



# Appendix E

## EA Product 4

**Reference:** EAn/2017/63128  
**Site Address:** Brentwood Borough Council  
**Date:** 26/10/2017

**Included:**

- Flood Map
- Historic Flood Outlines Map

**Important information to note with your Product:**

**Flood Risk Assessments (FRAs)**

If you are obtaining this information for use within a Flood Risk Assessment (FRA) required for a planning application, please include our unaltered Product 4 data within an appendix of your FRA.

**Flood Zones**

Please see the attached map showing the Flood Zones (outlines) for the area of the site. Our maps show the site is located in fluvial Flood Zone 1, 2 and 3.

**Climate Change (Fluvial Only)**

Flood risk data requests including an allowance for climate change will be based on the 1% annual probability flood including an additional 20% increase on peak flows to account for climate change impacts, unless otherwise stated. You should refer to 'Flood risk assessments: climate change allowances' to check if this allowance is still appropriate for the type of development you are proposing and its location. You may need to undertake further assessment of future flood risk using different allowances to ensure your assessment of future flood risk is based on best available evidence.

The flow data for this model is not readily available. However, you can request a Product 7 for the model inputs and extract the flows from the model yourself.

For further guidance on fluvial climate change please contact the Partnership and Strategic Overview Team at: [PSOENS@environment-agency.gov.uk](mailto:PSOENS@environment-agency.gov.uk)

**Historic Flood Events**

Examinations of our records of historic flooding show that the general area has previously flooded. Please note that these records show flooding to the land and do not necessarily indicate that properties within the historic flood events were flooded internally. It is also possible that the pattern of flooding in this area has changed and that this area would now flood under different circumstances. Please see the attached PDF for flood history information.

**Surface Water**

Please be aware that in recent years, there has been an increase in flood damage caused by surface water flooding or drainage systems that have been overwhelmed. We have worked with Lead local Flood Authorities (LLFAs) to develop a map which incorporates the best local and national scale information on surface water flood risk. These maps can be viewed on our website at the following:-  
<http://maps.environment-agency.gov.uk/wiyby/wiybyController?ep=maptopics&lang=e>

**Reservoir Flooding**

You can obtain a map which shows the extent of flooding if a reservoir was to fail and release the water that it holds. The map shows the worst case scenario. These maps can be viewed on our website at the following:-

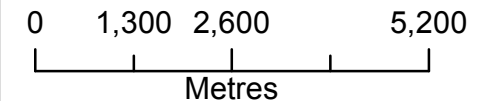
[http://maps.environment-agency.gov.uk/wiyby/wiybyController?ep=maptopics&lang=\\_e](http://maps.environment-agency.gov.uk/wiyby/wiybyController?ep=maptopics&lang=_e)

# Flood Map for planning centred on Brentwood District

Created 26/10/2017 - Ref: EAn/2017/63128

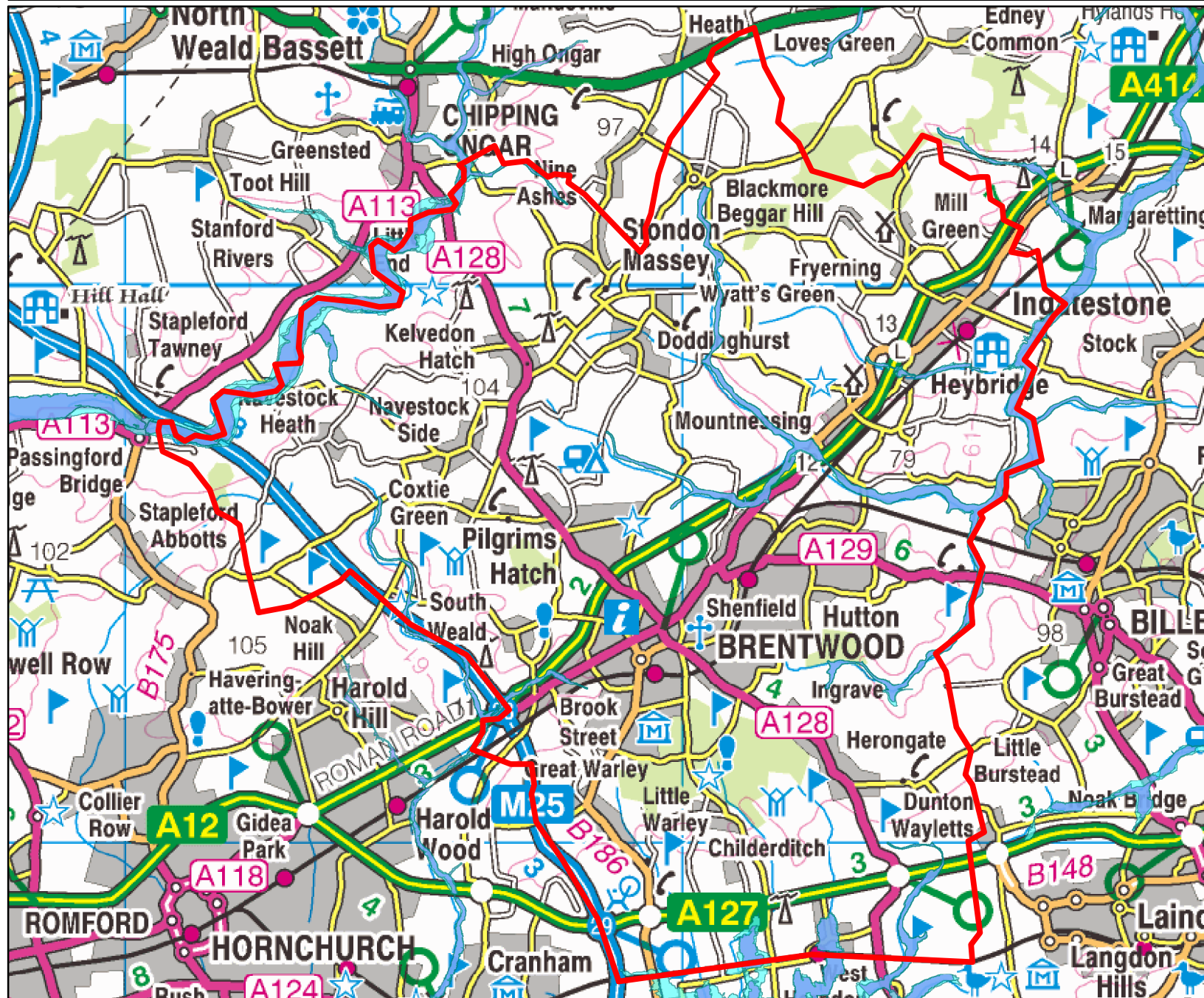


Environment Agency  
Iceni House  
Cobham Road  
Ipswich  
Suffolk  
IP3 9JD



## Legend

- Site Location
- Areas Benefiting from Defence
- Flood Zone 3
- Flood Zone 2



Flood Map for Planning (assuming no 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.

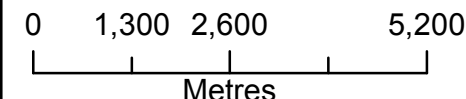
Flood Zone 2 shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.

# Recorded Flood Events Outlines Map centred on Brentwood District

Created 26/10/2017 - Ref: EAn/2017/63128

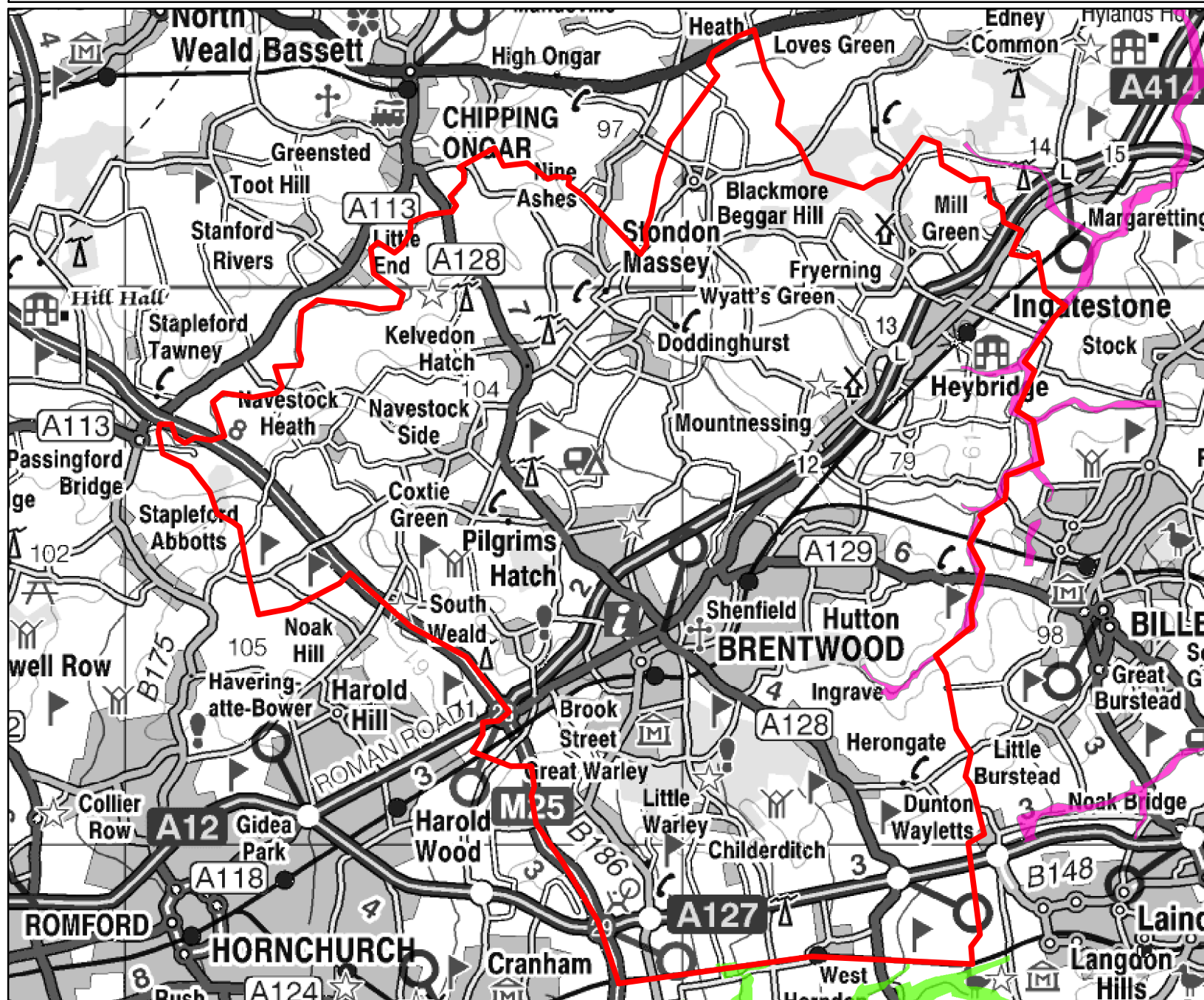


Environment Agency  
Iceni House  
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Suffolk  
IP3 9JD



## Legend

- Site Location
- 1968 Outline
- 1958 Outline



The historic flood event outlines are based on a combination of anecdotal evidence, Environment Agency staff observations and survey.

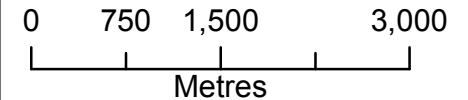
Our historic flood event outlines do not provide a definitive record of flooding. It is possible that there will be an absence of data in places where we have not been able to record the extent of flooding. It is also possible for errors to occur in the digitisation of historic records of flooding.

# Flood Map for planning centred on NW of Brentwood District





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Environment Agency  
Iceni House  
Cobham Road  
Ipswich  
Suffolk  
IP3 9JD



## Legend

-  Site Location
-  Areas Benefiting from Defence
-  Flood Zone 3
-  Flood Zone 2



Flood Map for Planning (assuming no 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.

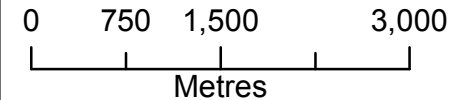
Flood Zone 2 shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.

# Recorded Flood Events Outlines Map centred on NW of Brentwood District

## Created 26/10/2017 - Ref: EAn/2017/63128

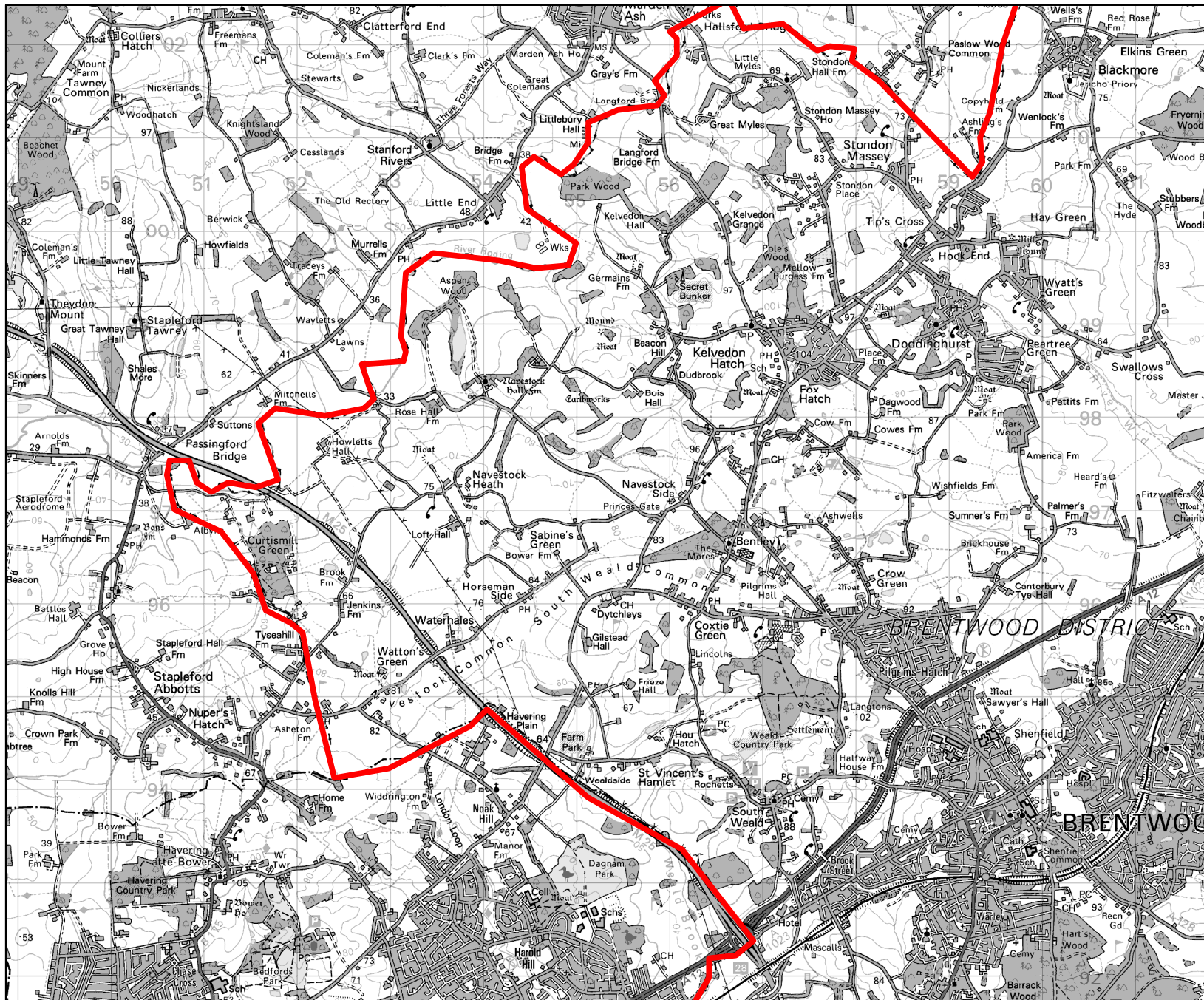


Environment Agency  
Iceni House  
Cobham Road  
Ipswich  
Suffolk  
IP3 9JD



### Legend

 Site Location



The historic flood event outlines are based on a combination of anecdotal evidence, Environment Agency staff observations and survey.

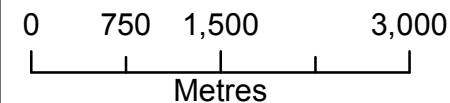
Our historic flood event outlines do not provide a definitive record of flooding. It is possible that there will be an absence of data in places where we have not been able to record the extent of flooding. It is also possible for errors to occur in the digitisation of historic records of flooding.

# Flood Map for planning centred on NE of Brentwood District

## Created 26/10/2017 - Ref: EAn/2017/63128

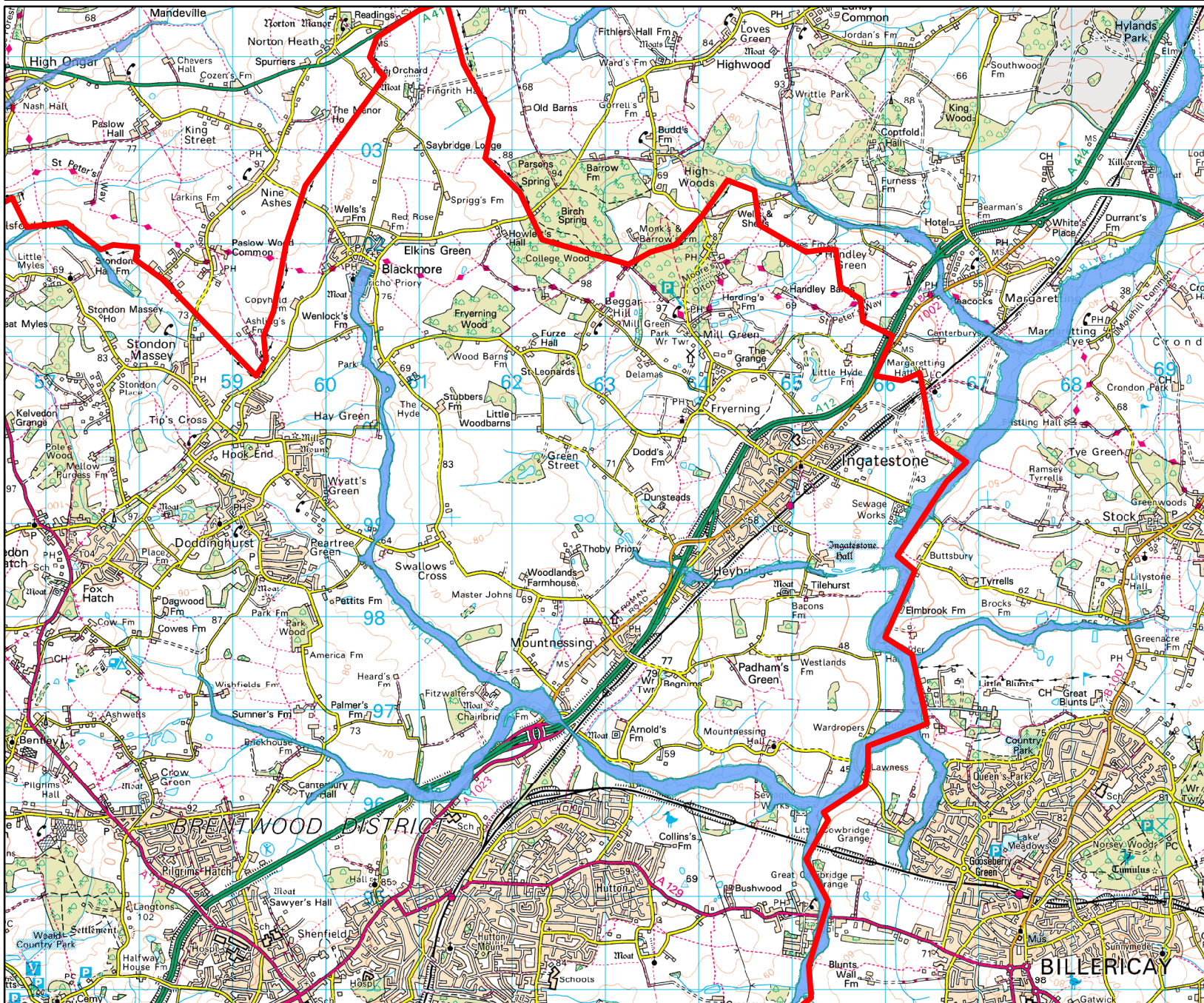


Environment Agency  
Iceni House  
Cobham Road  
Ipswich  
Suffolk  
IP3 9JD



### Legend

- Site Location
- Areas Benefiting from Defence
- Flood Zone 3
- Flood Zone 2



Flood Map for Planning (assuming no 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.

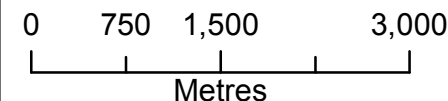
Flood Zone 2 shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.

# Recorded Flood Events Outlines Map centred on NE of Brentwood District

## Created 26/10/2017 - Ref: EAn/2017/63128

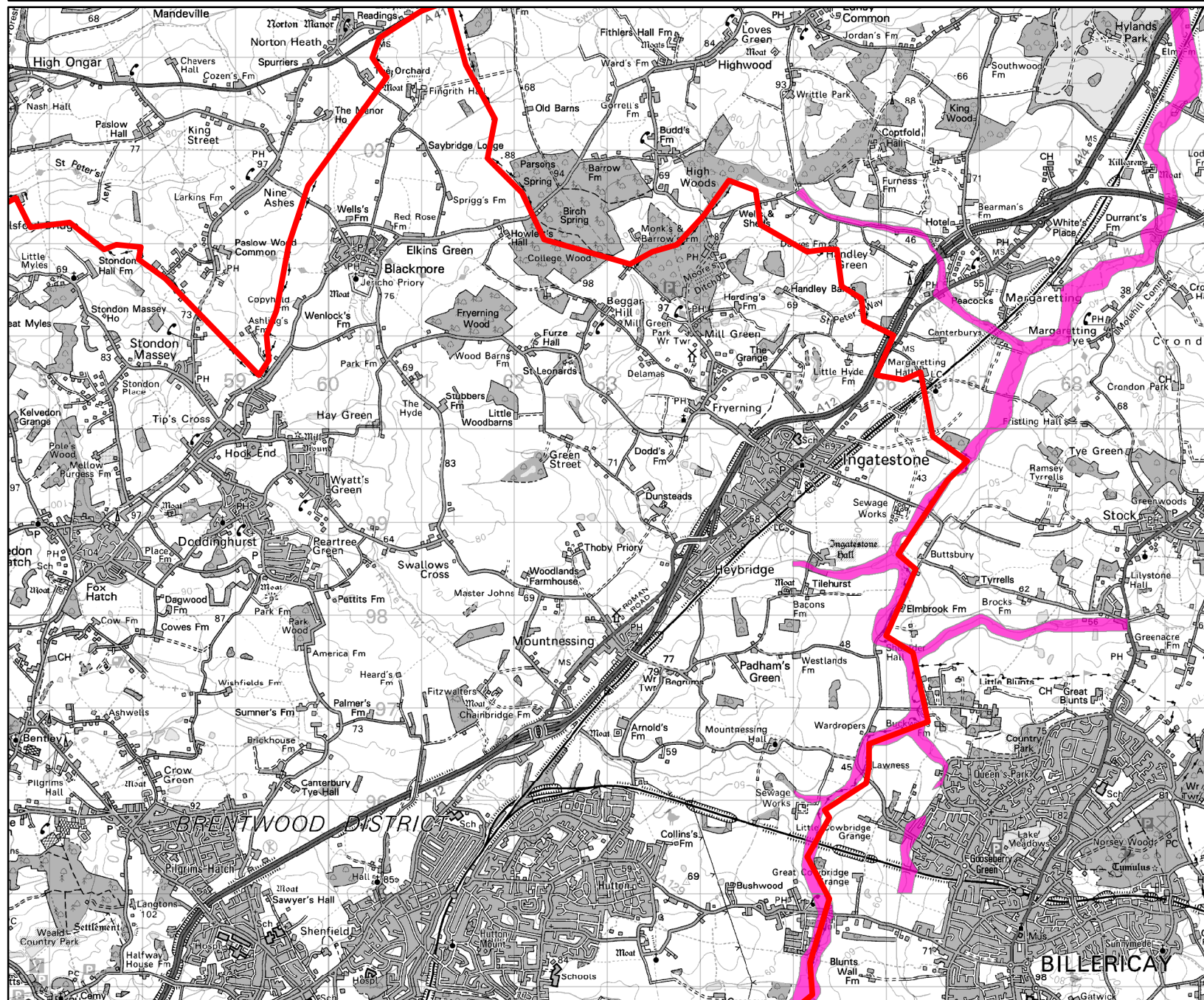


Environment Agency  
Iceni House  
Cobham Road  
Ipswich  
Suffolk  
IP3 9JD



### Legend

- Site Location
- 1958 Outline



The historic flood event outlines are based on a combination of anecdotal evidence, Environment Agency staff observations and survey.

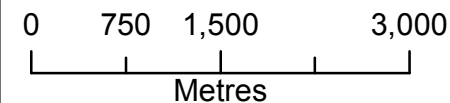
Our historic flood event outlines do not provide a definitive record of flooding. It is possible that there will be an absence of data in places where we have not been able to record the extent of flooding. It is also possible for errors to occur in the digitisation of historic records of flooding.

# Flood Map for planning centred on S of Brentwood District





Created 26/10/2017 - Ref: EAn/2017/63128

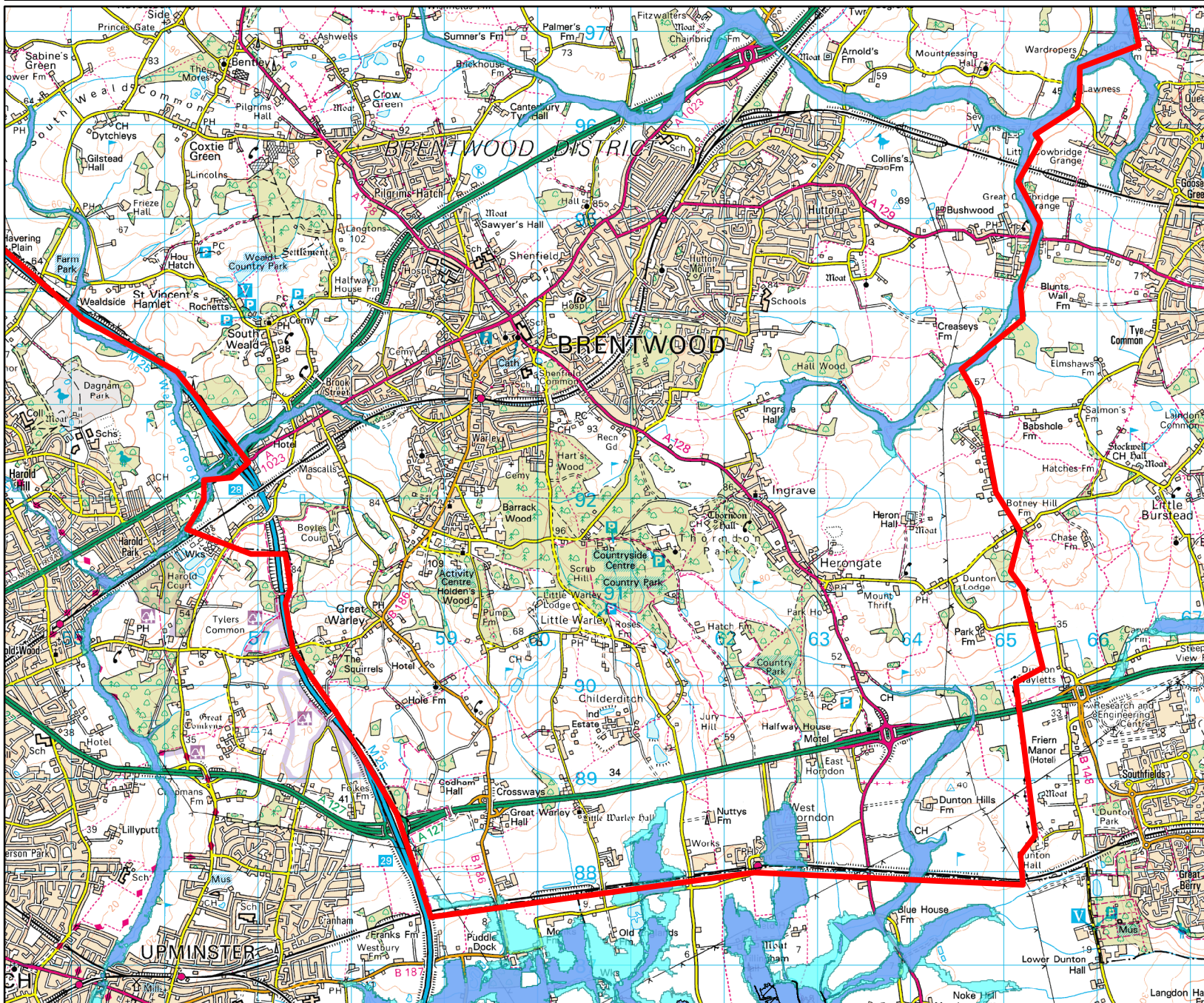


Environment Agency  
Iceni House  
Cobham Road  
Ipswich  
Suffolk  
IP3 9JD



## Legend

-  Site Location
-  Areas Benefiting from Defence
-  Flood Zone 3
-  Flood Zone 2



Flood Map for Planning (assuming no 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.

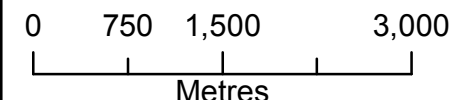
Flood Zone 2 shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.

# Recorded Flood Events Outlines Map centred on S of Brentwood District




Created 26/10/2017 - Ref: EAn/2017/63128

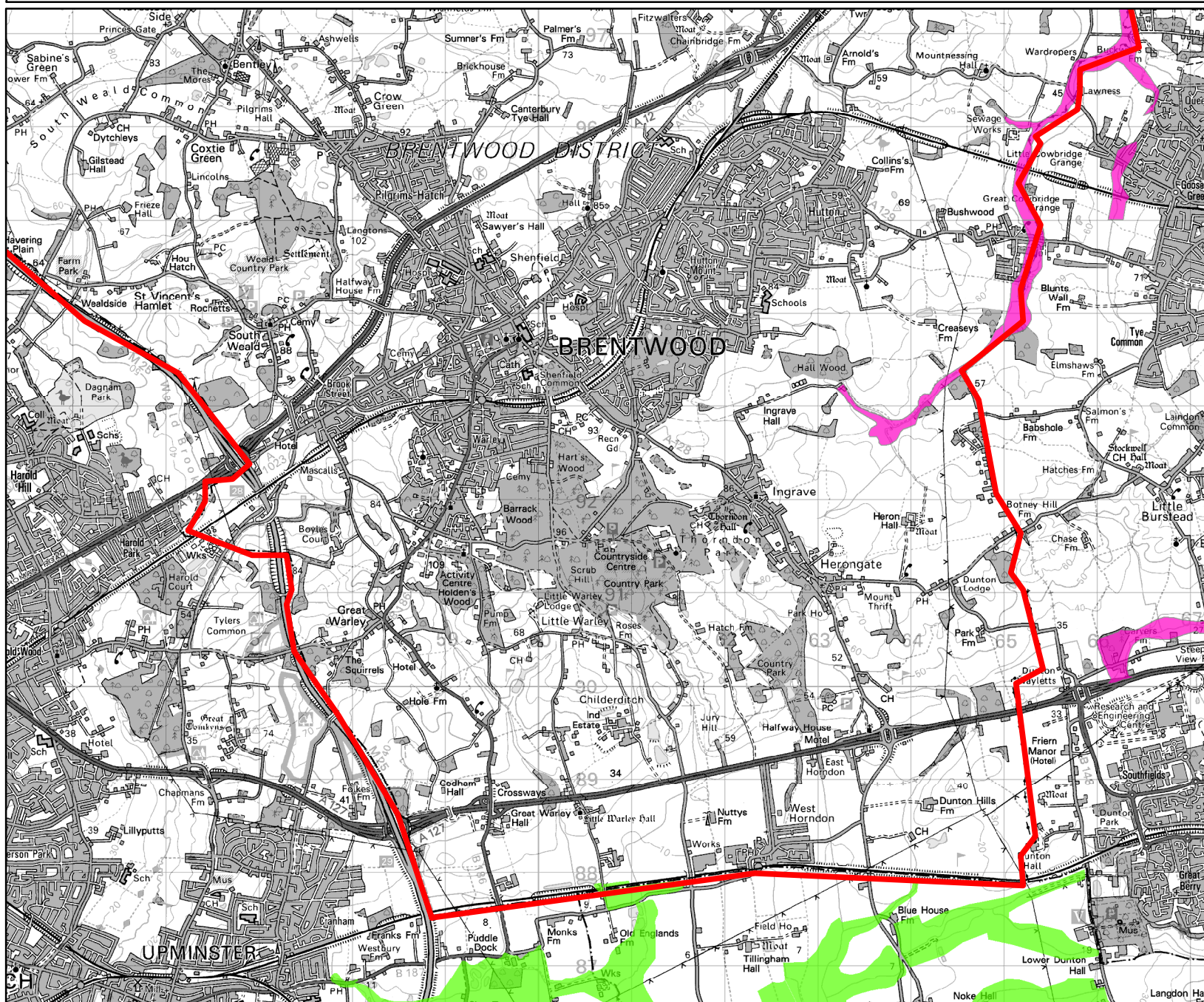


Environment Agency  
Iceni House  
Cobham Road  
Ipswich  
Suffolk  
IP3 9JD



## Legend

-  Site Location
-  1968 Outline
-  1958 Outline



The historic flood event outlines are based on a combination of anecdotal evidence, Environment Agency staff observations and survey.

Our historic flood event outlines do not provide a definitive record of flooding. It is possible that there will be an absence of data in places where we have not been able to record the extent of flooding. It is also possible for errors to occur in the digitisation of historic records of flooding.

# Modelled Outlines Location Map centred on NE of Brentwood District

## Created 26/10/2017 - Ref: EAn/2017/63079



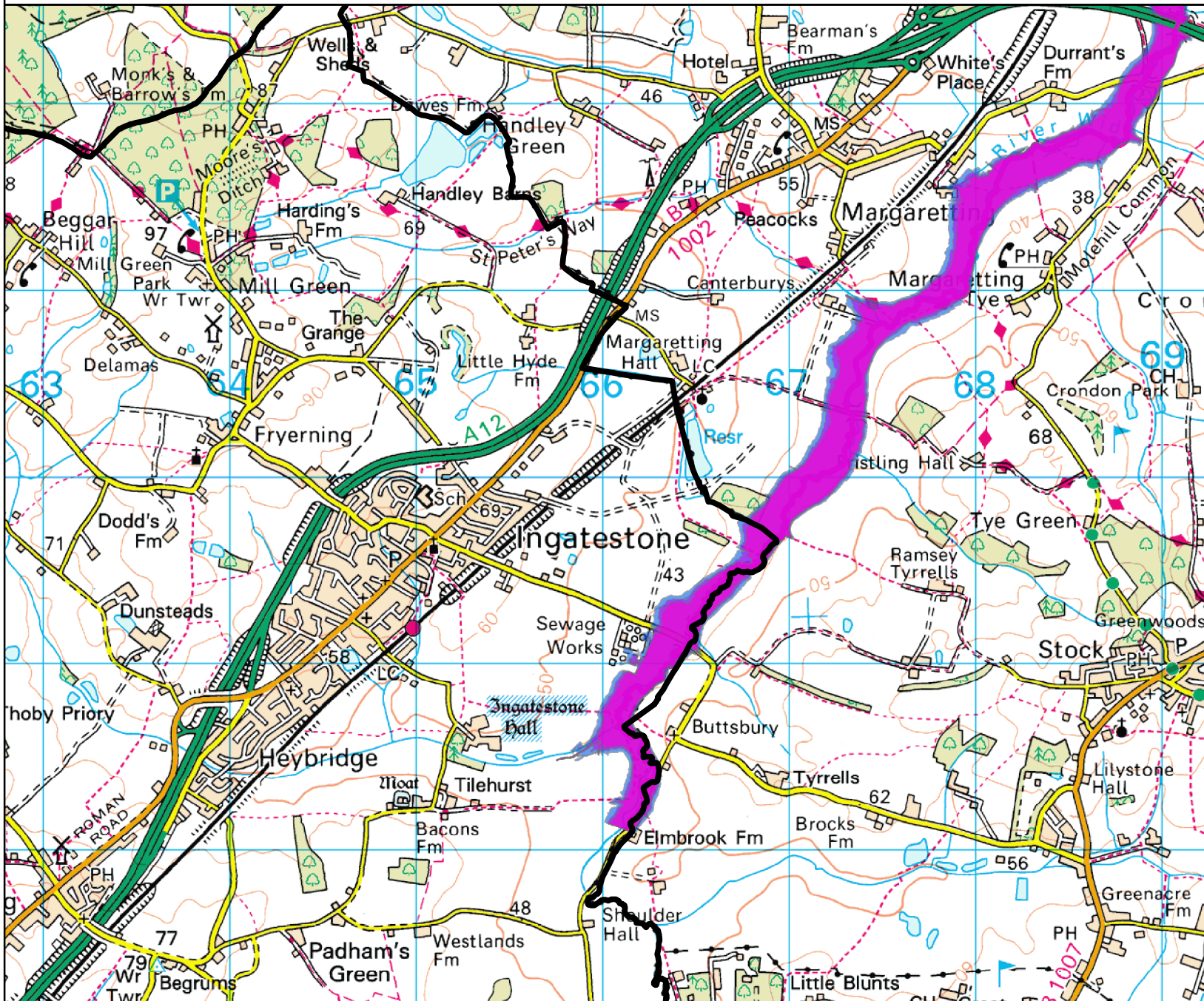
Environment Agency  
Iceni House  
Cobham Road  
Ipswich  
Suffolk  
IP3 9JD

0 260 520 1,040  
Meters

### Legend

- Site Location
- Chelmer\_Def\_020yr
- Chelmer\_Def\_100yr
- Chelmer\_Def\_1000YR
- Flood Risk studies

This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences if present.



# Modelled Outlines (+CC) Location Map centred on NE of Brentwood District

## Created 26/10/2017 - Ref: EAn/2017/63079



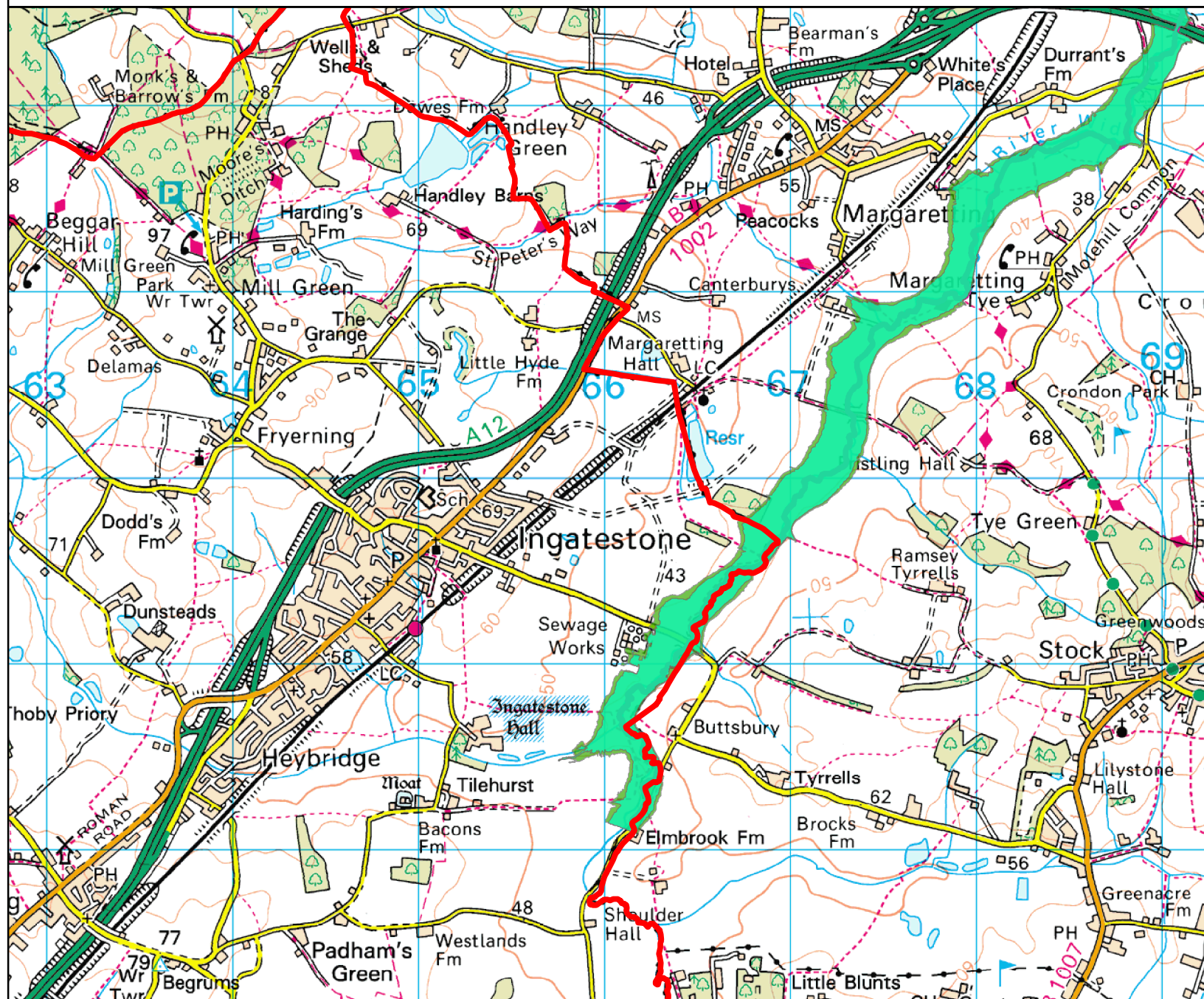
Environment Agency  
Iceni House  
Cobham Road  
Ipswich  
Suffolk  
IP3 9JD

0 260 520 1,040  
Meters

### Legend

- Site Location
- Chelmer\_Def\_100yrCC
- Chelmer\_Def\_1000yrCC
- Flood Risk studies

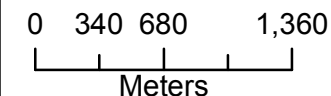
This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences if present.







# Modelled Defended Outlines Location Map centred on S of Brentwood District Created 26/10/2017 - Ref: EAn/2017/63079



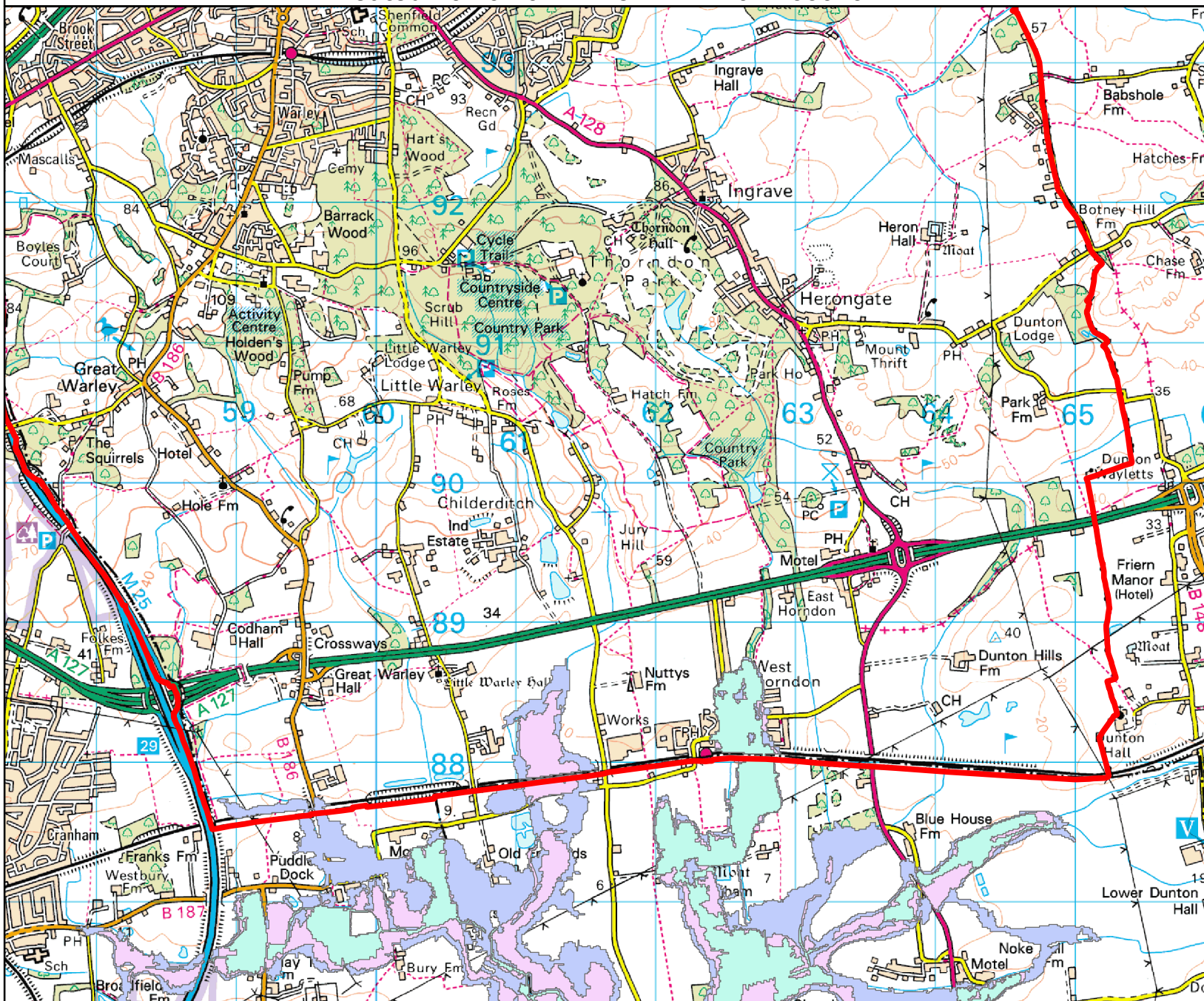
Environment Agency  
Iceni House  
Cobham Road  
Ipswich  
Suffolk  
IP3 9JD



## Legend

-  Site Location
-  def\_F\_20\_region
-  Def\_F\_100\_region
-  Def\_F\_1000\_region

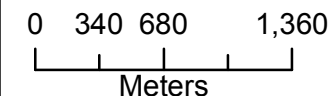
This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences if present.



# Modelled Defended Outlines (+CC) Location Map centred on S of Brentwood District Created 26/10/2017 - Ref: EAn/2017/63079



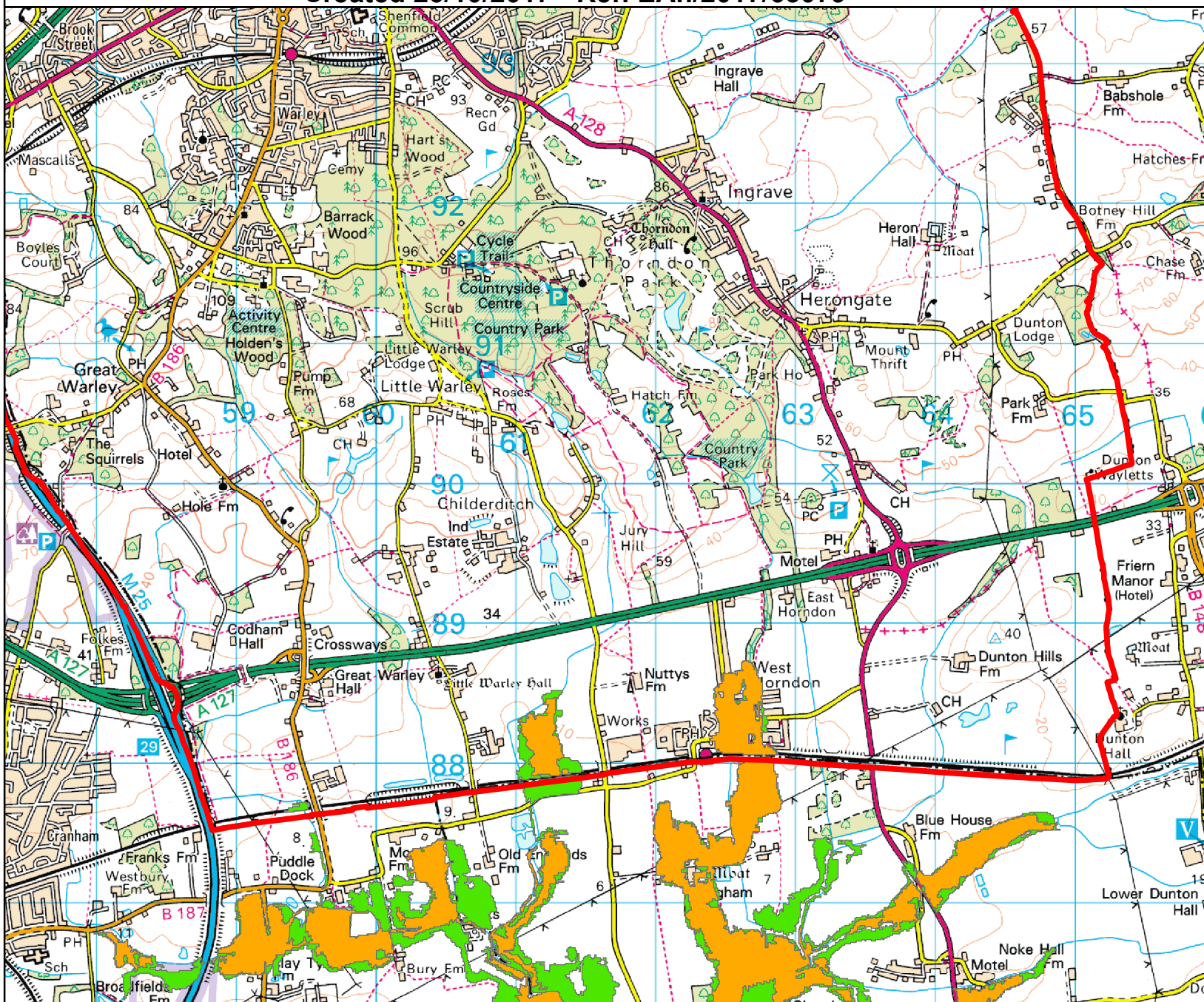
Environment Agency  
Iceni House  
Cobham Road  
Ipswich  
Suffolk  
IP3 9JD



## Legend

- Site Location
- DEF\_f\_20\_cc\_region
- DEF\_f\_100\_cc\_region

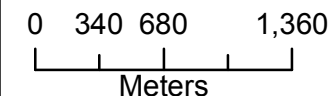
This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences if present.



**Modelled Undefended Outlines Location Map**  
**centred on S of Brentwood District**  
**Created 26/10/2017 - Ref: EAn/2017/63079**



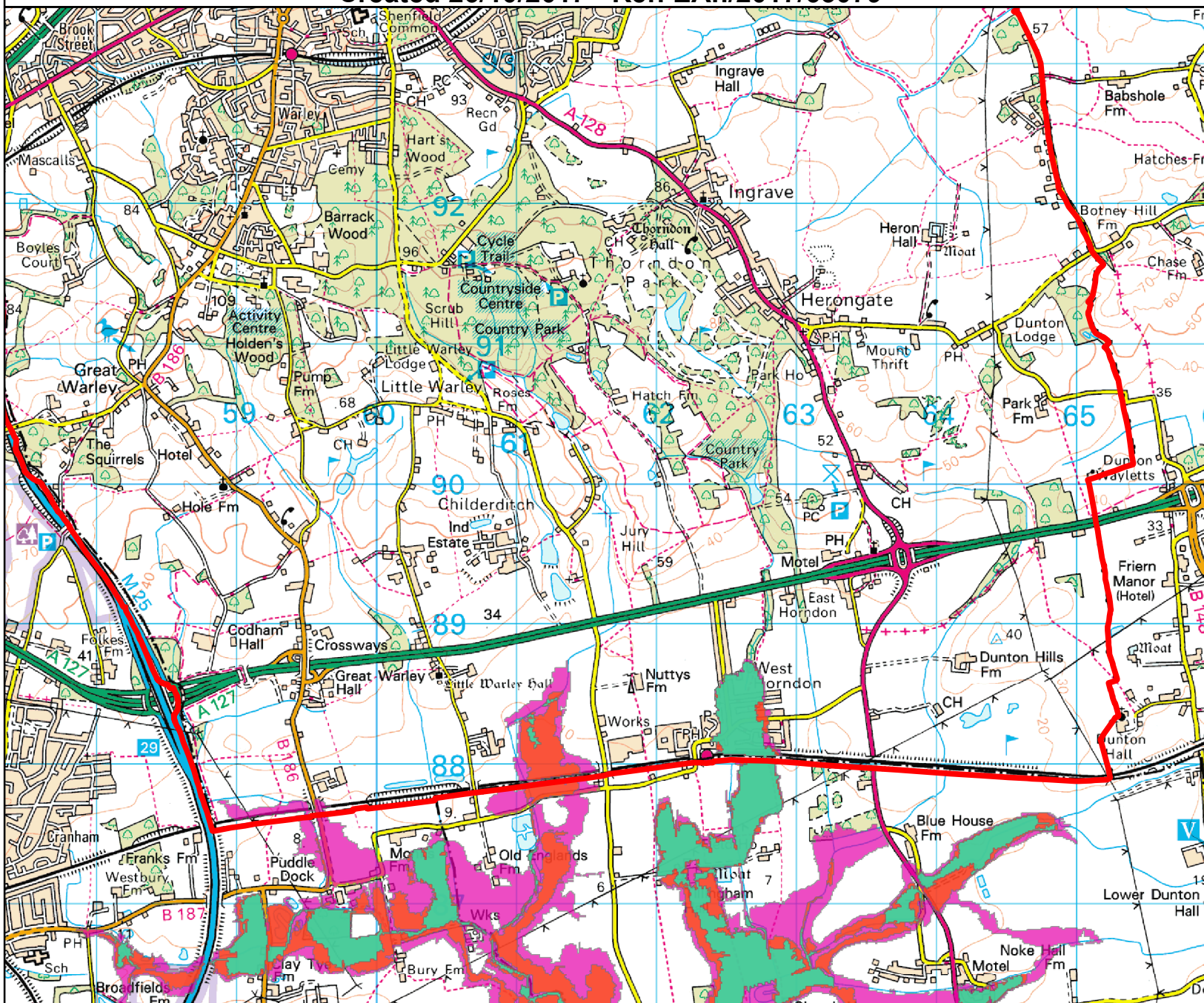
Environment Agency  
 Icen House  
 Cobham Road  
 Ipswich  
 Suffolk  
 IP3 9JD



## Legend

- Site Location
- und\_F\_20\_region
- Und\_F\_100\_region
- Und\_F\_1000\_region

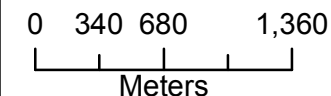
This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences if present.



# Modelled Undefended Outlines (+CC) Location Map centred on S of Brentwood District Created 26/10/2017 - Ref: EAn/2017/63079



Environment Agency  
Iceni House  
Cobham Road  
Ipswich  
Suffolk  
IP3 9JD



## Legend

- Site Location
- ea051377\_Und\_f\_20\_cc\_region
- ea051377\_Und\_f\_100\_cc\_region

This model has been designed for catchment wide flood risk mapping. It should be noted that it was not created to produce flood levels for specific development sites within the catchment. Modelled outlines take into account catchment wide defences if present.

