# Appendix C Environment Agency's Data and Information

# Flood risk assessment data



Location of site: 347478 / 436829 (shown as easting and northing coordinates)

Document created on: 31 July 2023

This information was previously known as a product 4.

Customer reference number: 3JHD2XJJ39HD

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

#### Not included in this document

This document does not include a Flood Defence Breach Hazard Map.

If your location has a reduced flood risk from rivers and sea because of defences, you need to request a Flood Defence Breach Hazard Map and information about the level of flood protection offered at your location from the Cumbria and Lancashire Environment Agency team at <a href="mailto:inforequests.cmblnc@environment-agency.gov.uk">inforequests.cmblnc@environment-agency.gov.uk</a>. This information will only be available if modelling has been carried out for breach scenarios.

Include a site location map in your request.

# Surface water and other sources of flooding

Use the <u>long term flood risk service</u> 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: Wyre 2014

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

defences removed climate change fluvial

Date: 1 June 2014

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

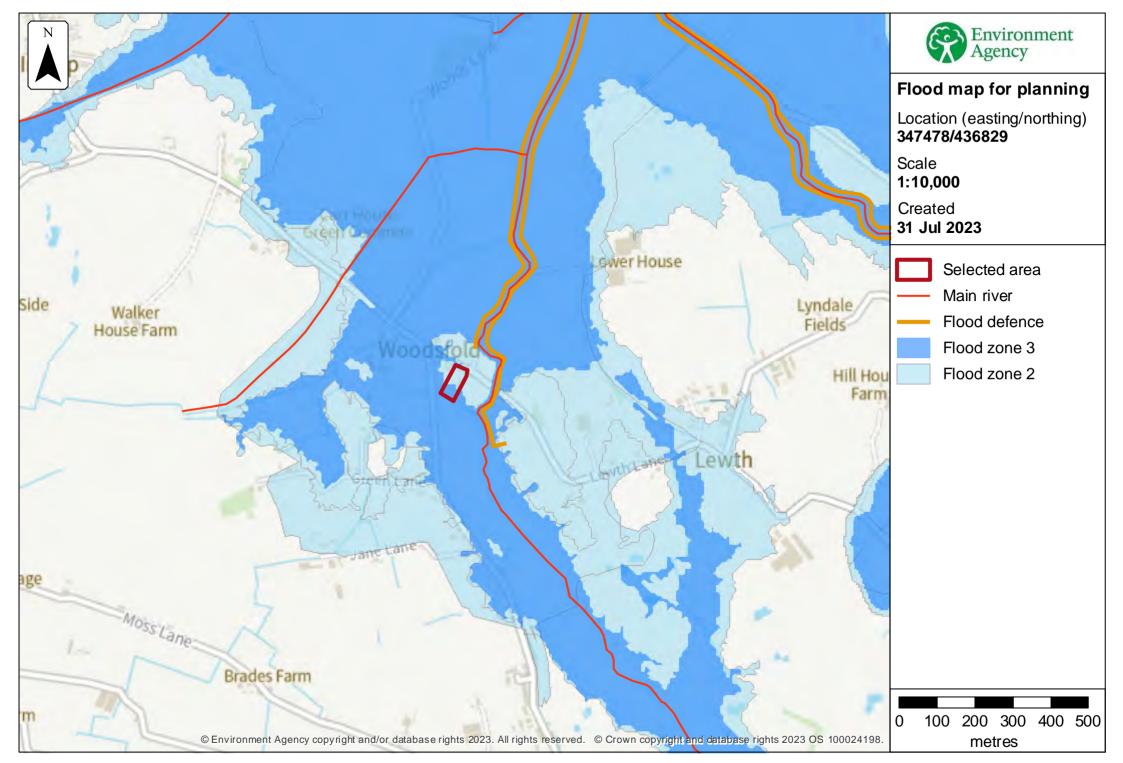
Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- 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

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



Page 5

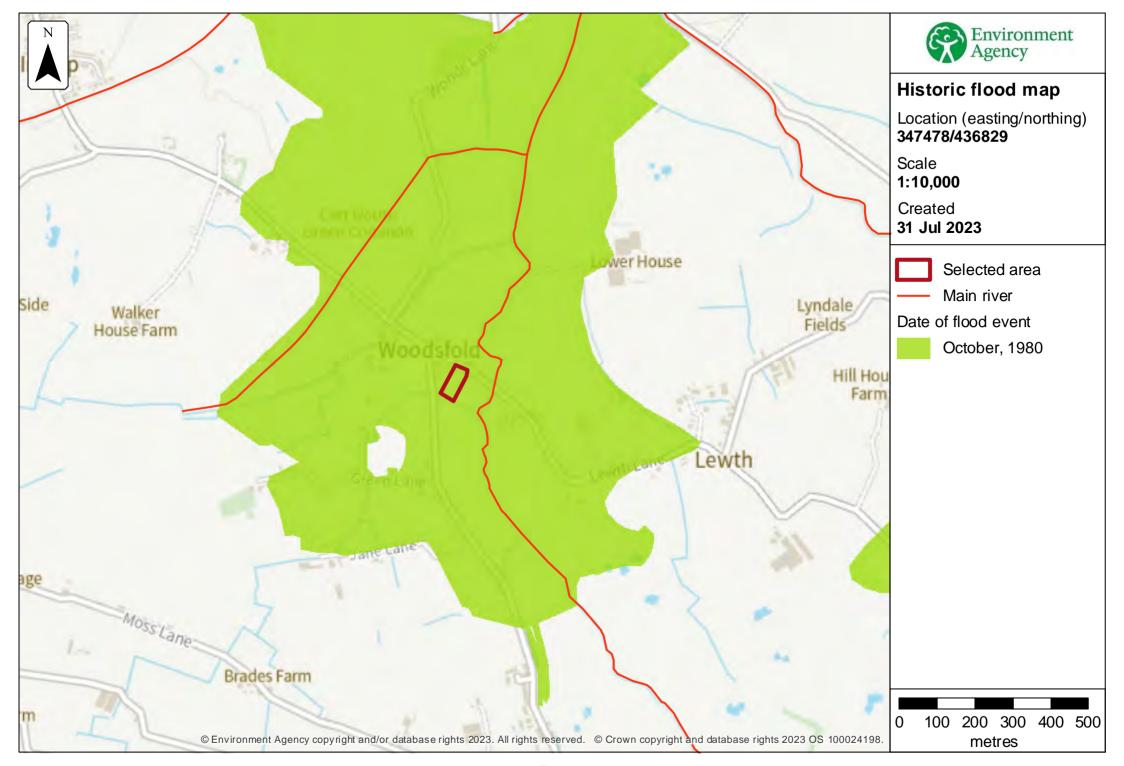
# **Historic flooding**

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



Page 7

# Historic flood event data

Start date	End date	Source of flood	Cause of flood	Affects location
27 October 1980	28 October 1980	main river	overtopping of defences	Yes
23 October 1980	24 October 1980	main river	overtopping of defences	Yes

#### Flood defences and attributes

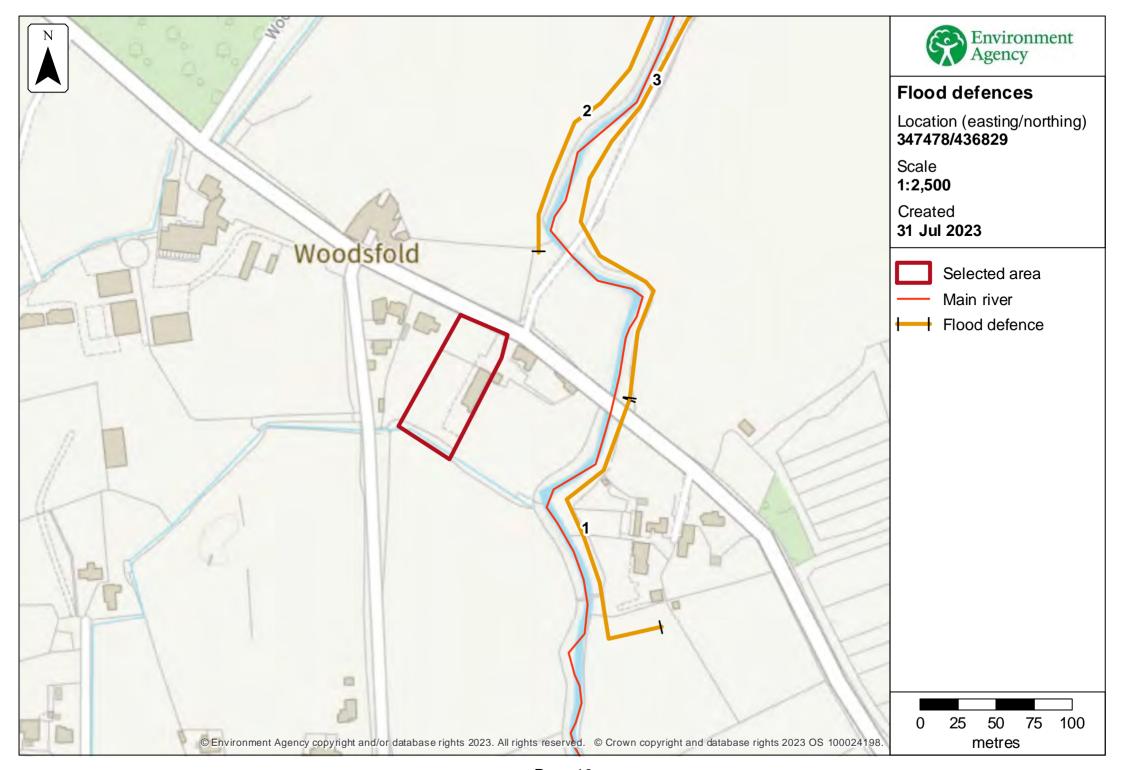
The flood defences map shows the location of the flood defences present.

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



Page 10

# 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	127402	Embankment	50	Fair	11.92	13.0	11.92
2	57264	Embankment	100	Fair	14.04	12.13	12.13
3	92161	Embankment	100	Fair	12.69	12.64	12.64

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

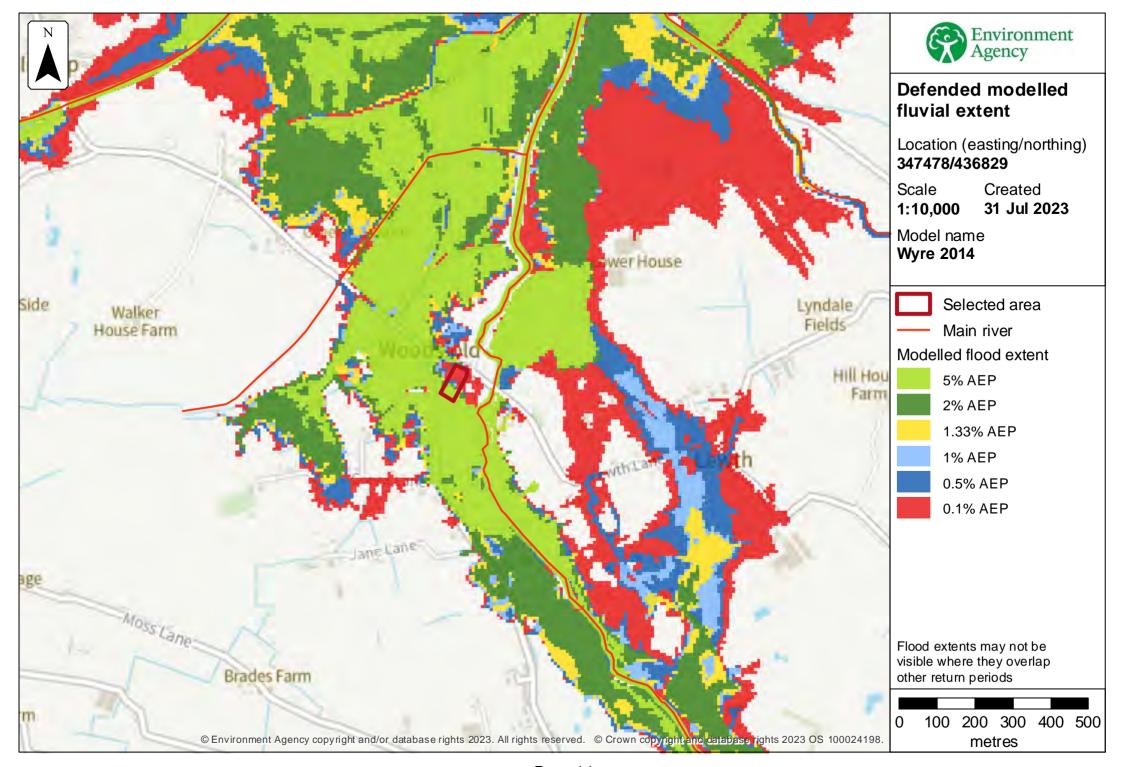
The climate change data included in the models may not include the latest <u>flood risk</u> <u>assessment climate change allowances</u>. Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

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.

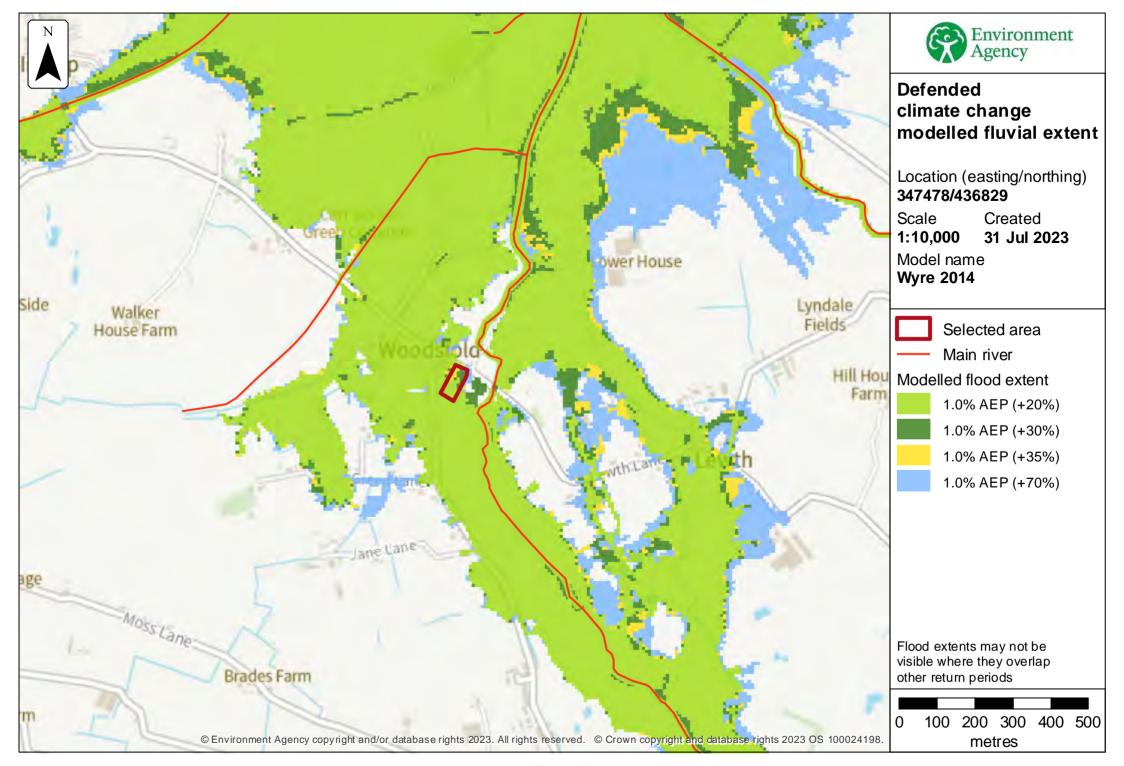
#### **Modelled scenarios**

The following scenarios are included:

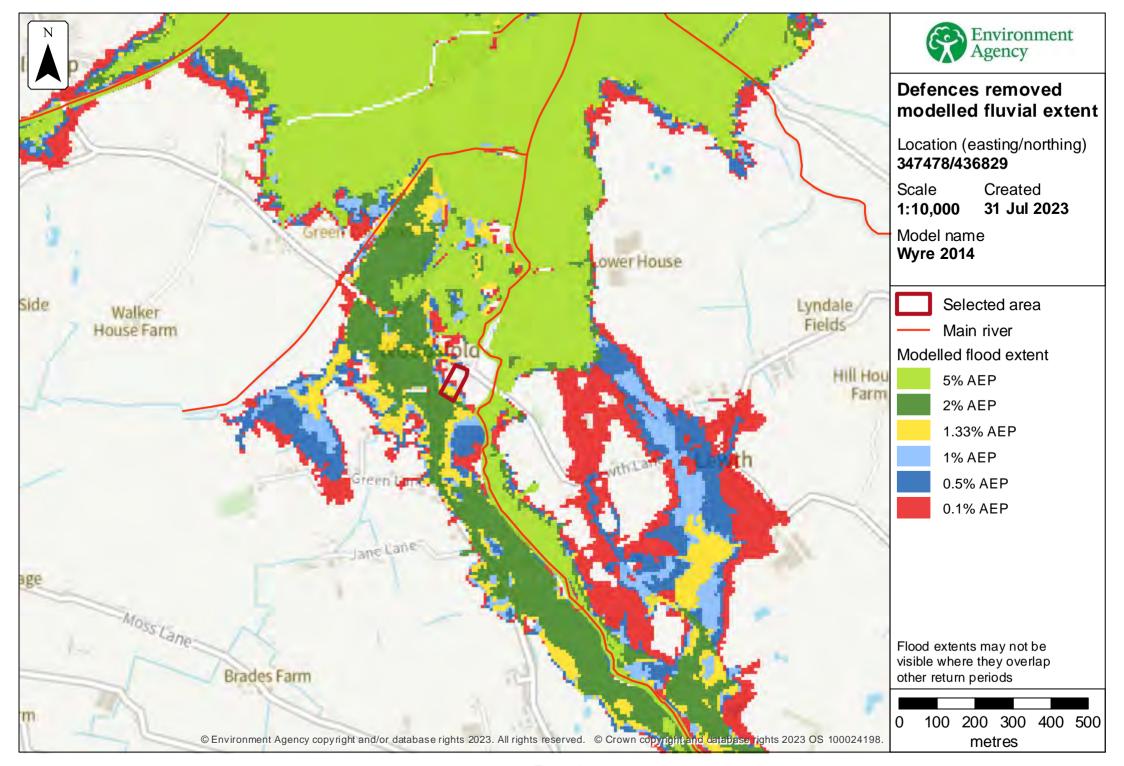
- Defended modelled fluvial: risk of flooding from rivers where there are flood defences
- Defences removed modelled fluvial: risk of flooding from rivers where flood defences have been removed
- Defended climate change modelled fluvial: risk of flooding from rivers where there are flood defences, including 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



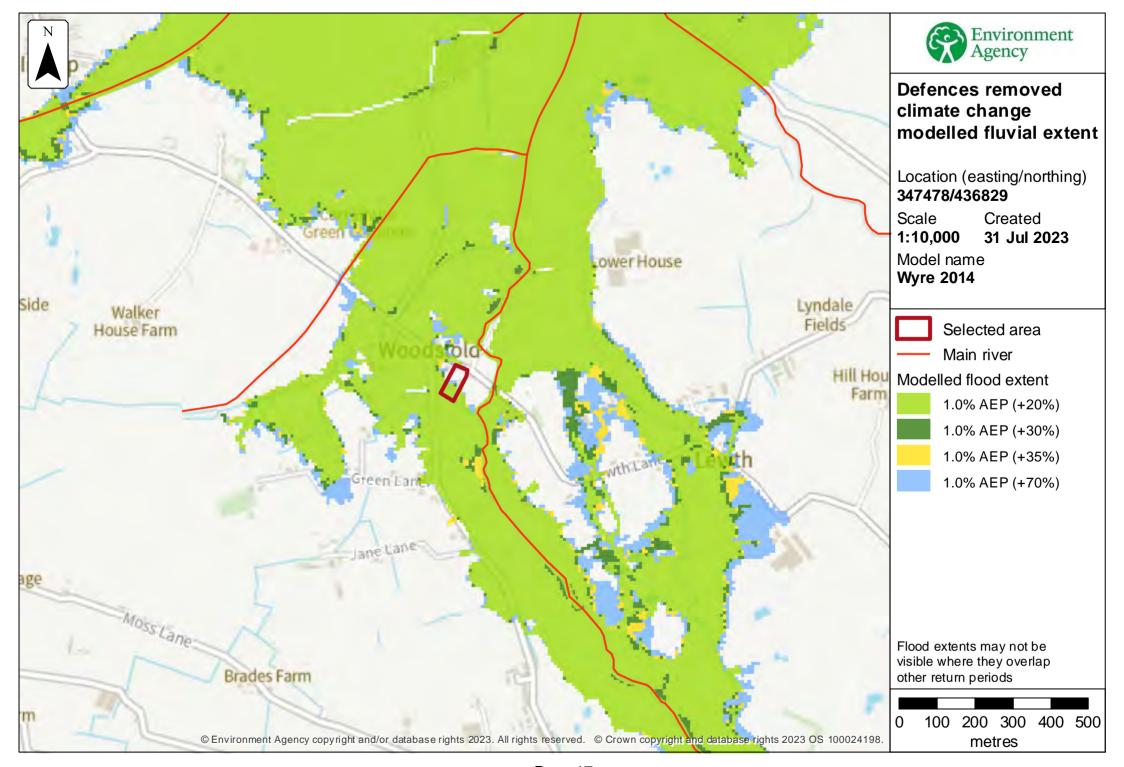
Page 14



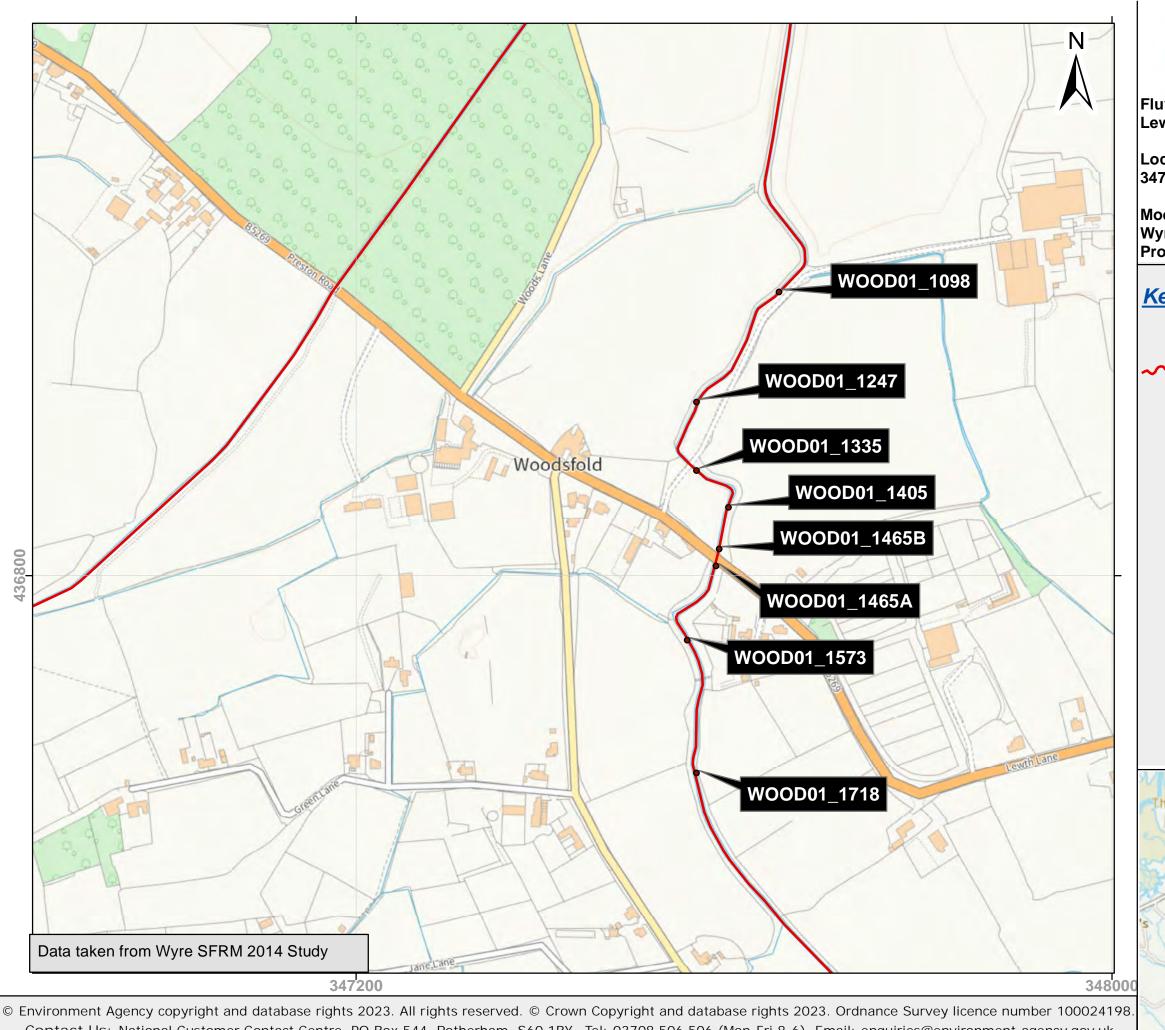
Page 16



Page 15



Page 17





Fluvial Flood Levels Map: Lewth Lane, Woodplumpton

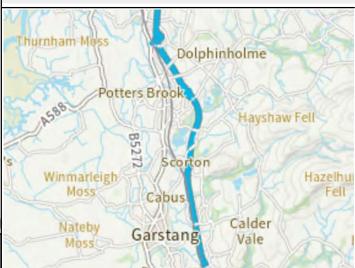
Location (easting/northing) 347430/436882

**Model Name** Wyre SFRM 2014 Produced 31/07/2023

## Key

**Node Points** 

Statutory Main Rivers

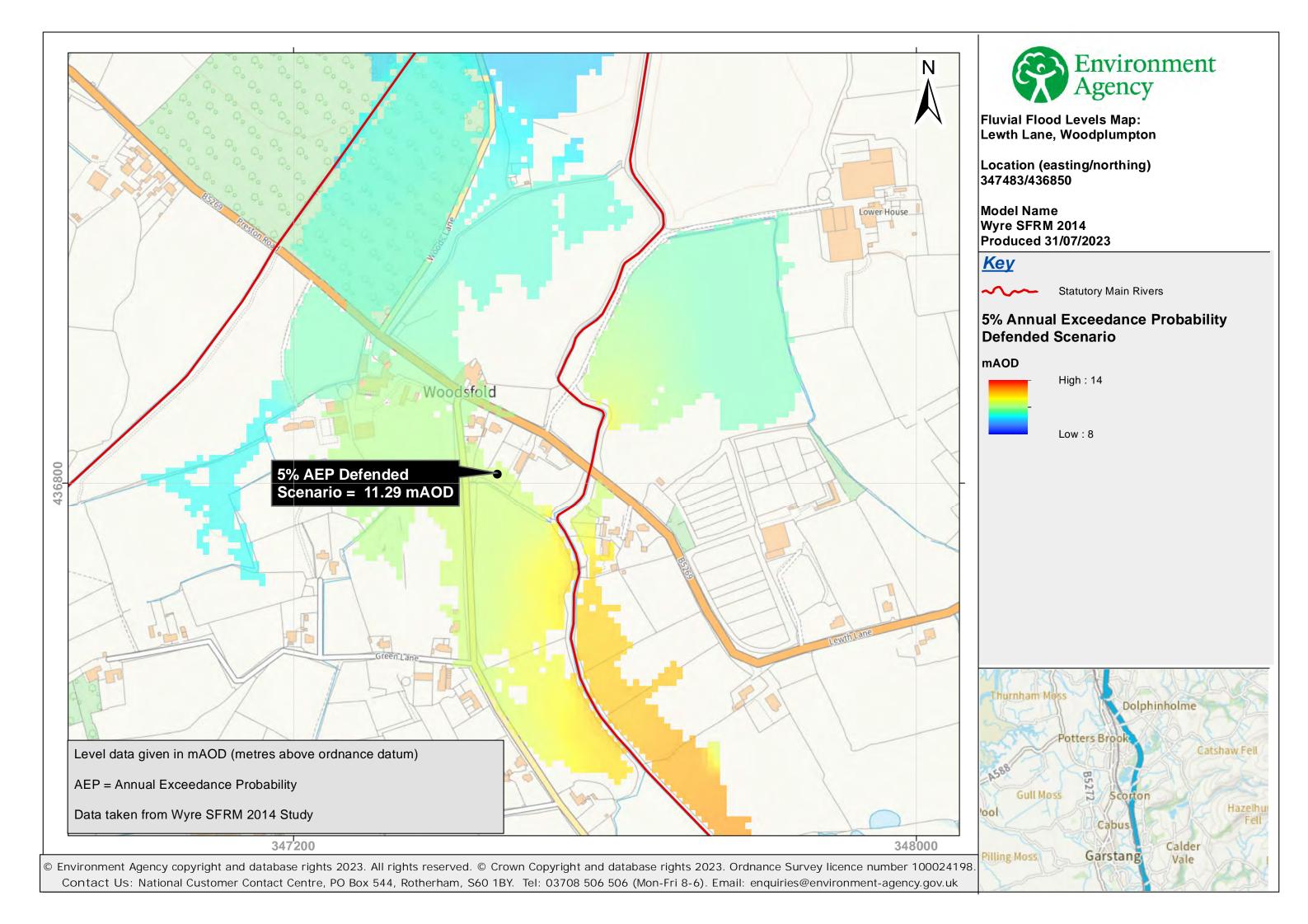


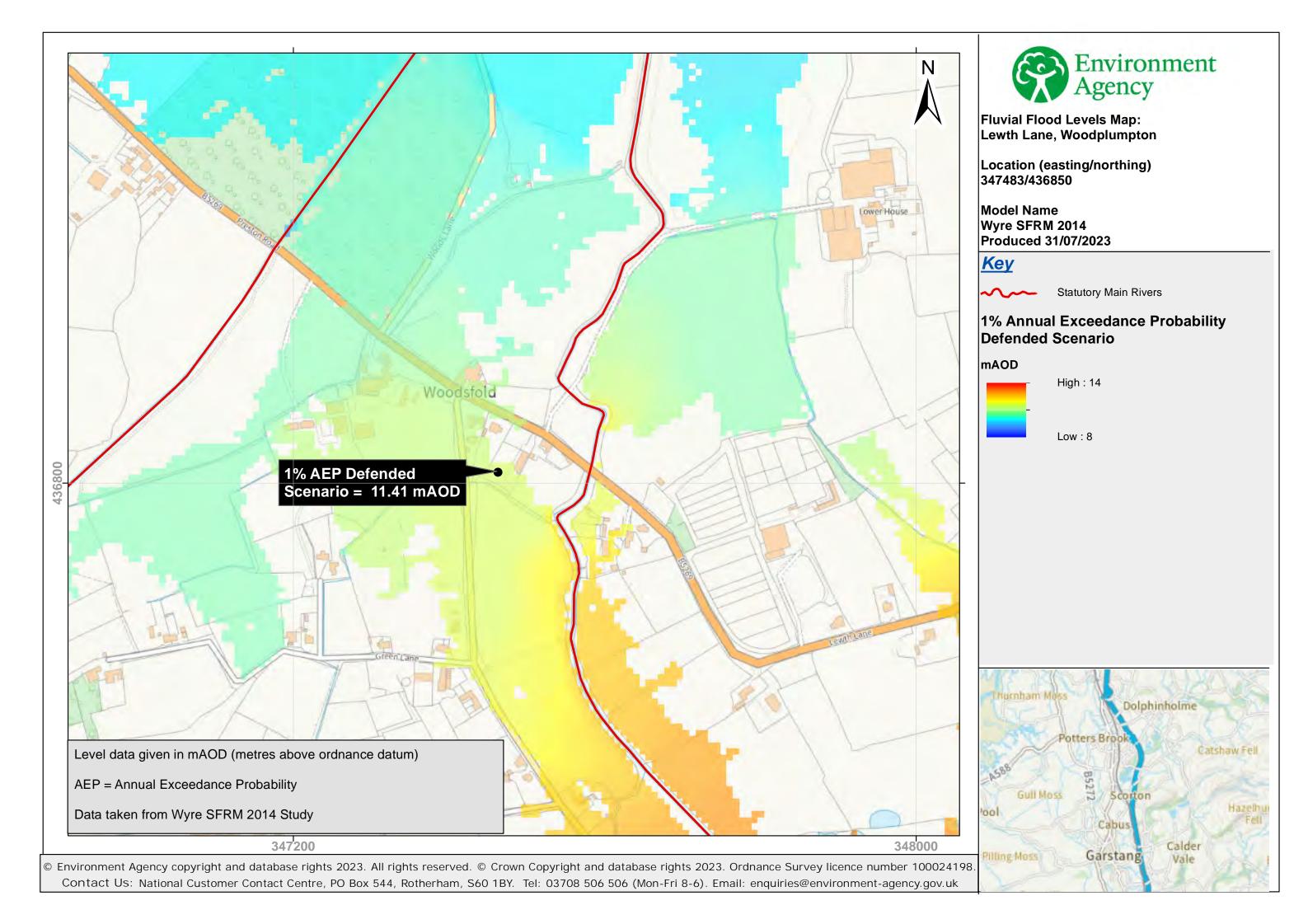
Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

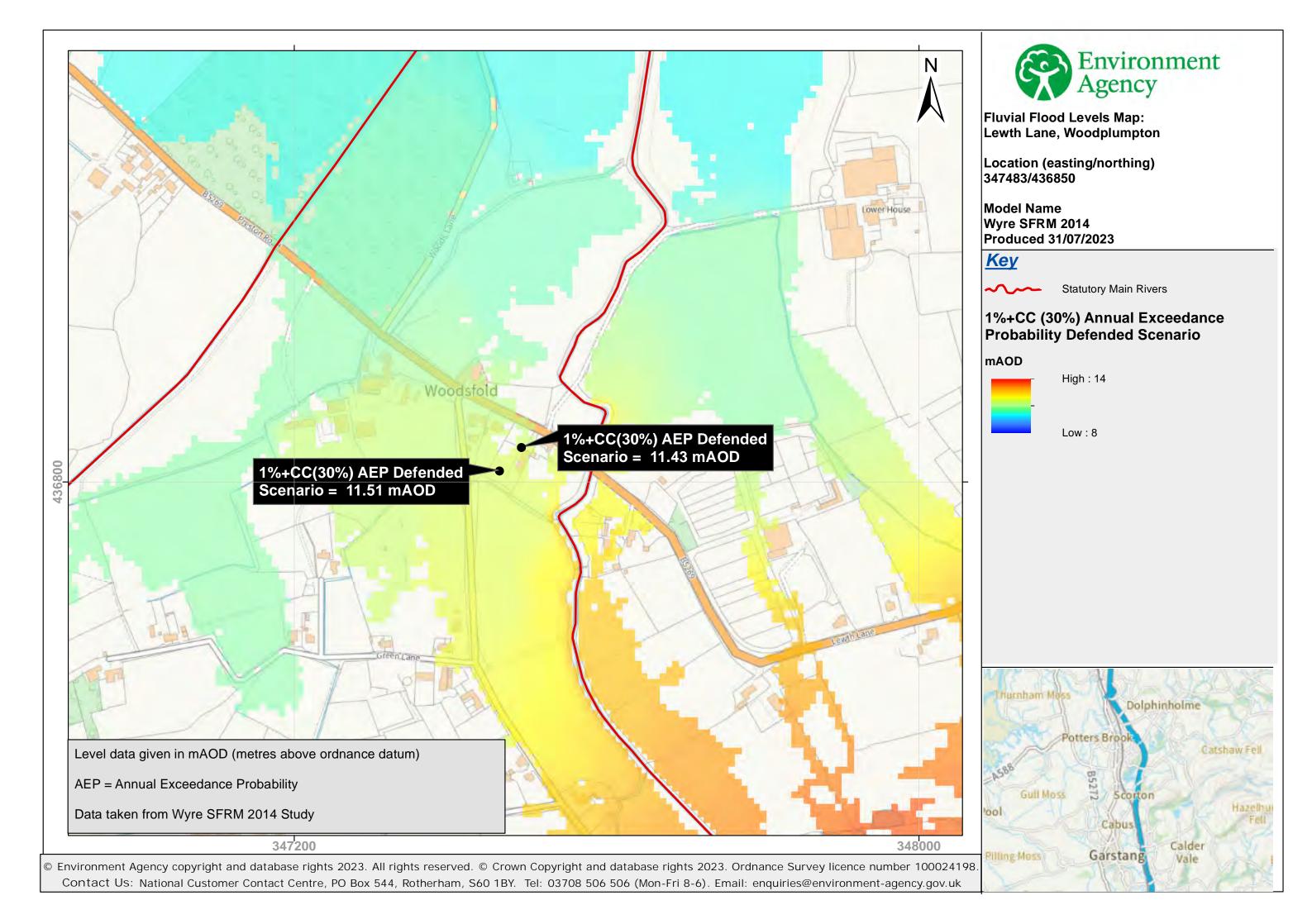
NODE ID	DEFENDED (D)/ UNDEFENDED (U)/CLIMATE CHANGE (CC)	AEP (%)	WATER LEVEL (mAOD)	FLOW (cumecs)
WOOD01_1718	Wyre2014_11_U	5	12.27	22.60
WOOD01_1718	Wyre2014_11_D	5	12.44	19.62
WOOD01_1718	Wyre2014_11_D	1	12.48	20.84
WOOD01_1718	Wyre2014_11_U	1	12.36	24.78
WOOD01_1718	Wyre2014_11_U_30%CC	1	12.43	26.37
WOOD01_1718	Wyre2014_11_D_30%CC	1	12.55	22.08
WOOD01_1718	Wyre2014_11_U_35%CC	1	12.44	26.89
WOOD01_1718	Wyre2014_11_D_35%CC	1	12.56	22.49
WOOD01_1718	Wyre2014_11_U_70%CC	1	12.46	28.00
WOOD01_1718	Wyre2014_11_D_70%CC	1	12.58	23.40
WOOD01_1718	Wyre2014_11_D	0.1	12.55	23.35
WOOD01_1718	Wyre2014_11_U	0.1	12.45	27.71
WOOD01_1573	Wyre2014_11_U	5	11.98	24.80
WOOD01_1573	Wyre2014_11_D	5	12.28	23.36
WOOD01_1573	Wyre2014_11_D	1	12.32	24.33
WOOD01_1573	Wyre2014_11_U	1	12.10	25.78
WOOD01_1573	Wyre2014_11_U_30%CC	1	12.21	26.22
WOOD01_1573	Wyre2014_11_D_30%CC	1	12.38	26.07
WOOD01_1573	Wyre2014_11_U_35%CC	1	12.23	26.25
WOOD01_1573	Wyre2014_11_D_35%CC	1	12.38	26.43
WOOD01_1573	Wyre2014_11_U_70%CC	1	12.27	26.31
WOOD01_1573	Wyre2014_11_D_70%CC	1	12.40	27.20
WOOD01_1573	Wyre2014_11_D	0.1	12.37	26.49
WOOD01_1573	Wyre2014_11_U	0.1	12.25	25.90
WOOD01_1465A	Wyre2014_11_U	5	11.80	25.96
WOOD01_1465A	Wyre2014_11_D	5	12.20	22.97
WOOD01_1465A	Wyre2014_11_D	1	12.24 11.92	23.79
WOOD01_1465A	Wyre2014_11_U	1		27.97
WOOD01_1465A WOOD01_1465A	Wyre2014_11_U_30%CC Wyre2014_11_D_30%CC	1 1	12.03 12.31	29.09 24.02
WOOD01_1465A WOOD01_1465A	Wyre2014_11_U_35%CC	1	12.31	29.29
WOOD01_1465A	Wyre2014_11_D_35%CC	1	12.03	24.02
WOOD01_1465A	Wyre2014_11_U_70%CC	1	12.09	29.58
WOOD01_1465A	Wyre2014_11_D_70%CC	1	12.33	23.98
WOOD01_1405A WOOD01_1465A	Wyre2014_11_D_7076CC	0.1	12.30	24.09
WOOD01_1465A	Wyre2014_11_U	0.1	12.07	29.46
WOOD01_1465B	Wyre2014_11_U	5	11.50	25.96
WOOD01_1465B	Wyre2014_11_D	5	11.90	22.97
WOOD01_1465B	Wyre2014_11_D Wyre2014_11_D	1	11.93	23.79
WOOD01_1465B	Wyre2014_11_U	1	11.57	27.97
WOOD01_1465B	Wyre2014_11_U_30%CC	1	11.60	29.09
WOOD01_1465B	Wyre2014_11_D_30%CC	1	11.96	24.02
WOOD01_1465B	Wyre2014_11_U_35%CC	1	11.61	29.29
WOOD01_1465B	Wyre2014_11_D_35%CC	1	11.97	24.02
WOOD01_1465B	Wyre2014_11_U_70%CC	1	11.62	29.58

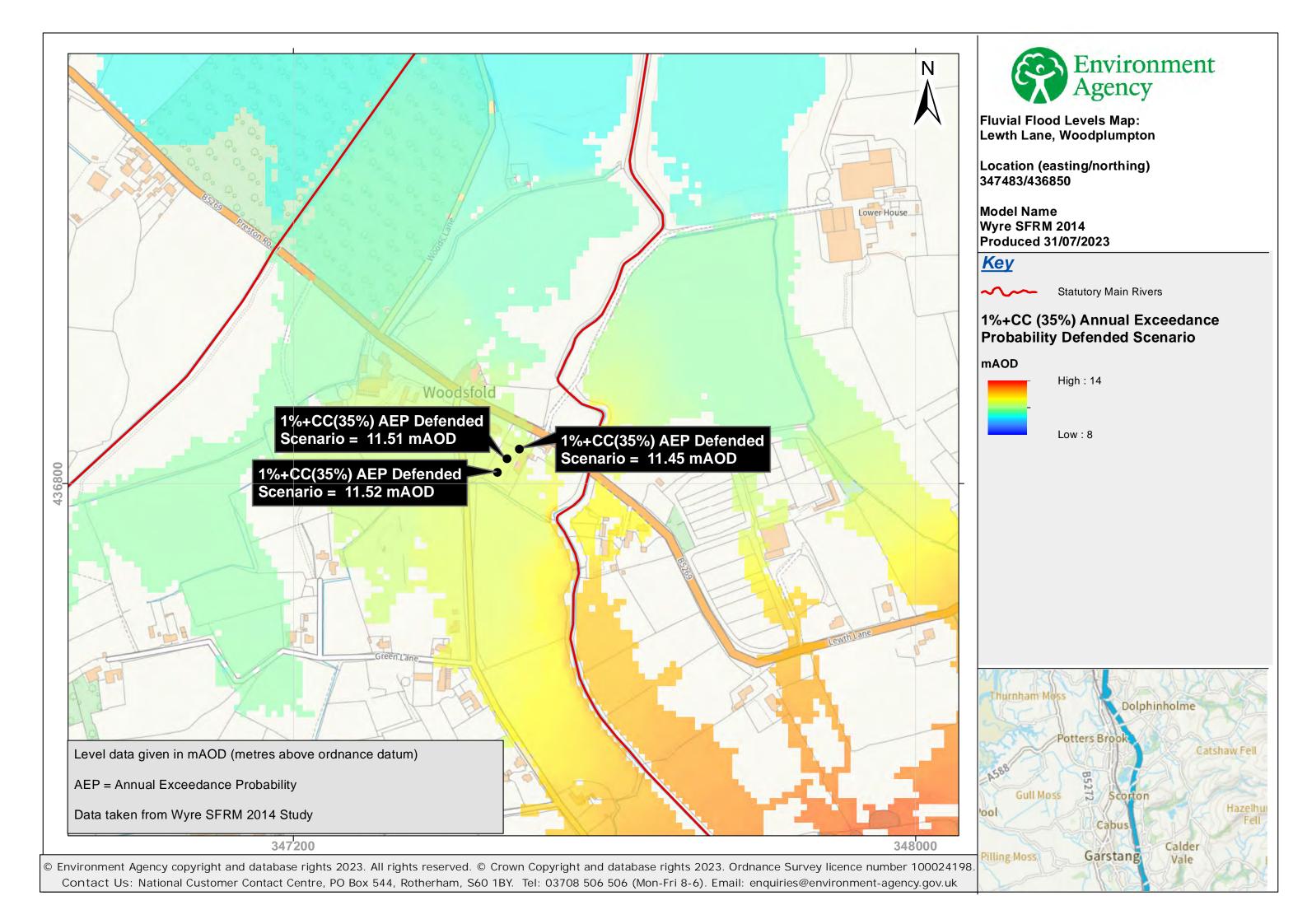
WOOD01_1465B	Wyre2014_11_D_70%CC	1	11.98	23.98
WOOD01_1465B	Wyre2014_11_D	0.1	11.96	24.09
WOOD01_1465B	Wyre2014_11_U	0.1	11.62	29.46
WOOD01_1405	Wyre2014_11_U	5	11.38	26.39
WOOD01_1405	Wyre2014_11_D	5	11.85	22.93
WOOD01_1405	Wyre2014_11_D	1	11.88	23.72
WOOD01_1405	Wyre2014_11_U	1	11.42	28.82
WOOD01_1405	Wyre2014_11_U_30%CC	1	11.44	30.25
WOOD01_1405	Wyre2014_11_D_30%CC	1	11.92	23.95
WOOD01_1405	Wyre2014_11_U_35%CC	1	11.44	30.52
WOOD01 1405	Wyre2014_11_D_35%CC	1	11.92	23.95
WOOD01_1405	Wyre2014_11_U_70%CC	1	11.45	30.92
WOOD01_1405	Wyre2014_11_D_70%CC	1	11.93	23.89
WOOD01_1405	Wyre2014_11_D	0.1	11.91	24.02
WOOD01 1405	Wyre2014_11_U	0.1	11.44	30.70
WOOD01_1335	Wyre2014_11_U	5	11.22	25.91
WOOD01 1335	Wyre2014_11_D	5	11.81	22.76
WOOD01 1335	Wyre2014_11_D	1	11.84	23.60
WOOD01_1335	Wyre2014_11_U	1	11.27	27.44
WOOD01_1335	Wyre2014_11_U_30%CC	1	11.29	28.35
WOOD01 1335	Wyre2014_11_D_30%CC	1	11.88	23.81
WOOD01_1335	Wyre2014_11_U_35%CC	1	11.30	28.50
WOOD01_1335	Wyre2014_11_D_35%CC	1	11.89	23.81
WOOD01 1335	Wyre2014_11_U_70%CC	1	11.30	28.85
WOOD01_1335	Wyre2014_11_D_70%CC	1	11.90	23.74
WOOD01_1335	Wyre2014_11_D	0.1	11.88	23.88
WOOD01_1335	Wyre2014_11_U	0.1	11.30	28.63
WOOD01_1247	Wyre2014_11_U	5	10.99	25.40
WOOD01_1247	Wyre2014_11_D	5	11.76	22.66
WOOD01 1247	Wyre2014_11_D	1	11.80	23.46
WOOD01_1247	Wyre2014_11_U	1	11.03	26.43
WOOD01_1247	Wyre2014_11_U_30%CC	1	11.05	26.88
WOOD01_1247	Wyre2014_11_D_30%CC	1	11.84	23.64
WOOD01_1247	Wyre2014_11_U_35%CC	1	11.06	26.95
WOOD01_1247	Wyre2014_11_D_35%CC	1	11.84	23.64
WOOD01_1217 WOOD01_1247	Wyre2014_11_U_70%CC	1	11.08	27.15
WOOD01_1217 WOOD01_1247	Wyre2014_11_D_70%CC	1	11.86	23.56
WOOD01_1247 WOOD01_1247	Wyre2014_11_D	0.1	11.84	23.70
WOOD01_1247 WOOD01_1247	Wyre2014_11_U	0.1	11.08	27.00
WOOD01_1247 WOOD01_1098	Wyre2014_11_U	5	10.61	25.25
WOOD01_1036 WOOD01_1098	Wyre2014_11_D	5	11.70	22.46
WOOD01_1098	Wyre2014_11_D Wyre2014_11_D	1	11.74	23.17
WOOD01_1098	Wyre2014_11_U	1	10.64	26.31
WOOD01_1098	Wyre2014_11_U_30%CC	1	10.66	26.74
WOOD01_1098	Wyre2014_11_D_30%CC	1	11.78	23.27
WOOD01_1098 WOOD01_1098	Wyre2014_11_U_35%CC	1	10.67	26.77
WOOD01_1098 WOOD01_1098	Wyre2014_11_D_35%CC	1	11.78	23.25
WOOD01_1098 WOOD01_1098	Wyre2014_11_U_70%CC	1	10.71	26.85
WOOD01_1098 WOOD01_1098	Wyre2014_11_D_70%CC	1	11.80	23.17
**************************************	** y102014_11_D_10/000	'	11.00	20.17

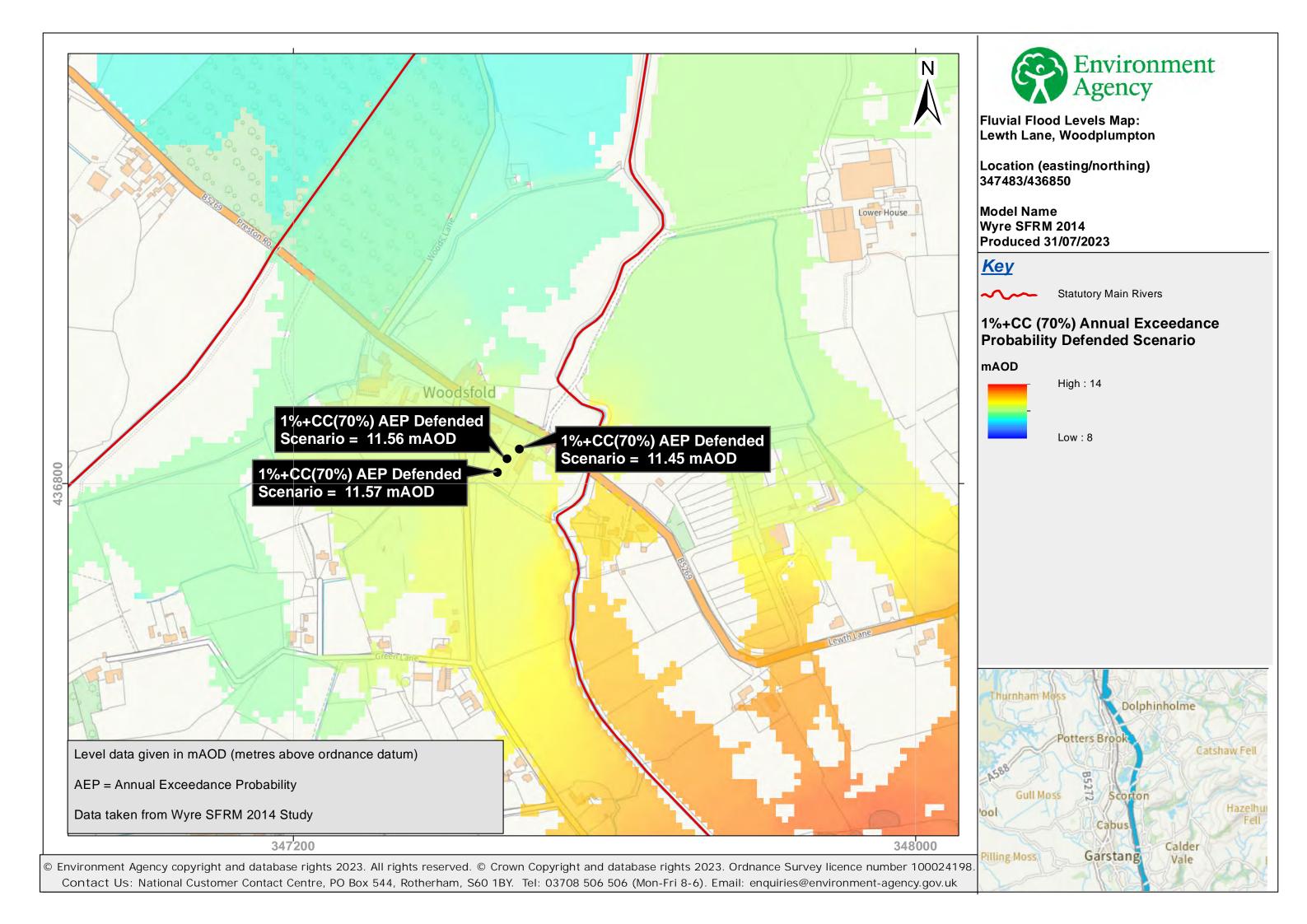
WOOD01\_1098 Wyre2014\_11\_D 0.1 11.78 23.31 WOOD01\_1098 Wyre2014\_11\_U 0.1 10.71 26.82

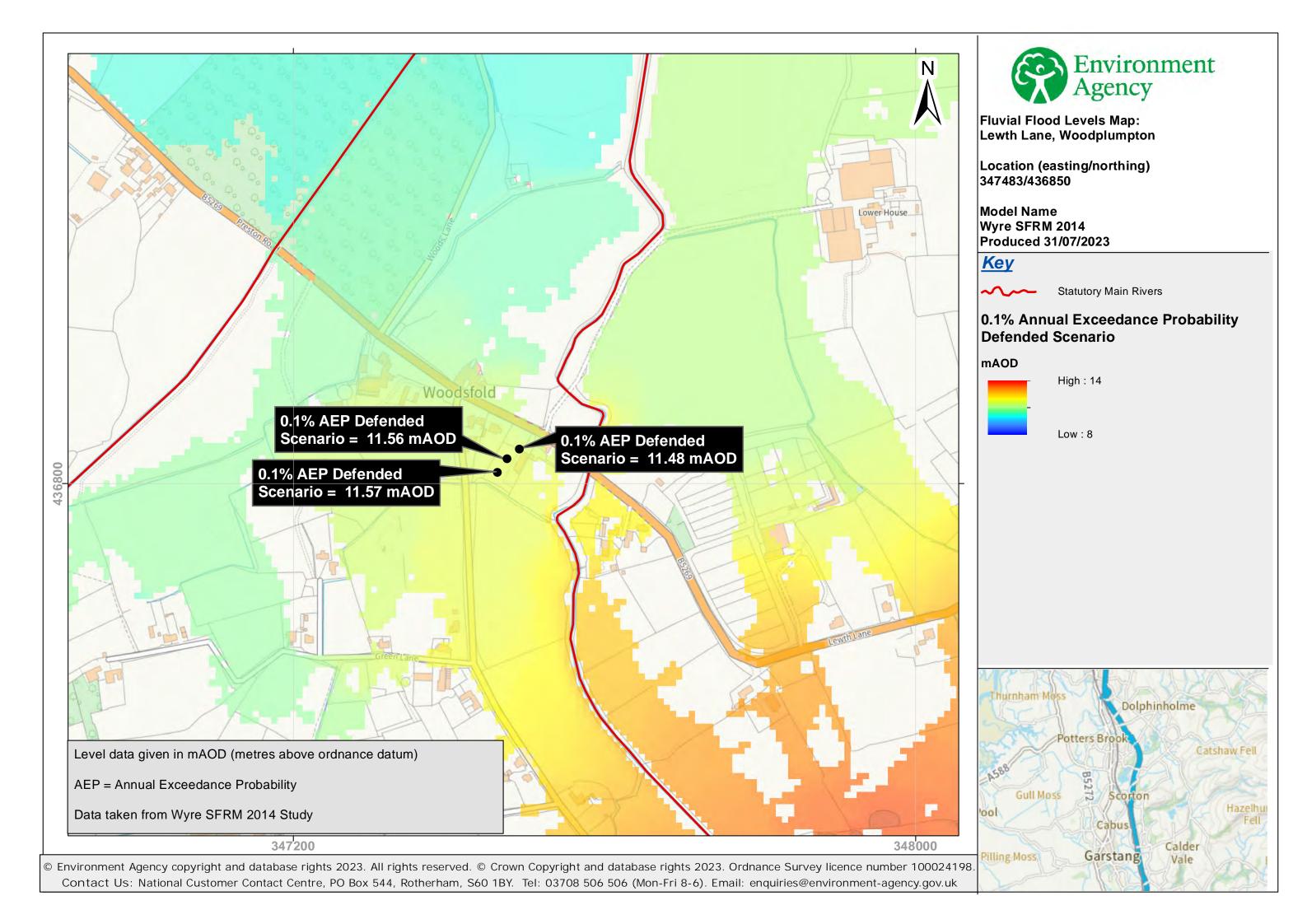


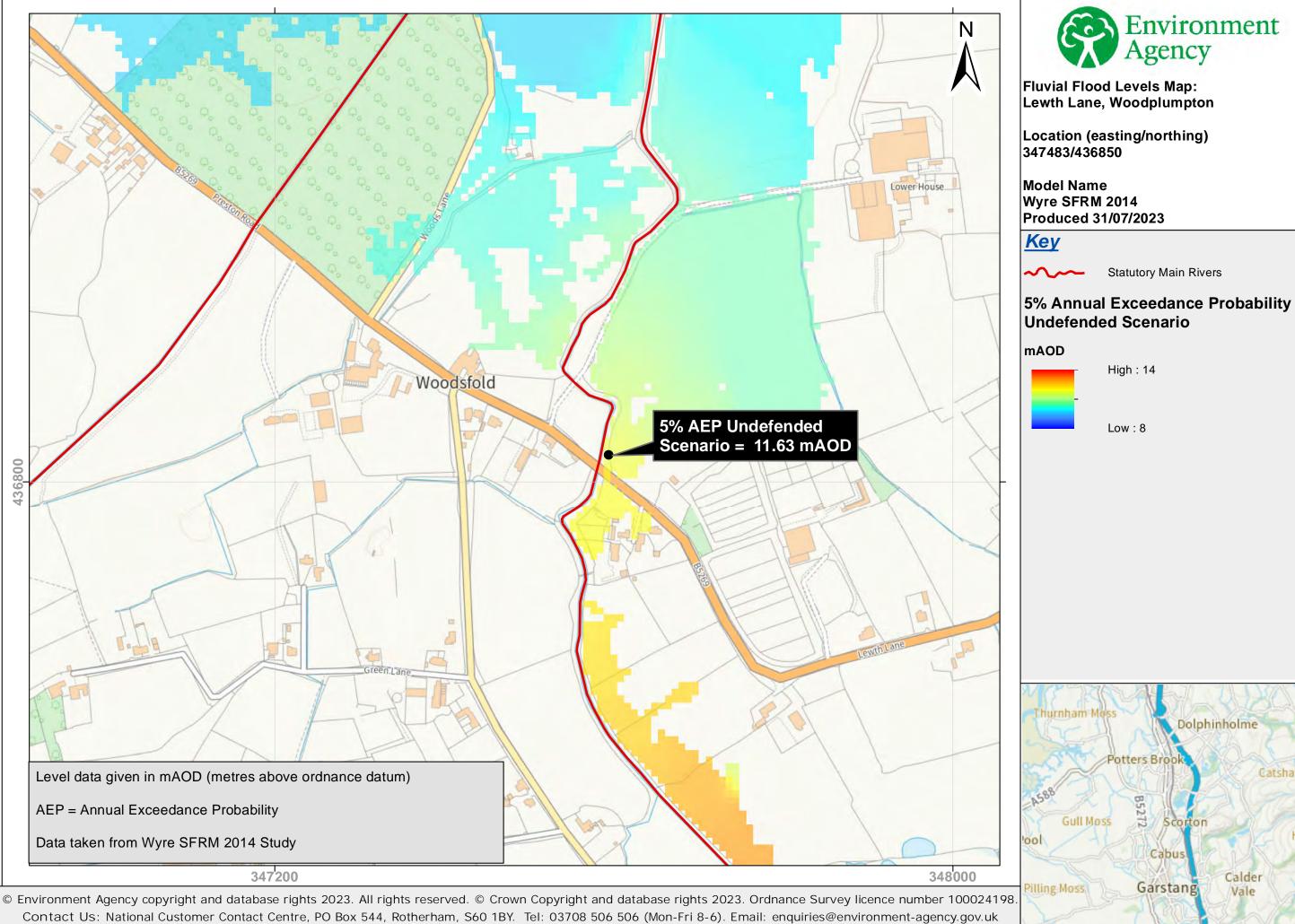






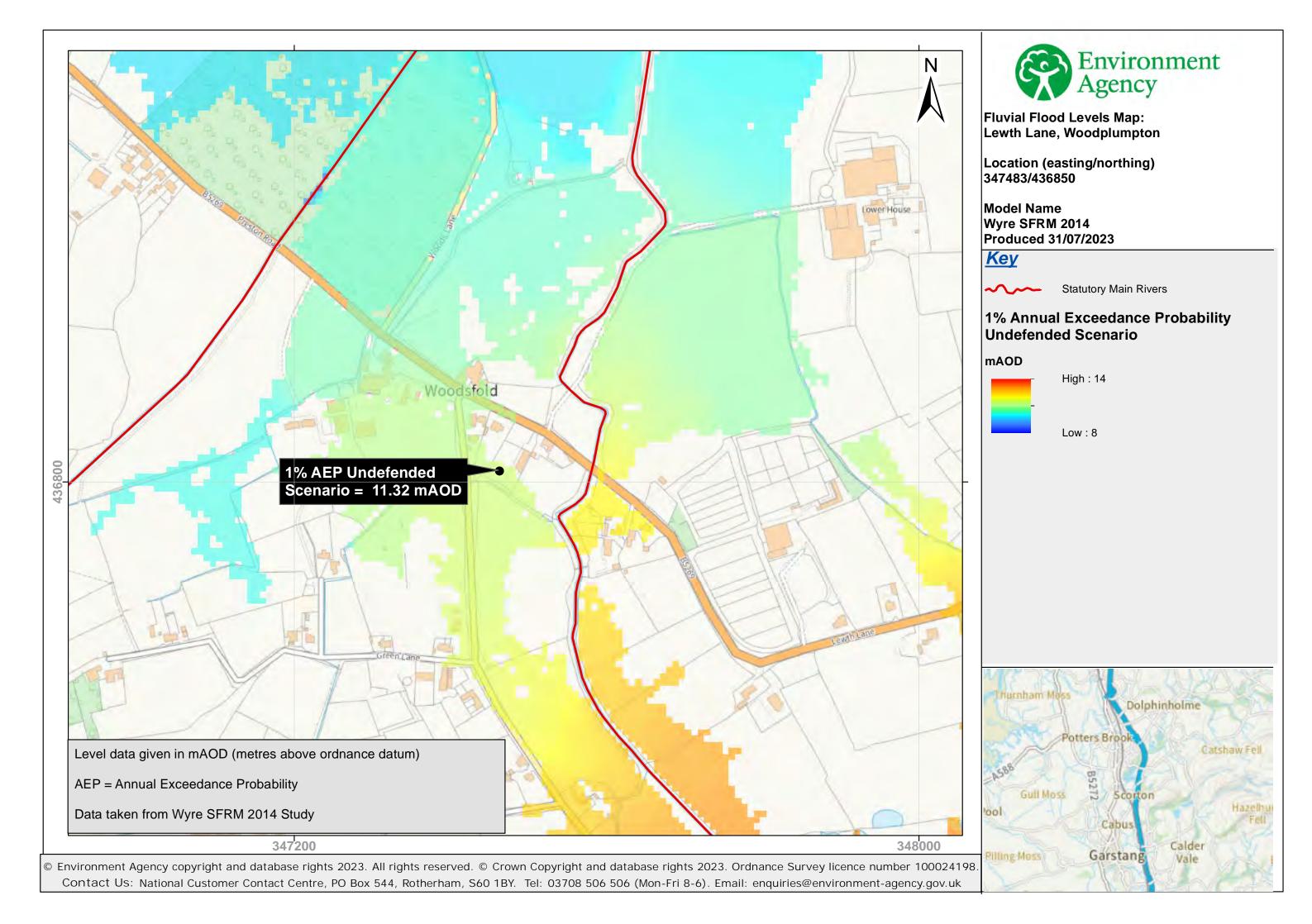


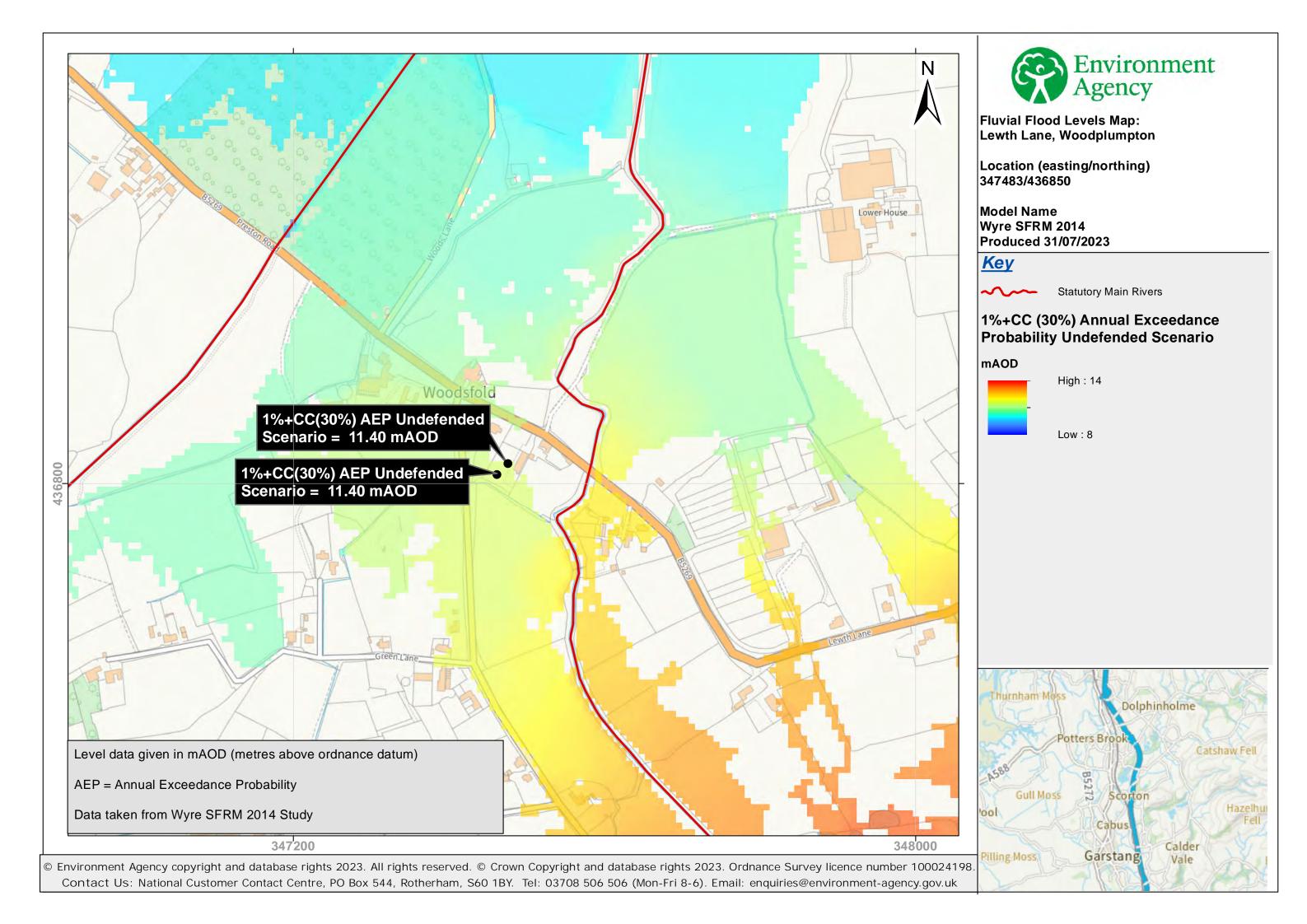


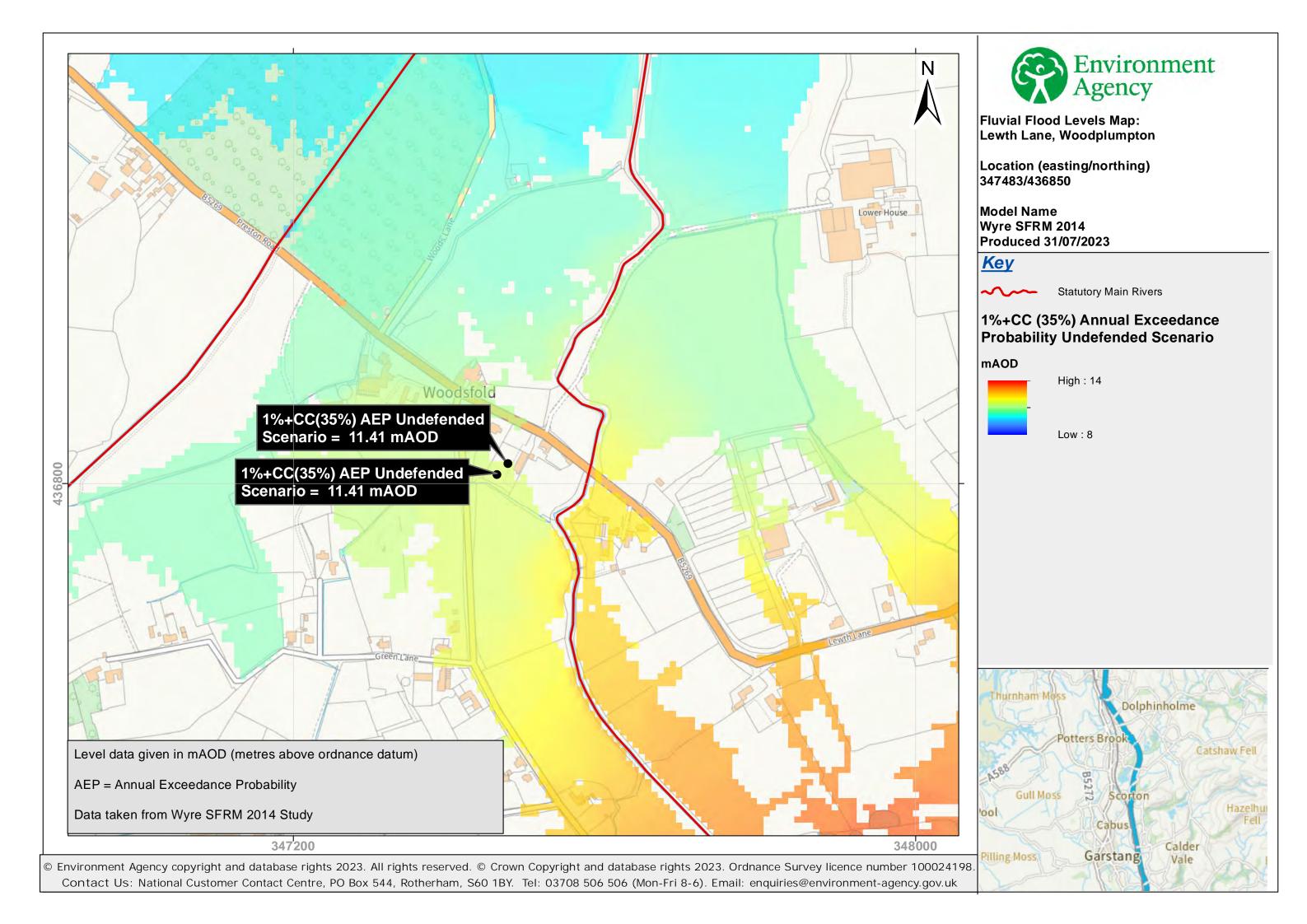


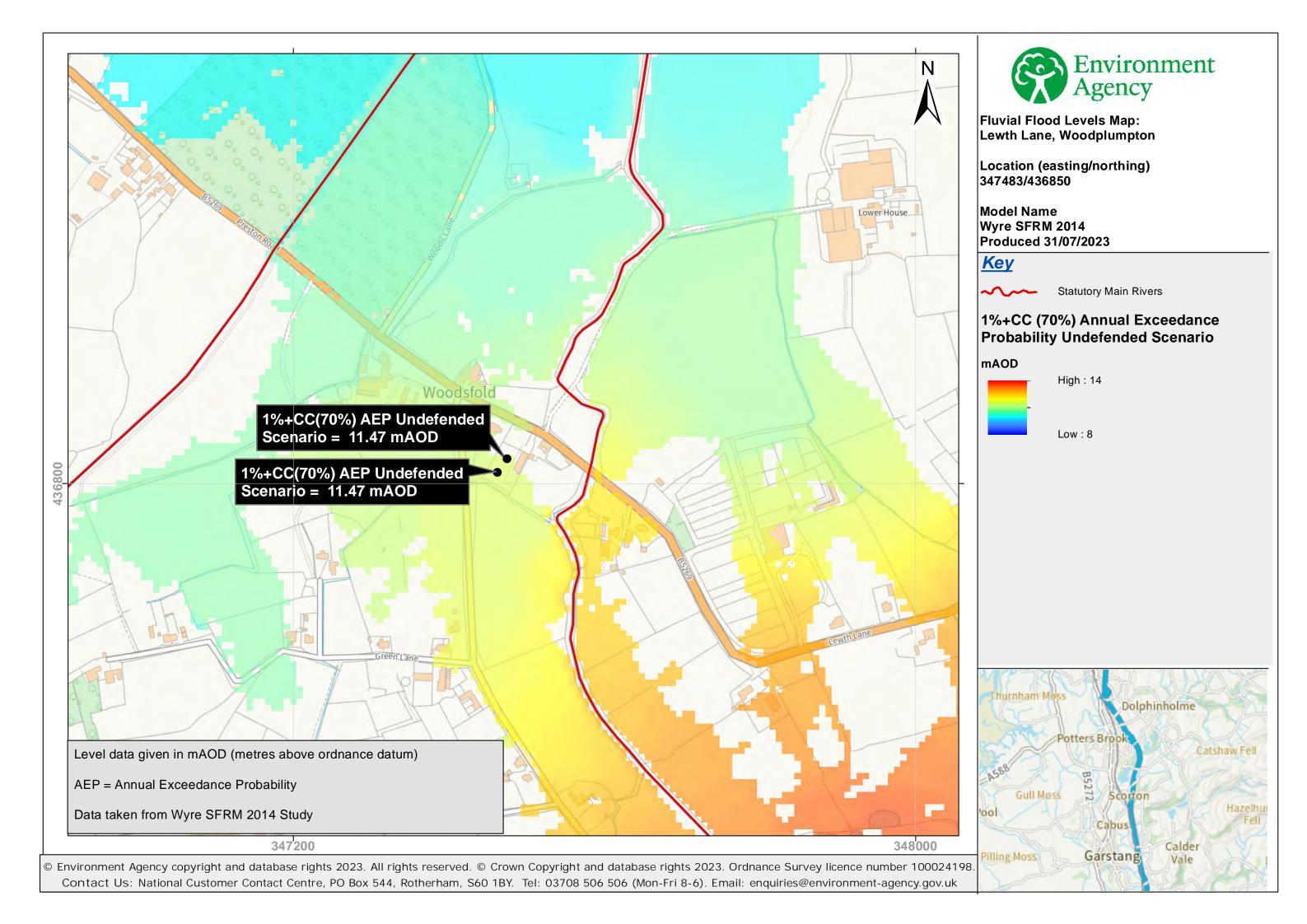
Environment Agency

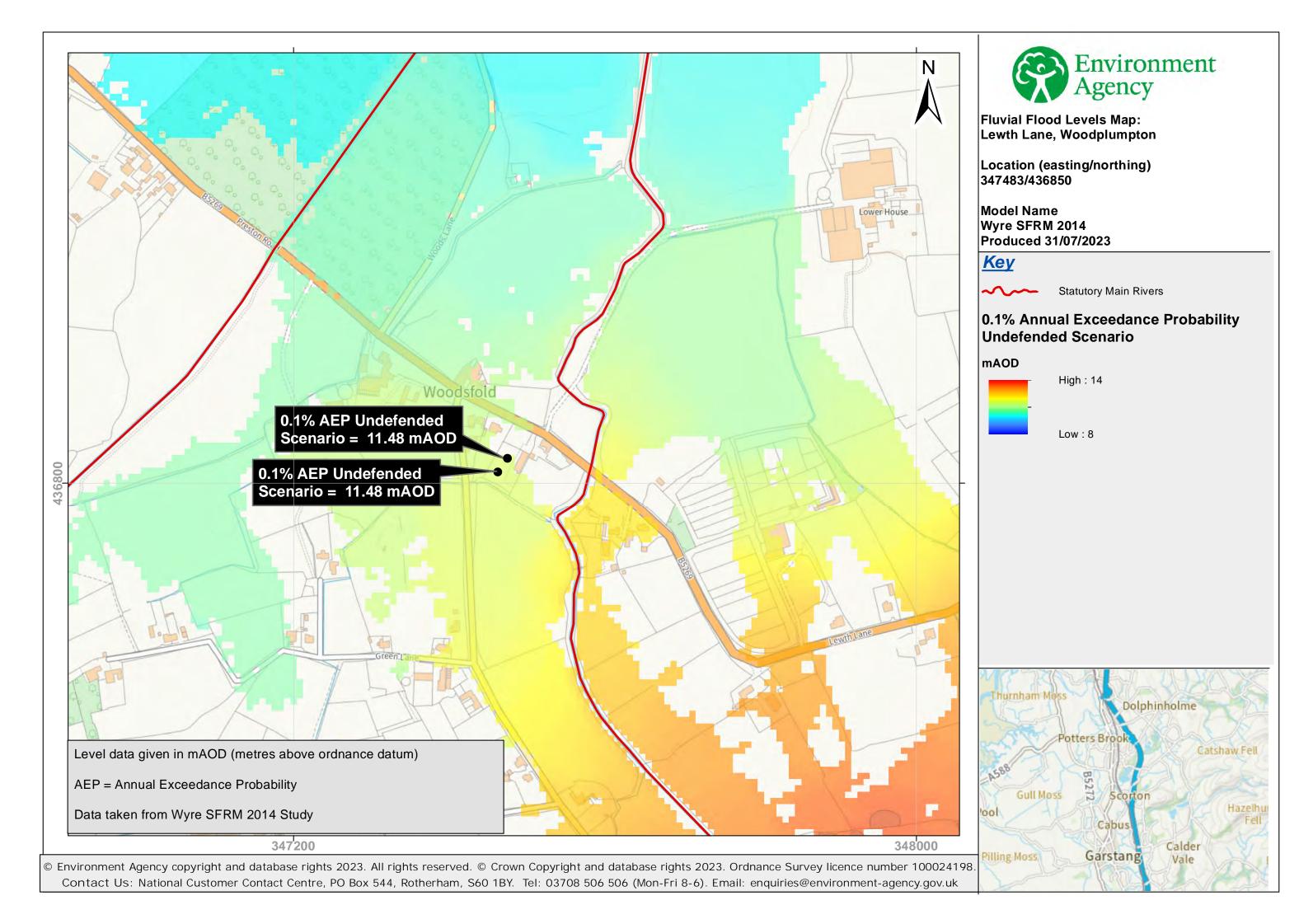












## Strategic flood risk assessments

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 <a href="mailto:inforequests.cmblnc@environment-agency.gov.uk">inforequests.cmblnc@environment-agency.gov.uk</a> for:

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