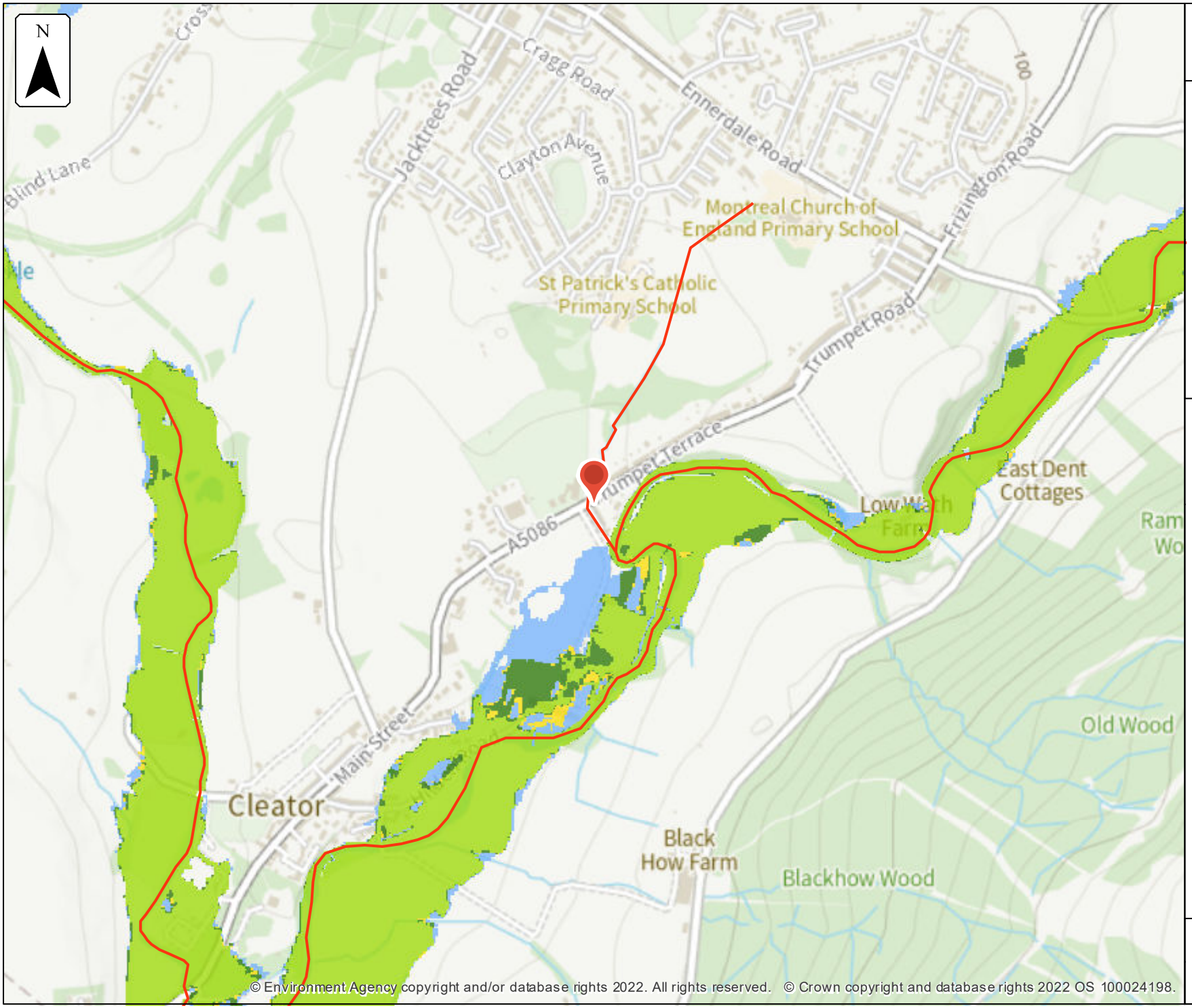
Sample point data

Defended

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	302031	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2	302056	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
3	302081	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
4	302106	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
5	302131	514018	3.62	63.82	3.69	63.89	3.74	63.93	3.77	63.97	3.81	64.01	3.95	64.15
6	302031	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
7	302056	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
8	302081	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
9	302106	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
10	302131	514043	NoData	NoData	NoData	NoData	0.00	63.98	0.00	64.00	0.01	64.05	0.05	64.21
11	302031	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
12	302056	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
13	302081	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
14	302106	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
15	302131	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
16	302031	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

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	302056	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
18	302081	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
19	302106	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
20	302131	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
21	302031	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
22	302056	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
23	302081	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
24	302106	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
25	302131	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

Data in this table comes from the Ehen 2015 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

Defended climate change modelled fluvial extent

Location (easting/northing)
302081/514068

Scale
1:10,000

Created
24 Jun 2022

Model name
Ehen 2015

Selected location

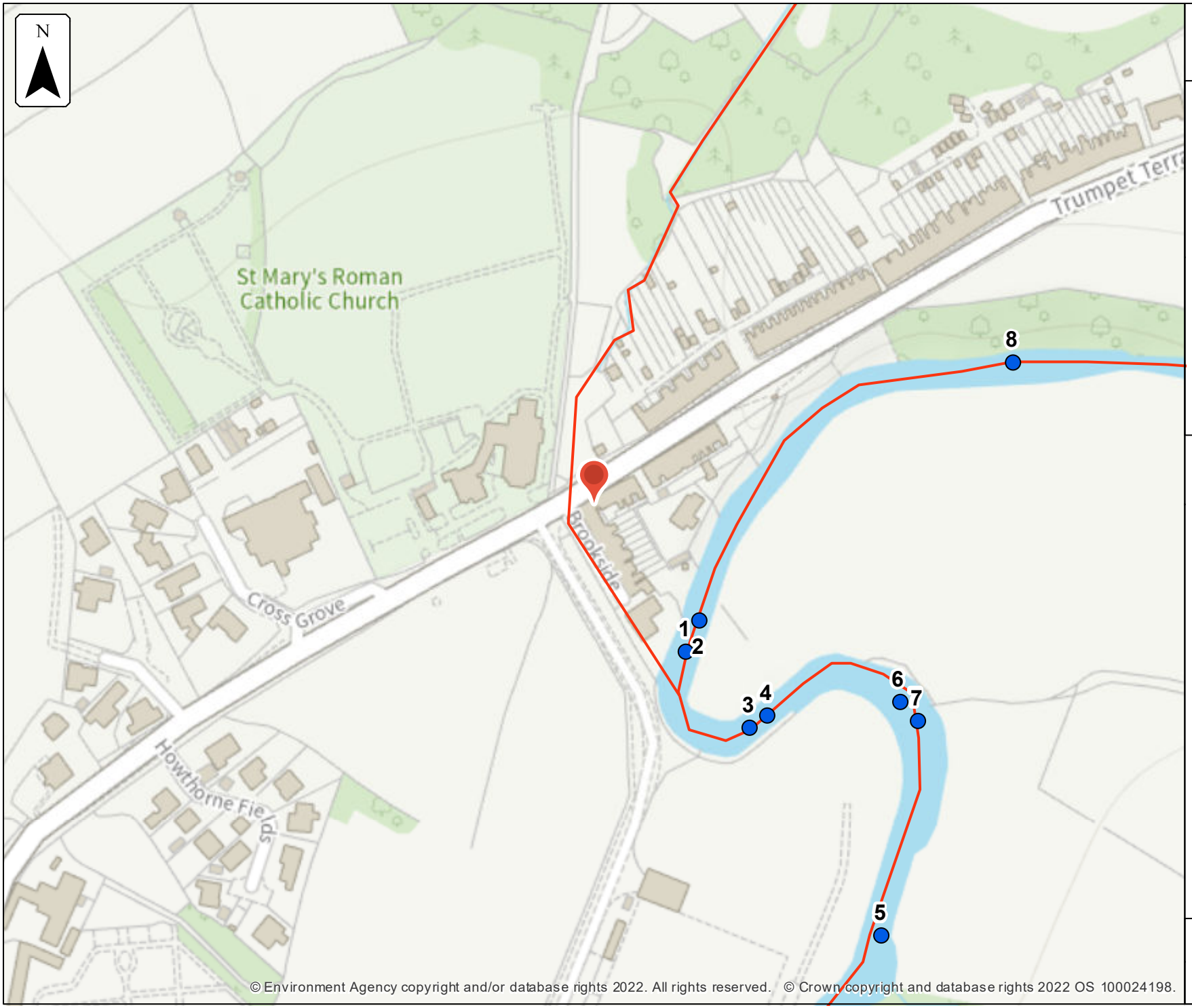
Main river

Modelled flood extent

- 1.0% AEP (+20%)
- 1.0% AEP (+30%)
- 1.0% AEP (+35%)
- 1.0% AEP (+70%)

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

0 100 200 300 400 500
metres



Environment Agency

Defended climate change modelled fluvial node locations

Location (easting/northing)
302081/514068

Scale
1:2,500

Created
24 Jun 2022

Model name
Ehen 2015

Selected location

Modelled location

Main river

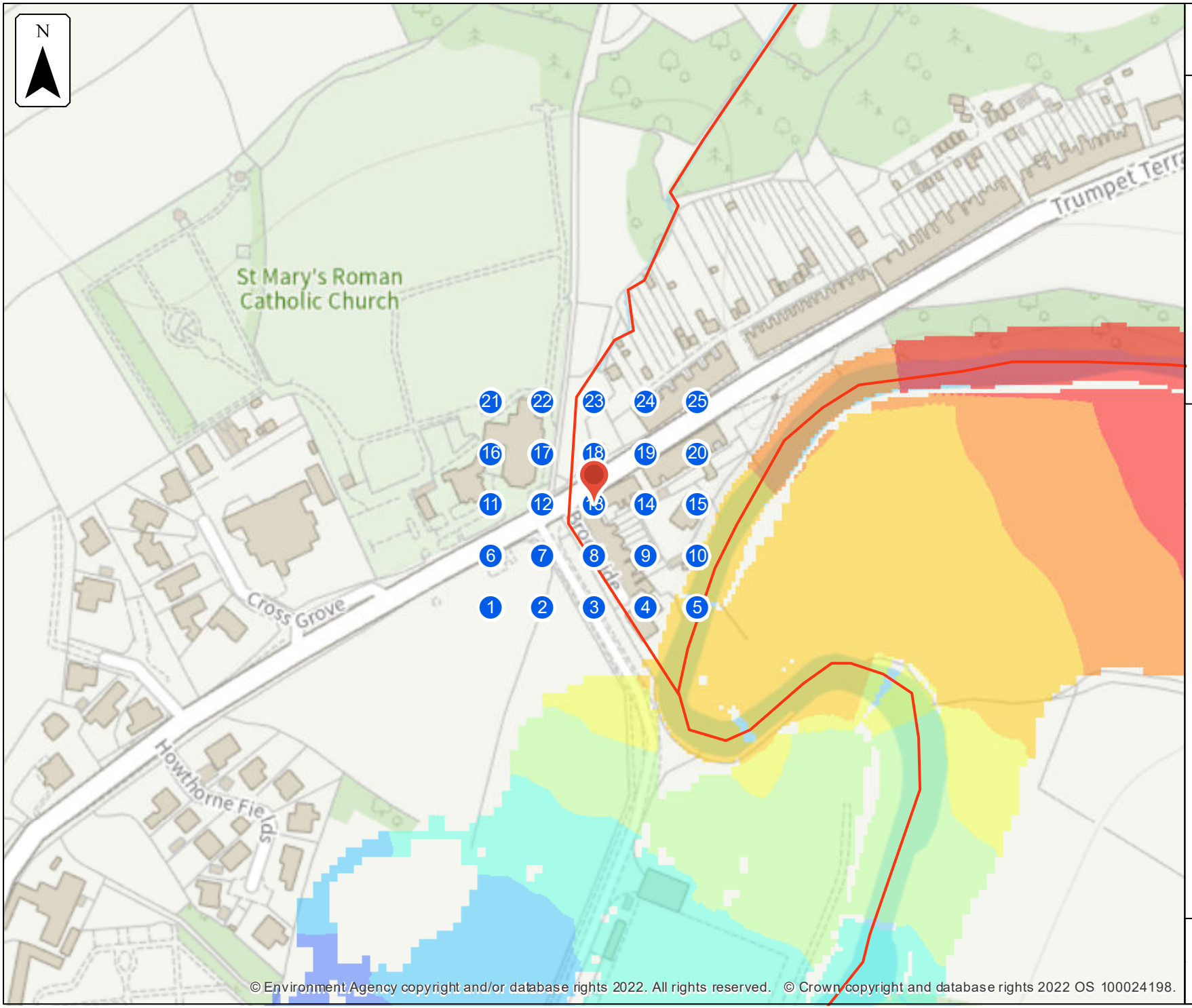
0 25 50 75 100
metres

Modelled node locations data

Defended climate change

Label	Modelled location ID	Easting	Northing	1.0% AEP (+20%)		1.0% AEP (+30%)		1.0% AEP (+35%)		1.0% AEP (+70%)	
				Level	Flow	Level	Flow	Level	Flow	Level	Flow
1	1204197	302126	513995	64.03	101.48	64.06	103.91	64.07	105.40	64.15	115.84
2	1204003	302132	514010	64.29	98.81	64.32	101.14	64.34	102.50	64.46	111.64
3	1204552	302156	513958	63.82	93.24	63.91	94.09	63.95	94.72	64.13	100.13
4	1203893	302165	513964	63.82	93.24	63.91	94.09	63.95	94.72	64.13	100.13
5	1204634	302221	513857	62.23	145.97	62.31	155.28	62.35	159.73	62.54	185.09
6	1204739	302230	513970	63.42	143.88	63.49	151.51	63.53	155.13	63.68	173.29
7	1204329	302239	513961	62.69	143.88	62.80	151.51	62.86	155.13	63.15	173.29
8	1203899	302285	514136	65.41	128.96	65.45	134.96	65.46	137.95	65.54	157.75

Data in this table comes from the Ehen 2015 model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.



Environment Agency

Defended climate change modelled fluvial extent and height

Location (easting/northing)
302081/514068

Scale
1:2,500

Created
24 Jun 2022

Model name
Ehen 2015

Selected location

Main river

Modelled 2D grid
Water level in mAOD

- 0 - 60.0
- 60.0 - 60.75
- 60.75 - 61.5
- 61.5 - 62.25
- 62.25 - 63.0
- 63.0 - 63.75
- 63.75 - 64.5
- 64.5 - 65.25
- 65.25 - 66.0

This map shows the 1.0% AEP +70% height data

0 25 50 75 100
metres

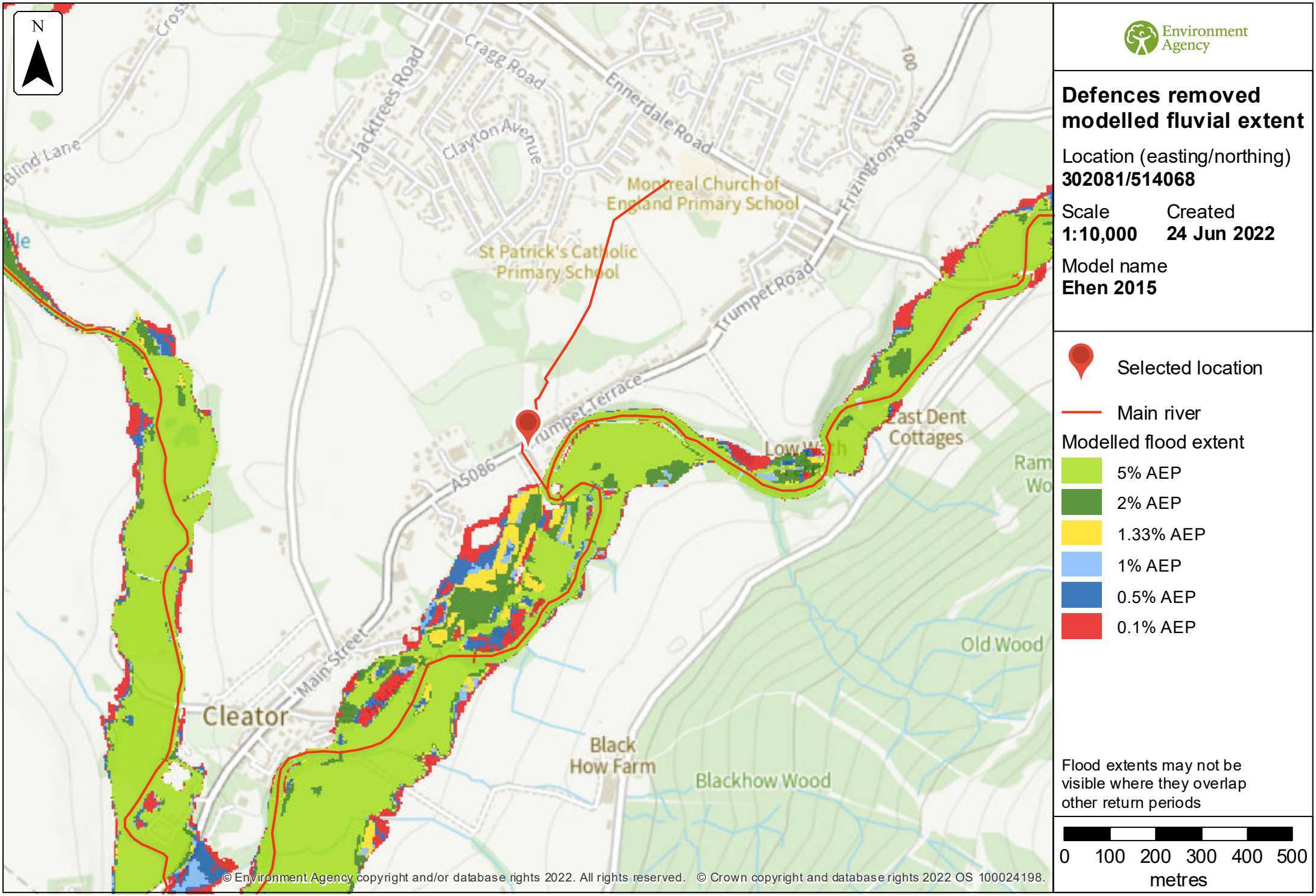
Sample point data

Defended climate change

Label	Easting	Northing	1% AEP (+20%)		1% AEP (+30%)		1% AEP (+35%)		1% AEP (+70%)	
			Depth	Height	Depth	Height	Depth	Height	Depth	Height
1	302031	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2	302056	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
3	302081	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
4	302106	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
5	302131	514018	3.83	64.02	3.23	64.06	3.25	64.07	3.33	64.15
6	302031	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
7	302056	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
8	302081	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
9	302106	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
10	302131	514043	0.01	64.06	0.02	64.10	0.02	64.12	0.04	64.22
11	302031	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
12	302056	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
13	302081	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
14	302106	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
15	302131	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
16	302031	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

Label	Easting	Northing	1% AEP (+20%)		1% AEP (+30%)		1% AEP (+35%)		1% AEP (+70%)	
			Depth	Height	Depth	Height	Depth	Height	Depth	Height
17	302056	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
18	302081	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
19	302106	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
20	302131	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
21	302031	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
22	302056	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
23	302081	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
24	302106	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
25	302131	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

Data in this table comes from the Ehen 2015 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.


N
Environment Agency
Defences removed modelled fluvial extent
Location (easting/northing)
302081/514068
Scale
1:10,000
Created
24 Jun 2022
Model name
Ehen 2015
Selected location
Main river
Modelled flood extent
5% AEP
2% 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
Jacktrees Road
Cragg Road
Ennerdale Road
Clayton Avenue
Frizington Road
Blind Lane
Montreal Church of England Primary School
St Patrick's Catholic Primary School
Trumpet Road
Trumpet Terrace
A5086
East Dent Cottages
Main Street
Cleator
Black How Farm
Blackhow Wood
Old Wood
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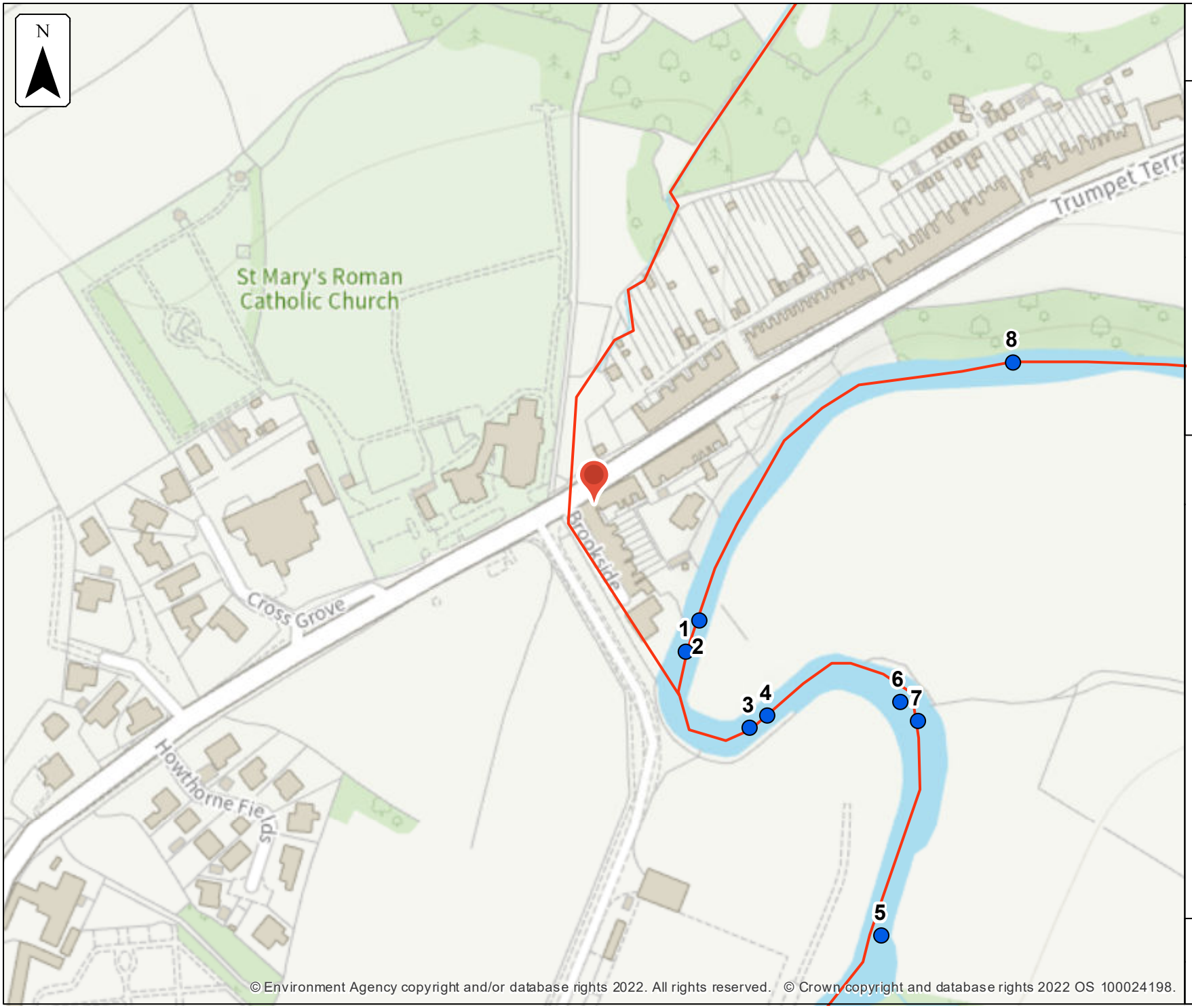


Environment Agency

Defences removed modelled fluvial node locations

Location (easting/northing)
302081/514068

Scale
1:2,500

Created
24 Jun 2022

Model name
Ehen 2015

Selected location

Modelled location

Main river

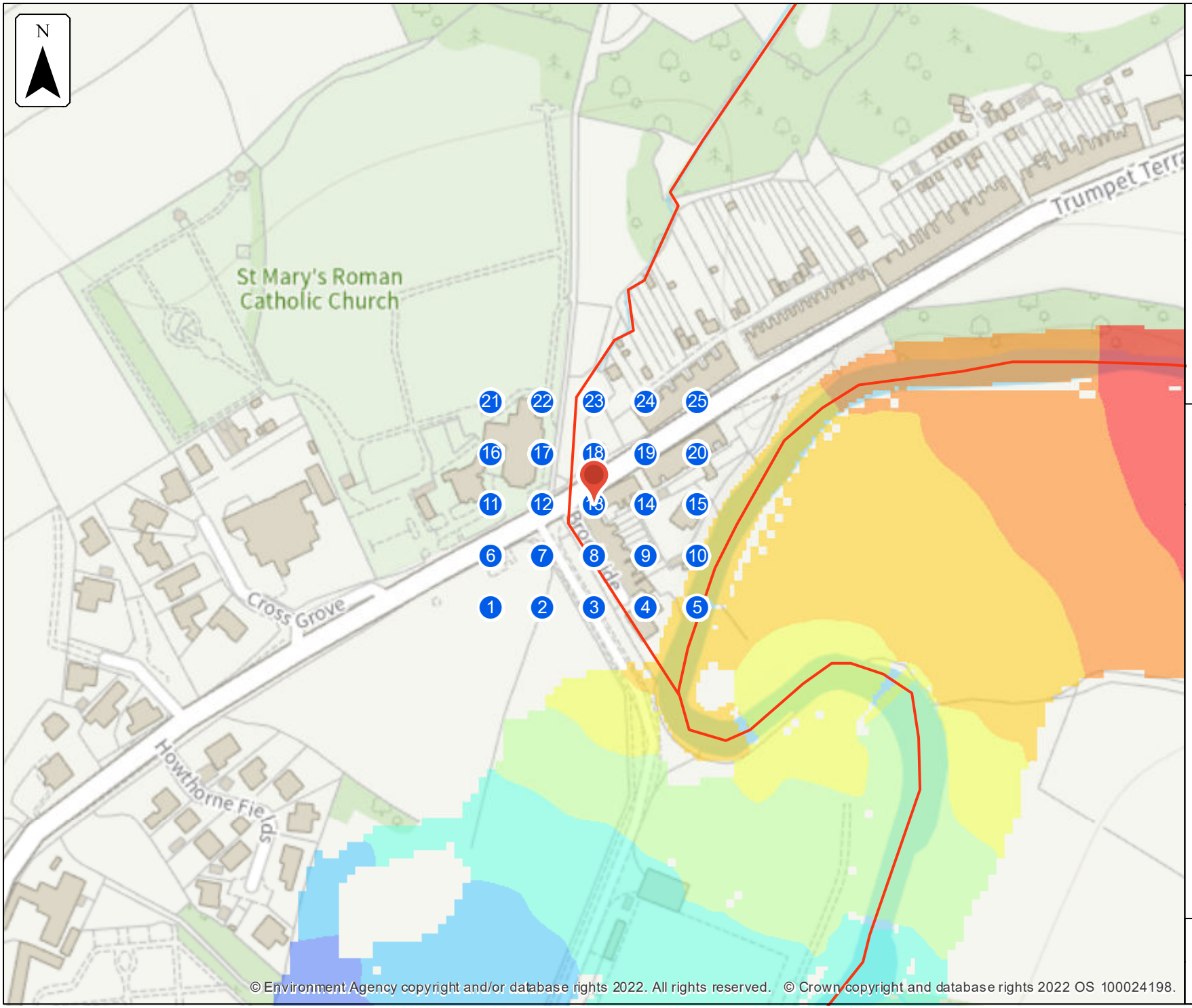
0 25 50 75 100
metres

Modelled node locations data

Defences removed

Label	Modelled location ID	Easting	Northing	5% AEP		2% AEP		1.33% AEP		1% AEP		0.5% AEP		0.1% AEP	
				Level	Flow	Level	Flow	Level	Flow	Level	Flow	Level	Flow	Level	Flow
1	1204197	302126	513995	63.65	67.76	63.71	70.90	63.74	73.53	63.76	75.13	63.79	79.92	63.92	97.29
2	1204003	302132	514010	63.82	66.22	63.89	68.84	63.93	71.24	63.95	72.66	64.0	77.10	64.19	93.36
3	1204552	302156	513958	63.24	68.69	63.37	71.02	63.44	72.75	63.47	73.63	63.54	75.78	63.75	86.33
4	1203893	302165	513964	63.24	68.69	63.37	71.02	63.44	72.75	63.47	73.63	63.54	75.78	63.75	86.33
5	1204634	302221	513857	61.69	95.76	61.83	106.94	61.93	115.06	61.97	119.09	62.08	129.31	62.46	164.86
6	1204739	302230	513970	62.90	95.33	63.0	104.34	63.06	109.63	63.09	111.99	63.15	118.0	63.34	135.65
7	1204329	302239	513961	62.16	95.33	62.29	104.34	62.39	109.63	62.44	111.99	62.57	118.0	63.03	135.65
8	1203899	302285	514136	64.79	84.28	64.82	91.79	64.84	97.32	64.85	100.35	64.88	109.34	64.94	147.44

Data in this table comes from the Ehen 2015 model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.



Environment Agency

Defences removed modelled fluvial extent and height

Location (easting/northing)
302081/514068

Scale
1:2,500

Created
24 Jun 2022

Model name
Ehen 2015

Selected location

Main river

Modelled 2D grid
Water level in mAOD

- 0 - 60.0
- 60.0 - 60.75
- 60.75 - 61.5
- 61.5 - 62.25
- 62.25 - 63.0
- 63.0 - 63.75
- 63.75 - 64.5
- 64.5 - 65.25
- 65.25 - 66.0

This map shows the 0.1% AEP height data

0 25 50 75 100
metres

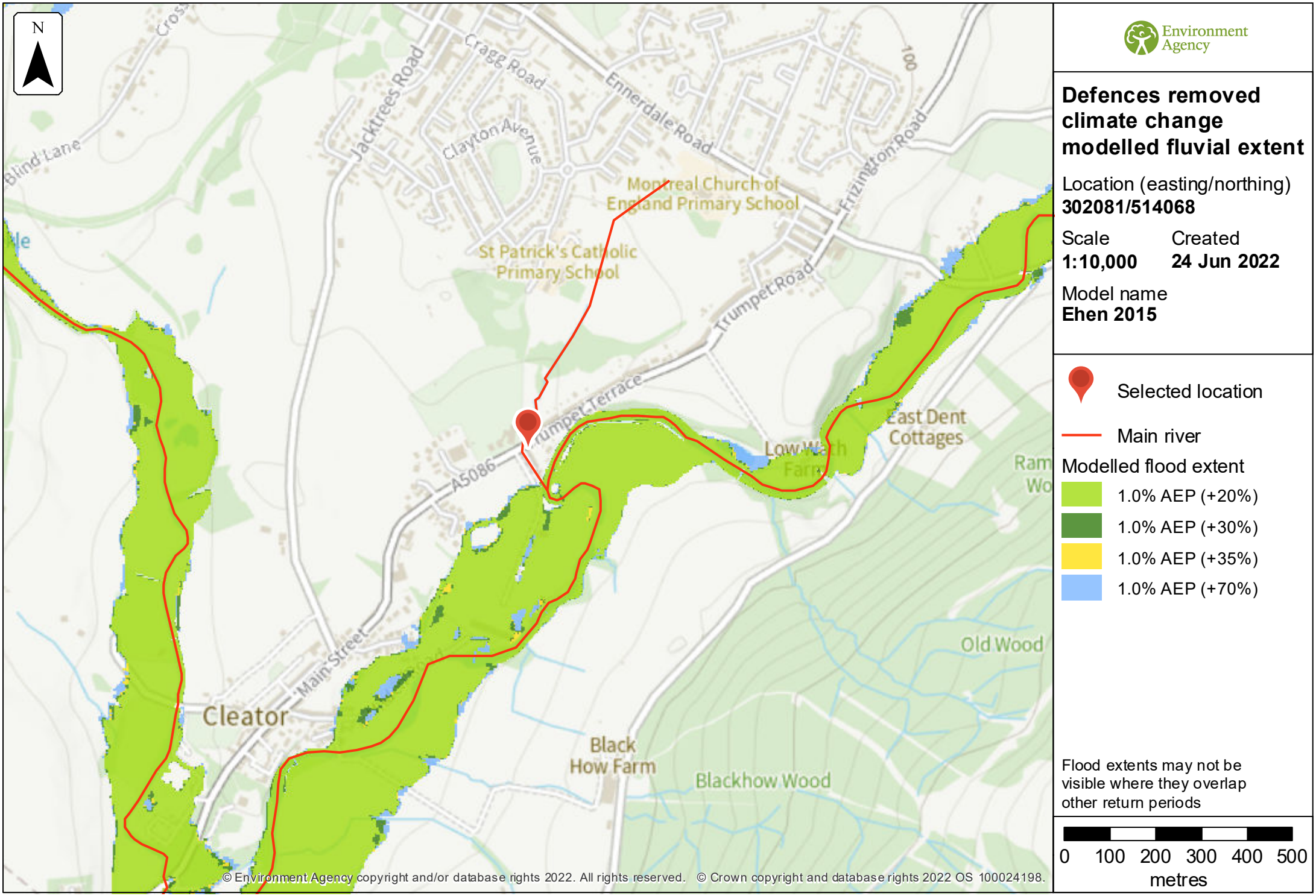
Sample point data

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	302031	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2	302056	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
3	302081	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
4	302106	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
5	302131	514018	3.44	63.64	3.50	63.70	3.54	63.74	3.56	63.75	3.59	63.79	3.73	63.92
6	302031	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
7	302056	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
8	302081	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
9	302106	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
10	302131	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.00	63.97
11	302031	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
12	302056	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
13	302081	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
14	302106	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
15	302131	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
16	302031	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

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	302056	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
18	302081	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
19	302106	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
20	302131	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
21	302031	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
22	302056	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
23	302081	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
24	302106	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
25	302131	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

Data in this table comes from the Ehen 2015 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.


N
Environment Agency
Defences removed climate change modelled fluvial extent
Location (easting/northing)
302081/514068
Scale
1:10,000
Created
24 Jun 2022
Model name
Ehen 2015
Selected location
Main river
Modelled flood extent
1.0% AEP (+20%)
1.0% AEP (+30%)
1.0% AEP (+35%)
1.0% AEP (+70%)
Flood extents may not be visible where they overlap other return periods
0 100 200 300 400 500
metres
Jacktrees Road
Cragg Road
Ennerdale Road
Clayton Avenue
Frizington Road
Montreal Church of England Primary School
St Patrick's Catholic Primary School
Trumpet Road
Trumpet Terrace
A5086
East Dent Cottages
Low Wath Farm
Main Street
Cleator
Black How Farm
Blackhow Wood
Old Wood
Blind Lane
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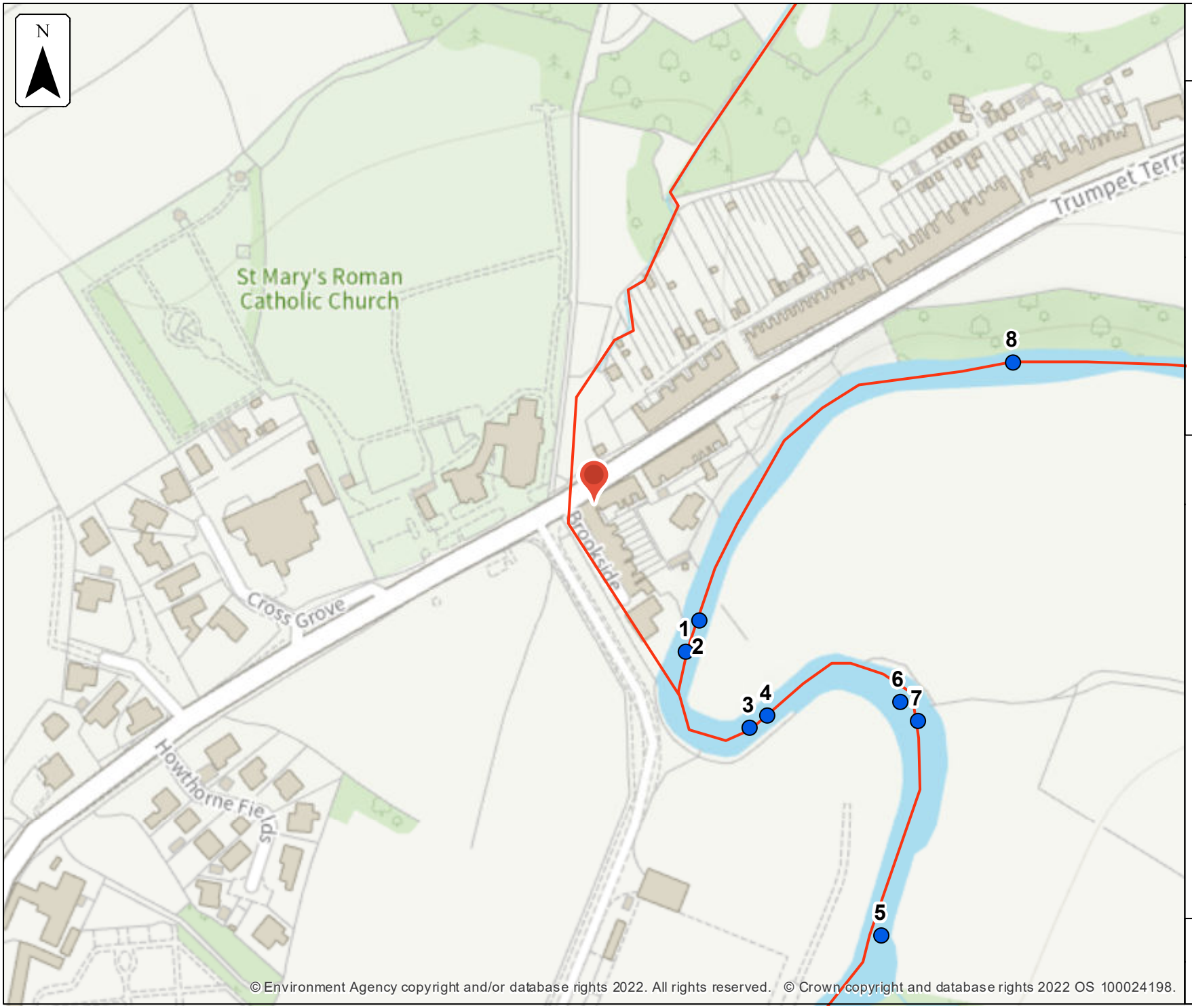


Environment Agency

Defences removed climate change modelled fluvial node locations

Location (easting/northing)
302081/514068

Scale
1:2,500

Created
24 Jun 2022

Model name
Ehen 2015

Selected location

Modelled location

Main river

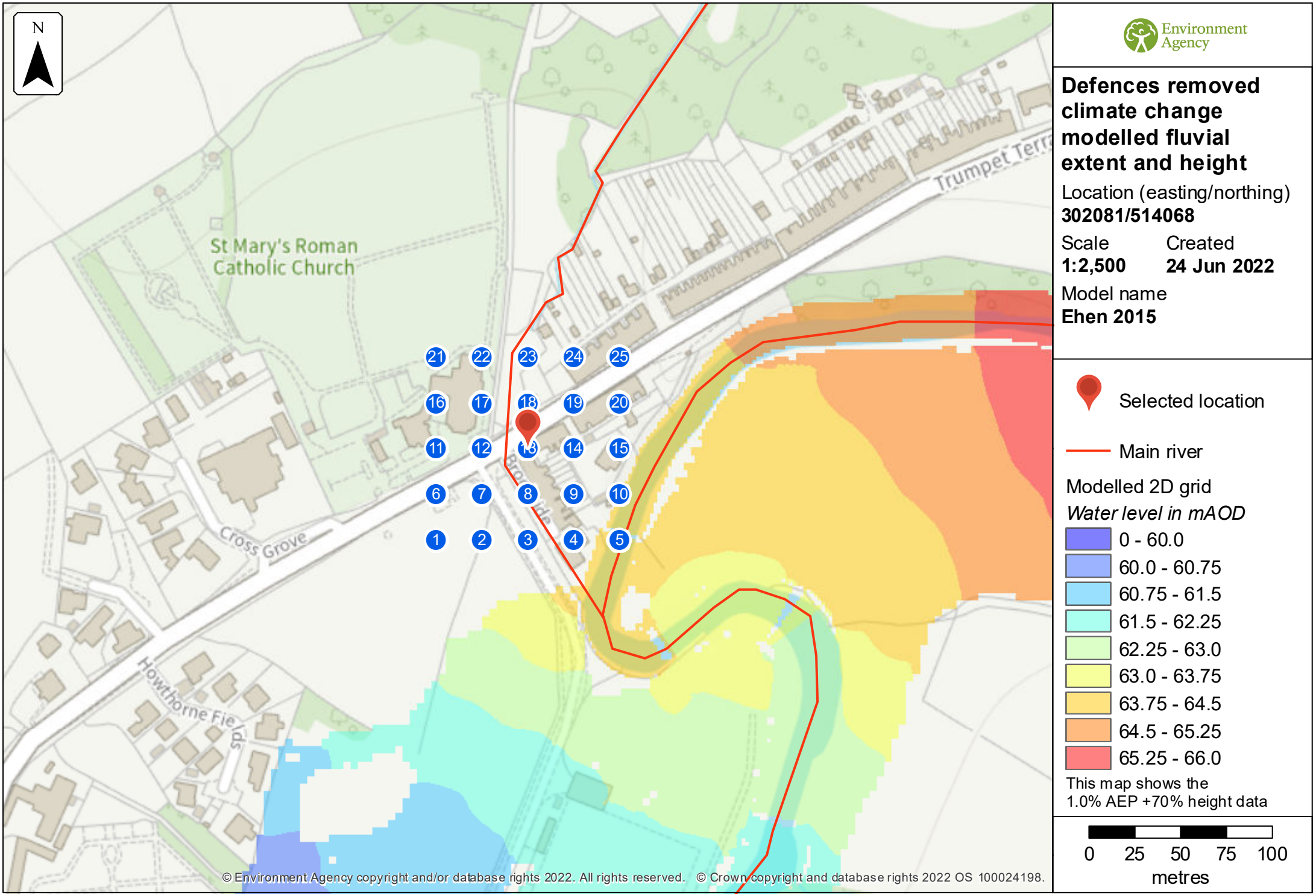
0 25 50 75 100
metres

Modelled node locations data

Defences removed climate change

Label	Modelled location ID	Easting	Northing	1.0% AEP (+20%)		1.0% AEP (+30%)		1.0% AEP (+35%)		1.0% AEP (+70%)	
				Level	Flow	Level	Flow	Level	Flow	Level	Flow
1	1204197	302126	513995	63.80	81.06	63.84	84.09	63.85	85.81	63.93	98.02
2	1204003	302132	514010	64.02	78.37	64.06	81.34	64.07	82.92	64.20	93.77
3	1204552	302156	513958	63.56	76.12	63.62	77.18	63.63	77.91	63.76	86.71
4	1203893	302165	513964	63.56	76.12	63.62	77.18	63.63	77.91	63.76	86.71
5	1204634	302221	513857	62.11	132.38	62.19	140.77	62.22	144.40	62.48	165.95
6	1204739	302230	513970	63.17	119.51	63.21	123.68	63.23	125.08	63.35	136.17
7	1204329	302239	513961	62.61	119.51	62.71	123.68	62.76	125.08	63.05	136.17
8	1203899	302285	514136	64.89	112.19	64.91	119.33	64.92	122.81	64.94	148.56

Data in this table comes from the Ehen 2015 model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.



Environment Agency

Defences removed climate change modelled fluvial extent and height

Location (easting/northing)
302081/514068

Scale
1:2,500

Created
24 Jun 2022

Model name
Ehen 2015

Selected location

Main river

Modelled 2D grid
Water level in mAOD

- 0 - 60.0
- 60.0 - 60.75
- 60.75 - 61.5
- 61.5 - 62.25
- 62.25 - 63.0
- 63.0 - 63.75
- 63.75 - 64.5
- 64.5 - 65.25
- 65.25 - 66.0

This map shows the 1.0% AEP +70% height data

0 25 50 75 100
metres

Sample point data

Defences removed climate change

Label	Easting	Northing	1% AEP (+20%)		1% AEP (+30%)		1% AEP (+35%)		1% AEP (+70%)	
			Depth	Height	Depth	Height	Depth	Height	Depth	Height
1	302031	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
2	302056	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
3	302081	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
4	302106	514018	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
5	302131	514018	3.60	63.80	3.01	63.84	3.02	63.85	3.10	63.93
6	302031	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
7	302056	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
8	302081	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
9	302106	514043	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
10	302131	514043	NoData	NoData	NoData	NoData	NoData	NoData	0.00	63.99
11	302031	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
12	302056	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
13	302081	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
14	302106	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
15	302131	514068	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
16	302031	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

Label	Easting	Northing	1% AEP (+20%)		1% AEP (+30%)		1% AEP (+35%)		1% AEP (+70%)	
			Depth	Height	Depth	Height	Depth	Height	Depth	Height
17	302056	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
18	302081	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
19	302106	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
20	302131	514093	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
21	302031	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
22	302056	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
23	302081	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
24	302106	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
25	302131	514118	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData

Data in this table comes from the Ehen 2015 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