

Product 4 (Detailed Flood Risk) for Slate Meadow, Bourne End Our Ref: THM_25369

Product 4 is designed for developers where Flood Risk Standing Advice FRA (Flood Risk Assessment) Guidance Note 3 Applies. This is:

- i) "all applications in Flood Zone 3, other than non-domestic extensions less than 250 sq metres; and all domestic extensions", and
- ii) "all applications with a site area greater than 1 ha" in Flood Zone 2.

Product 4 includes the following information:

Ordnance Survey 1:25k colour raster base mapping;
Flood Zone 2 and Flood Zone 3;
Relevant model node locations and unique identifiers (for cross referencing to the water levels, depths and flows table);
Model extents showing *defended* scenarios;
FRA site boundary (where a suitable GIS layer is supplied);
Flood defence locations (where available/relevant) and unique identifiers; (supplied separately)
Flood Map areas benefiting from defences (where available/relevant);
Flood Map flood storage areas (where available/relevant);
Historic flood events outlines (where available/relevant, not the Historic Flood Map) and unique identifiers;
Statutory (Sealed) Main River (where available within map extents);

A table showing:

- i) Model node X/Y coordinate locations, unique identifiers, and levels and flows for *defended* scenarios.
- ii) Flood defence locations unique identifiers and attributes; (supplied separately)
- iii) Historic flood events outlines unique identifiers and attributes; and
- iv) Local flood history data (where available/relevant).

Please note:

If you will be carrying out computer modelling as part of your Flood Risk Assessment, please request our guidance which sets out the requirements and best practice for computer river modelling.

This information is based on that currently available as of the date of this letter. You may feel it is appropriate to contact our office at regular intervals, to check whether any amendments/ improvements have been made. Should you re-contact us after a period of time, please quote the above reference in order to help us deal with your query.

This information is provided subject to the enclosed notice which you should read.

This letter is not a Flood Risk Assessment. The information supplied can be used to form part of your Flood Risk Assessment. Further advice and guidance regarding Flood Risk Assessments can be found on our website at:

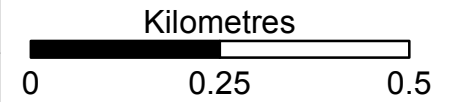
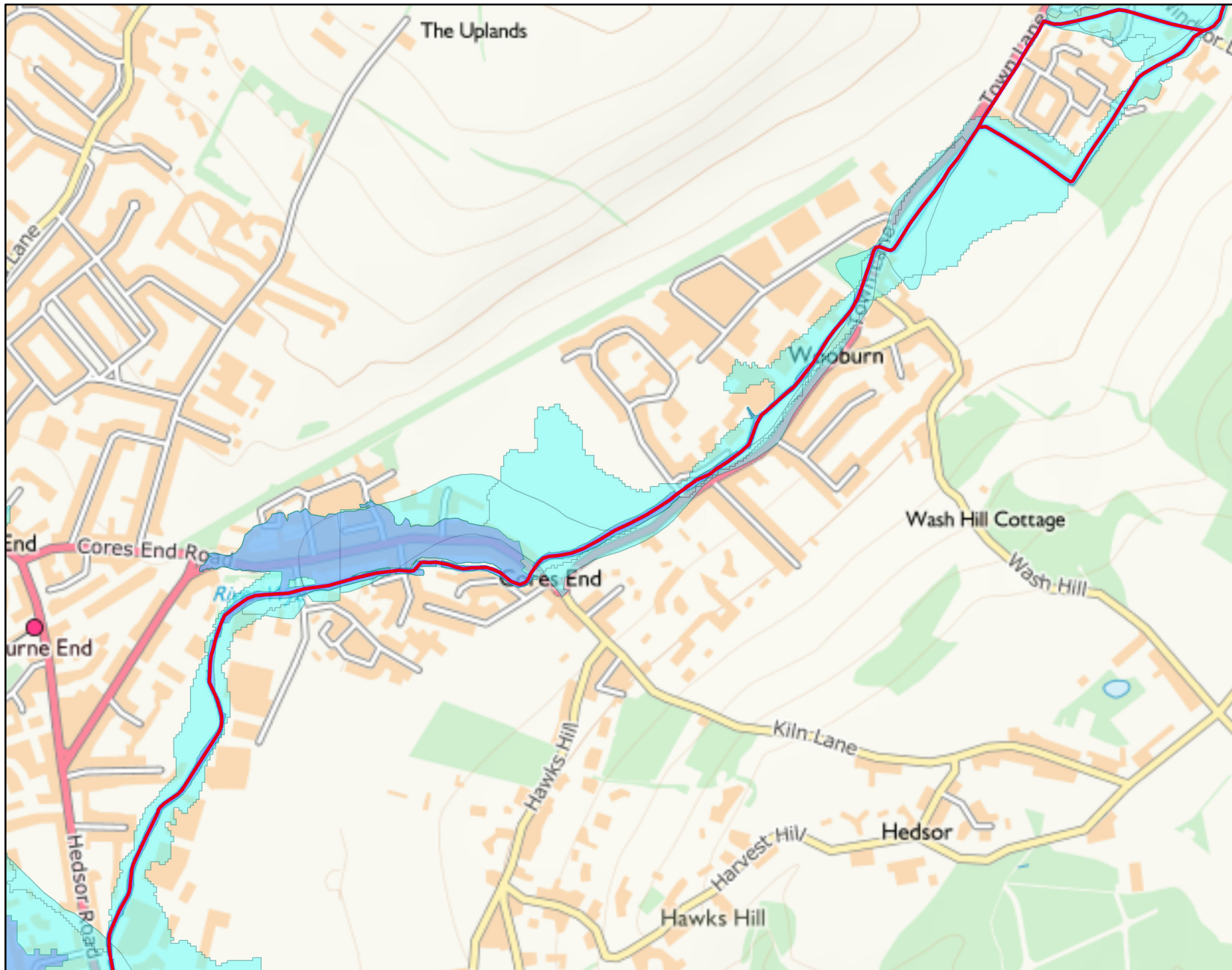
<https://www.gov.uk/guidance/flood-risk-assessment-local-planning-authorities>

If you would like advice from us regarding your development proposals you can complete our pre application enquiry form which can be found at:

<https://www.gov.uk/government/publications/pre-planning-application-enquiry-form-preliminary-opinion>

Flood Map for Planning centred on Slate Meadow, Bourne End

Created on 09/05/2019 REF: THM_25369



Legend

- Main River
- Flooding from rivers or sea (FZ3)
- Extent of extreme flood (FZ2)

Flooding from rivers or sea without defences (Flood Zone 3) shows the area that could be affected by flooding:
- from the sea with a 1 in 200 or greater chance of happening each year
- or from a river with a 1 in 100 or greater chance of happening each year.

The Extent of an extreme flood (Flood Zone 2) shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.

Defence information

Defence Location:

Description: This location is not currently protected by any formal defences and we do not currently have any flood alleviation works planned for the area. However we continue to maintain certain watercourses and the schedule of these can be found on our internet pages.

Model information

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Model: Wye (including Hughenden Stream) 2018

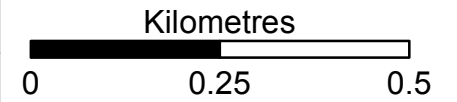
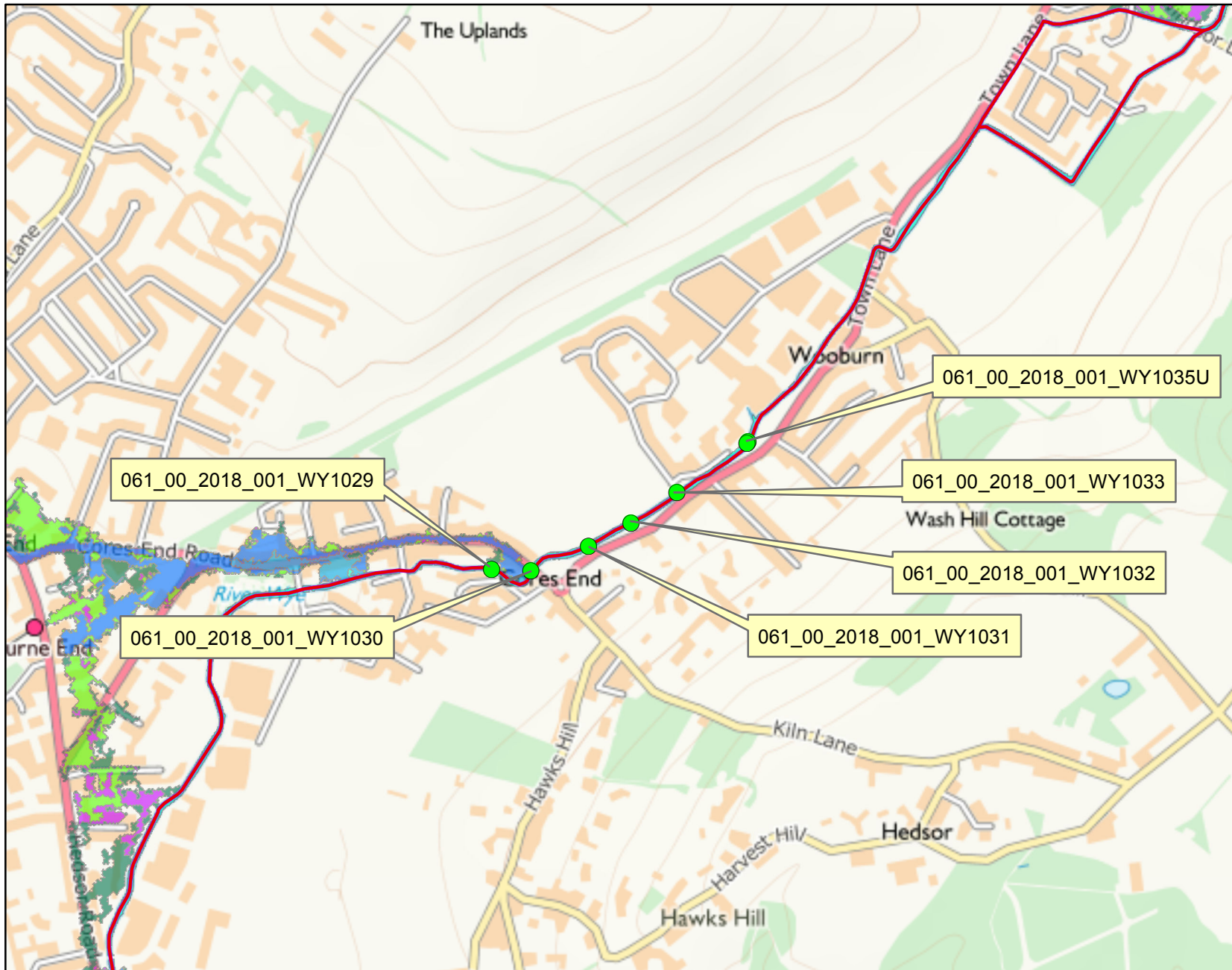
Description: The information provided is taken from the River Wye and Hughenden Stream modelling study in May 2018. The study was carried out using Flood Modeller ESTRY-TUFLOW software. This data supersedes the 2002 model.

Model design runs and Mapped Outputs:

- 1 in 5 / 20% AEP
- 1 in 20 / 5% AEP
- 1 in 30 / 3.3% AEP
- 1 in 75 / 1.33% AEP
- 1 in 100 / 1% AEP
- 1 in 100+15% / 1% AEP with 15% AEP climate change allowance
- 1 in 100+25% / 1% AEP with 25% AEP climate change allowance
- 1 in 100+35% / 1% AEP with 35% AEP climate change allowance
- 1 in 100+70% / 1% AEP with 70% AEP climate change allowance
- 1 in 1000 / 0.1% AEP

FRA Map centred on Slate Meadow, Bourne End

Created on 09/05/2019 REF: THM_25369



Legend

- Wye Model Node Data
- Main River
- 20% AEP Flood Outline
- 5% AEP Flood Outline
- 1% AEP Flood Outline
- 1%+25% CC AEP Flood Outline
- 1%+35% CC AEP Flood Outline
- 1%+70% CC AEP Flood Outline
- 0.1% AEP Flood Outline

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

Where available climate change extents have been calculated with an additional flow added to an AEP event. An example of how this is written is 1%+20% AEP.

Modelled in-channel flood flows and levels

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The modelled flood levels and flows for the closest most appropriate model node points for your site that are within the river channel are provided below:

Node label	Model	Easting	Northing	Flood Levels (mAOD)						
				20% AEP	5% AEP	1% AEP	1% AEP (+25% increase in flows)	1% AEP (+35% increase in flows)	1% AEP (+70% increase in flows)	0.1% AEP
061_00_2018_001_WY1035U	Wye (including Hughenden Stream) 2018	490723	187584	31.84	31.93	32.05	32.10	32.11	32.19	32.08
061_00_2018_001_WY1033	Wye (including Hughenden Stream) 2018	490597	187494	31.52	31.62	31.73	31.78	31.79	31.85	31.75
061_00_2018_001_WY1032	Wye (including Hughenden Stream) 2018	490516	187440	31.39	31.50	31.61	31.65	31.66	31.72	31.63
061_00_2018_001_WY1031	Wye (including Hughenden Stream) 2018	490441	187398	31.35	31.45	31.56	31.60	31.61	31.66	31.58
061_00_2018_001_WY1030	Wye (including Hughenden Stream) 2018	490338	187355	31.31	31.41	31.51	31.54	31.55	31.59	31.53
061_00_2018_001_WY1029	Wye (including Hughenden Stream) 2018	490269	187358	31.05	31.15	31.24	31.28	31.29	31.33	31.25

Node label	Model	Easting	Northing	Flood Flows (m3/s)						
				20% AEP	5% AEP	1% AEP	1% AEP (+25% increase in flows)	1% AEP (+35% increase in flows)	1% AEP (+70% increase in flows)	0.1% AEP
061_00_2018_001_WY1035U	Wye (including Hughenden Stream) 2018	490723	187584	3.70	4.79	6.18	6.90	7.03	8.15	6.53
061_00_2018_001_WY1033	Wye (including Hughenden Stream) 2018	490597	187494	3.70	4.79	6.18	6.90	7.03	8.15	6.53
061_00_2018_001_WY1032	Wye (including Hughenden Stream) 2018	490516	187440	3.70	4.79	6.18	6.90	7.03	8.15	6.53
061_00_2018_001_WY1031	Wye (including Hughenden Stream) 2018	490441	187398	3.70	4.79	6.18	6.90	7.03	8.15	6.53
061_00_2018_001_WY1030	Wye (including Hughenden Stream) 2018	490338	187355	3.70	4.79	6.18	6.90	7.03	8.15	6.53
061_00_2018_001_WY1029	Wye (including Hughenden Stream) 2018	490269	187358	3.70	4.79	5.99	6.44	6.54	7.27	6.24

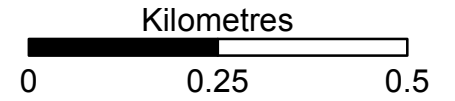
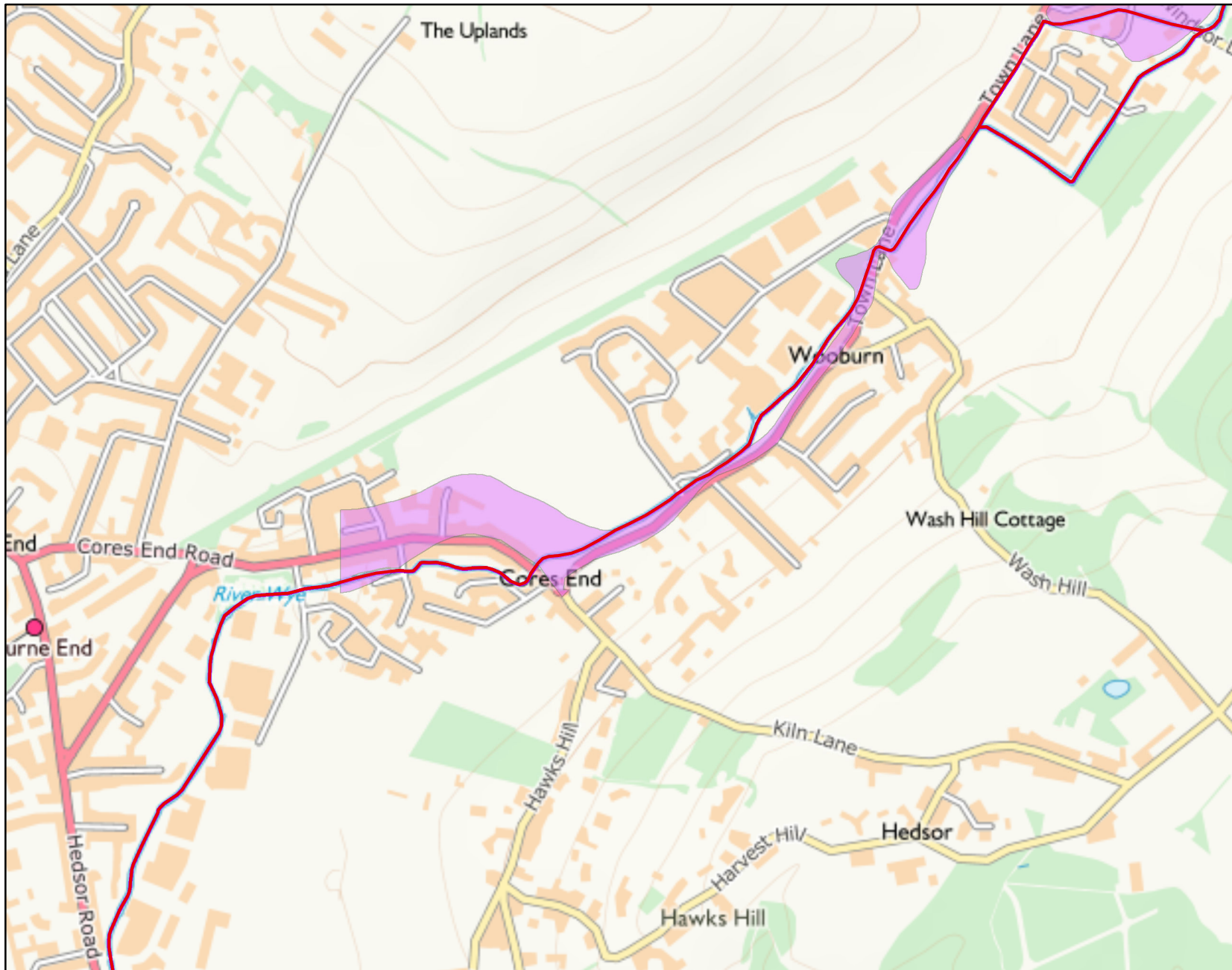
Note:

Due to changes in guidance on the allowances for climate change, the 20% increase in river flows should no longer to be used for development design purposes. The data included in this Product can be used for interpolation of levels as part of an intermediate level assessment.

For further advice on the new allowances please visit <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>.

Historic Flood Map centred on Slate Meadow, Bourne End

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Legend

— Main River

year
1981

Historic flood data

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Our records show that the area of your site has been affected by flooding.
Information on the floods that have affected your site is provided in the table below:

Flood Event Code	Flood Event Name	Start Date	End Date	Source of Flooding	Cause of Flooding
EA0619811200005	06DecemberWinter1981	01/01/1981	12/12/1981	main river	channel capacity exceeded (no raised defences)

Please note the Environment Agency maps flooding to land not individual properties. Floodplain extents are an indication of the geographical extent of a historic flood. They do not provide information regarding levels of individual properties, nor do they imply that a property has flooded internally.

Start and End Dates shown above may represent a wider range where the exact dates are not available.