



Chalvington Barn, Unit C Dittons Business Park, Dittons Road  
Polegate, East Sussex. BN26 6HY.

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## **Flood Risk Assessment**

for

The Watermill, Halfway Bridge, Petworth, West Sussex, GU28 9BP

E8017

## DOCUMENT CONTROL SHEET

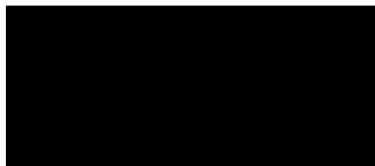
**Project Name:** The Watermill, Halfway Bridge, Petworth, West Sussex,  
GU28 9BP

**Project Number:** E8017

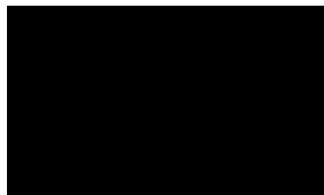
**Client:** Peter Bradley

**Report Title:** Flood Risk Assessment

**Reference:** RE003



**Craig Searle (BEng Hons)**  
**Graduate Civil Engineer**



Countersigned by.....

**Dean Giles (I.Eng. AMI Struct E)**  
**Managing Director**

**FOR AND ON BEHALF OF STEPHEN WILSON PARTNERSHIP**

**Date:** October 2021

**Rev:** A

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### Document Issue Record

Rev	Date	Description	Prepared	Reviewed	Approved
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## **1 INTRODUCTION AND BRIEF**

### **1.1 Introduction and Brief**

- 1.1.1 This report has been produced to assess the flood risk to and the potential for increased flood risk from the proposed development situated at The Watermill, Halfway Bridge, Petworth, West Sussex, GU28 9BP.
- 1.1.2 This document has been produced in accordance with current best practice and recommendations and guidance set out in the Nation Planning Policy Framework (NPPF).
- 1.1.3 Stephen Wilson Partnership has no responsibility to any other parties to whom this report may be circulated, in part or in full, and any such parties rely on the contents of this report solely at their own risk.
- 1.1.4 All copyrights and other intellectual rights in and over this report and its content shall remain vested in Stephen Wilson Partnership. The client and any other person authorised by them is granted an irrevocable royalty-free licence to use and reproduce this report for all purposes relating to the property but Stephen Wilson Partnership shall not be liable for any use of the report for any purpose other than that for which it was originally prepared.

## 2 EXISTING SITE CONDITIONS

### 2.1 Location

2.1.1 The site is located at The Watermill, Halfway Bridge, Petworth, West Sussex, GU28 9BP. The figure below shows the site in its current context.

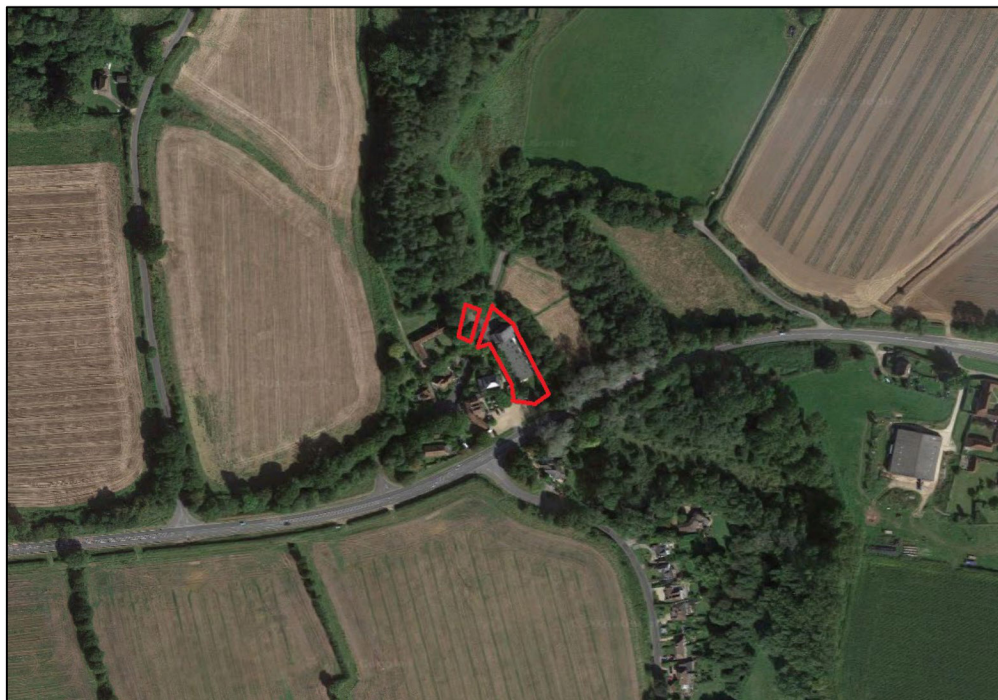


Figure 2.1 – Site Location – Approximate Site Boundary Shown in Red.

2.1.2 The existing site areas can be summarised as follows:

Total Site Area:	<u>1950 m<sup>2</sup></u>
Existing Roof Area:	605 m <sup>2</sup>
Existing Hard Paved Area:	605 m <sup>2</sup>
Total Impermeable Area	<u>1210 m<sup>2</sup></u>

2.1.3 A drawing showing the existing impermeable areas can be found in Appendix 3.0.

### 2.2 Site Topography

2.2.1 The centre of the site may be located by the National Grid Reference SU 93118 21988. The site is split into 2 by a public road. The site to the north of the road is predominately used as a car park, whilst the building is sited on the largest of the 2 sites to the south of the road. The site slopes from North-west to South-east. The development is focused on the north end of the building.

2.2.2 The River Rother runs along the North-Eastern boundary, which runs from North to South.

2.2.3 A review of site photos identified the presence of positive drainage systems on site and it is believed that these are existing foul and surface water drains serving the existing building.

## **2.3 Site Geology**

- 2.3.1 The British Geological Survey (BGS) map shows that the site is underlain by Sandstone (Easebourne Member).
- 2.3.2 At the time of writing no intrusive ground investigation works had been carried out.

### **3 FLOOD RISK**

Flooding can occur from a range of individual or a combination of sources that include fluvial (main river), tidal (sea), land, groundwater, sewers infrastructure, reservoirs, and other artificial sources.

The Environment Agency website includes Flood Maps which can be referred to for planning purposes in order to identify the flood risk from three different sources, for a particular development site. There are two different colours shown on the flood map.

- Dark blue identifies areas that could be affected by flooding from either rivers or the sea if there were no defences. These are classified as flood zone 3. Flood Zone 3 comprises land assessed as having a 0.5% (1 in 200) or greater chance of flooding by the sea or a 1% (1 in 100) or greater chance of flooding from rivers, in any one year.
- Light blue identifies areas that could be affected by flooding from either rivers or the sea. These are classified as Flood Zone 2. Flood Zone 2 comprises land assessed as having a 0.01% (1 in 1000) or greater chance of flooding, in any one year.

These two coloured areas show the extent of the natural flood plain in the absence of flood defence or other man-made structures. Areas outside of the blue areas are classified as Flood Zone 1. Flood Zone 1 comprises land assessed as having a <0.01% (1 in 1000) probability of river or sea flooding. Therefore, the risk of flooding from fluvial or tidal sources is considered to be negligible.

Each potential source of flooding has been considered in further details below.

### 3.1 Tidal and Fluvial Flooding

3.1.1 A flood map for planning was requested from the Environment Agency. The flood map identified that the development site is situated in Flood Zone 3.



Figure 3.1 – Extract of the Environment Agency’s Flood Risk Map for planning.

- 3.1.2 The full requested flood map for planning can be found in Appendix 1.0.
- 3.1.3 Flood Zone 3 comprises land assessed as having a greater than 1% (1 in 100) probability of river or sea flooding. Therefore, the current risk of flooding from fluvial or tidal sources is considered to be high.
- 3.1.4 Flood modelling was also requested from the environment agency for the River Rother. The flood model summarised and shown in figure 3.2 and figure 3.3 that the 1% plus climate change flood level in the locality of the development is 16.49m. The information provided by the EA can be found in Appendix 2.0.

Node Ref	NGR		Modelled Flood Levels in Metres AOD			
	Eastings	Northings	Undefended Annual Exceedance Probability			
			4%	1.3%	1%	1% +CC*
1	493074	122040	15.99	16.24	16.34	16.59
2	493127	122006	15.14	15.83	16.03	16.49
3	493149	121974	15.15	15.83	16.03	16.49

Figure 3.2 – Extract from the Environment Agency’s Flood Model



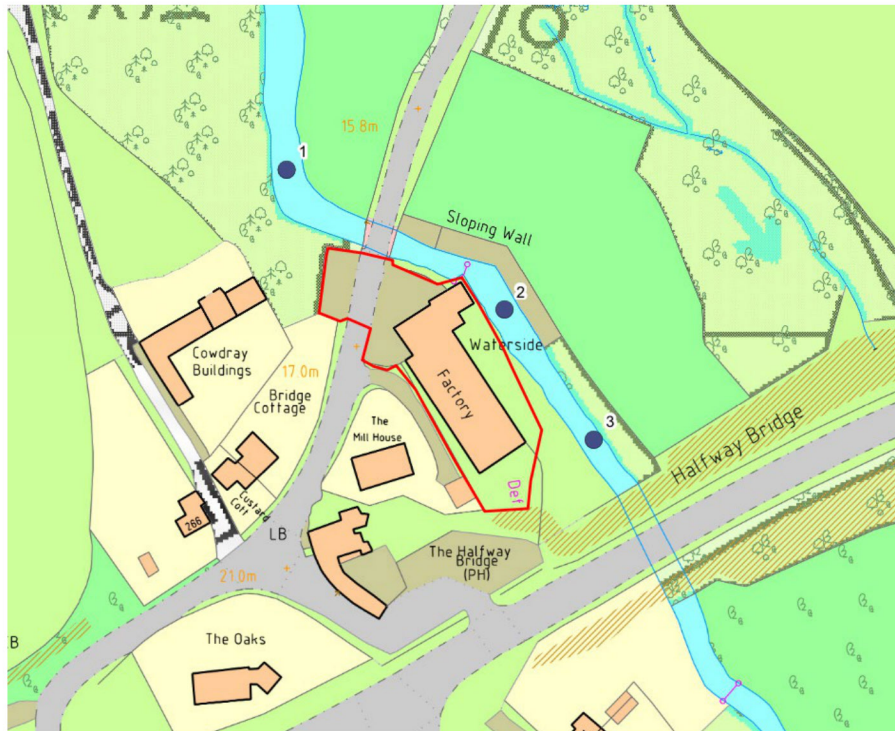


Figure 3.3 – Extract from the Environment Agency's Flood Model showing the flood node points

- 3.1.5 As discussed further in section 3.8, any future development must satisfy the requirements to show that the occupants will be kept safe from the effects of flooding.
- 3.1.6 Current requirements require habitable rooms to be a minimum of 600mm above the 1% plus climate change flood level with a means of a safe route for escape should flood waters rise.
- 3.1.7 For any future development that follows the current flood risk requirements, it can be considered that the risk of flooding from fluvial or tidal sources would be low.

### 3.2 Flooding from the Land

- 3.2.1 Intense rainfall, often short duration, that is unable to soak into the ground or enter a drainage system can quickly run off the land and result in localised flooding. Local topography and buildings can influence the direction and depth of flow. It is inevitable that as a result of extreme rainfall, the capacities of existing sewers, surface water attenuation features and other drainage systems will be exceeded on occasion.
- 3.2.2 The Environment Agency website provides surface water flood risk information based on the information provided by the lead local flood authority. This highlights the areas at risk from surface water flooding from overland flows.

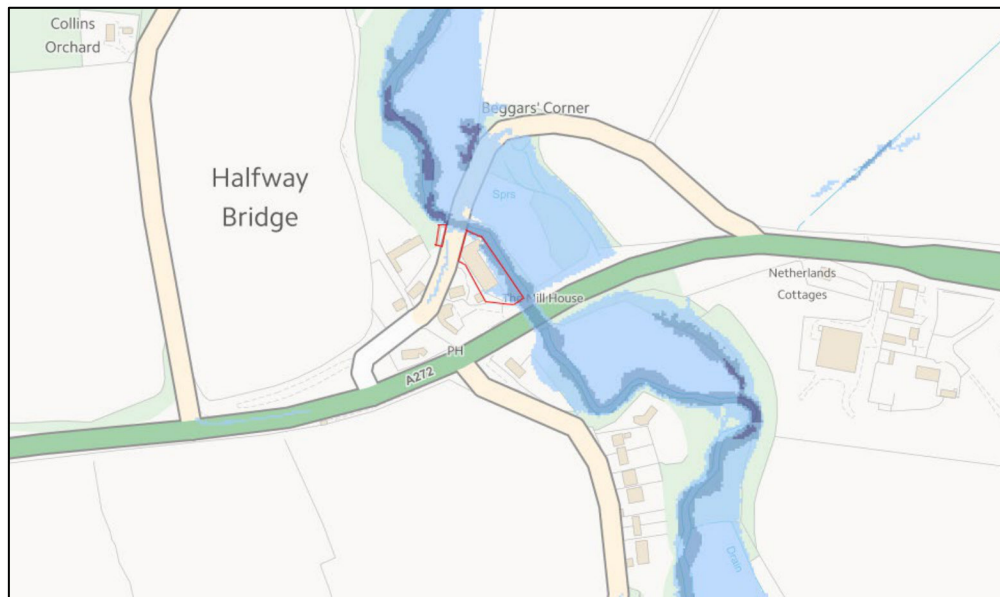


Figure 4.4 – Extract of the Environment Agency's online Flood Risk Map.

- 3.2.3 It can be seen from the figure above that the wider site is at risk of flooding from overland flows. However, the areas at risk of flood are in the low part of the site and do not affect the development or access to the proposed development. Therefore, the risk of flooding from overland flows can be considered as low.

### **3.3 Flooding from Groundwater**

- 3.3.1 Groundwater flooding occurs when water levels in the ground rise above surface level. It is most likely to occur in low lying areas underlain by aquifers. These may be extensive regional aquifers, such as chalk, or may be localised sands and gravels.
- 3.3.2 Water levels below the ground rise during the wet winter months and fall again in the summer as the water flows out towards rivers. In very wet winters, water level rise may lead to flooding or normally dry land. Groundwater flooding can sometimes take weeks or months to dissipate because groundwater flows are much slower than surface flows.
- 3.3.3 The existing site falls from the North-west to the South-east and should groundwater levels rise enough to cause flooding, flood waters would follow the existing topography of the site and flow towards the eastern boundary away from the development site.
- 3.3.4 Therefore, the risk of flooding from groundwater is considered to be low.

### **3.4 Flooding from Sewers, Highways and Private Drains**

- 3.4.1 In urbanised areas, rainwater is frequently drained to surface water or combined water sewers. Flooding can occur when the sewer is overwhelmed by heavy rainfall, becomes blocked or has inadequate capacity. Flood waters will either follow overland exceedance routes or be stored at surface level until they are able to drain away. When this happens to combined sewers there is a risk of land or property being contaminated with raw sewerage.
- 3.4.2 A review of site photos has identified the presence of foul manhole covers. Southern Water assets mapping was also acquired and is shown in Appendix 4. Should flooding occur from the existing drains, flood water will follow the existing topography and flow away from the development.
- 3.4.3 All foul manholes should be double sealed where they are below the 1 in 100 plus climate change flood level. This is to prevent foul sewer flooding in addition to the fluvial flooding when it occurs.
- 3.4.4 A review of site photos has identified the presence of a surface water drainage system. As discussed previously should flooding occur, flood water will follow the existing topography and flow away from the development site.
- 3.4.5 The design of the surface water drainage system serving the proposed development should look to maintain the run-off from the developed site to pre-development levels so that flood risk is not increased.
- 3.4.6 Therefore, the risk of flooding from sewers, highway drainage and private drains is considered to be low.

### 3.5 Flooding from Reservoirs and other Artificial Sources

3.5.1 Non-natural or artificial sources of flooding can include reservoirs, canals, and lakes, where water is retained above natural ground level. Reservoir or canal flooding can occur as a result of the facility being overwhelmed and or as a result of dam or bank failure. The latter can happen suddenly resulting in rapidly flowing, deep water that can cause significant threat to life and major property damage.

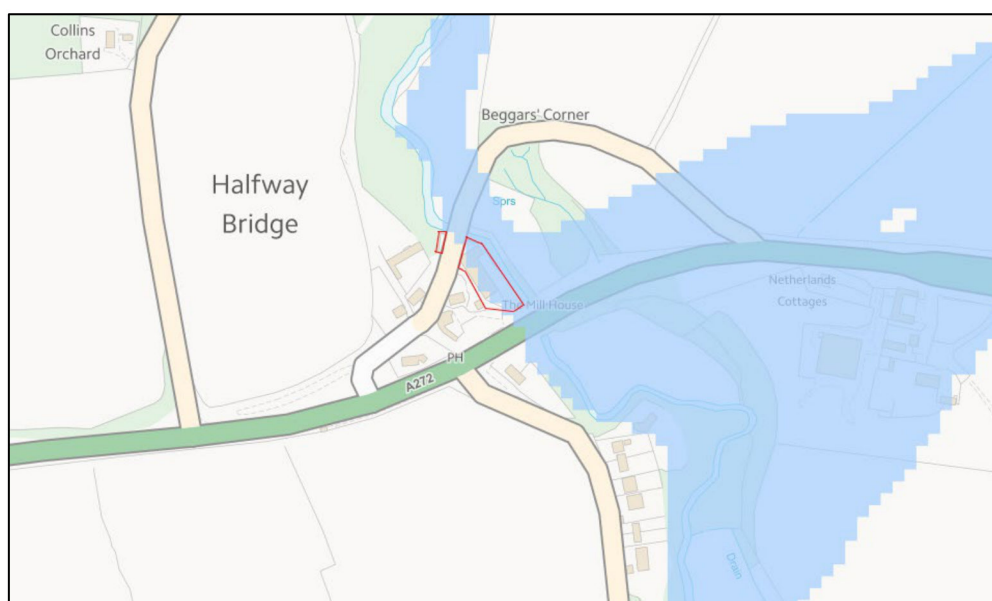


Figure 4.5 – Extract of the Environment Agency's online Flood Risk Map.

- 3.5.2 There are multiple bodies of water in close proximity to the site and the online environment agency flood risk map shows the site is at risk from flooding from artificial sources. However, the chance of a reservoir failing in the UK and causing flooding is extremely low.
- 3.5.3 Should there be flooding from a failed reservoir, the lowest floor level of the proposed development is at a height that should be sufficiently above any flood level.
- 3.5.4 Therefore, the risk of flooding from reservoirs and other artificial sources is considered to be low.

### 3.6 South Downs National Park Strategic Flood Risk Assessment

- 3.6.1 A Strategic Flood Risk Assessment (SFRA) has been produced by Amec Foster Wheeler, dated September 2017, for the South Downs National Park Authority. This SFRA provides details of the flood risk throughout the South Downs National Park.
- 3.6.2 A review of the SFRA and accompanying maps were undertaken and it was found that there was insufficient information provided that would affect the site.

### 3.7 West Sussex Preliminary Flood Risk Assessment

- 3.7.1 A Preliminary Flood Risk Assessment (PFRA) was produced by West Sussex County council dated May 2011. The PFRA provides a high level overview of flood risk from local sources within West Sussex.
- 3.7.2 The PFRA has shown that the area in which the site is located has been subjected to historical flooding. However, the PFRA does not go into detail on the type and extent of the recorded flooding. The location of the site is circled in the figure below.

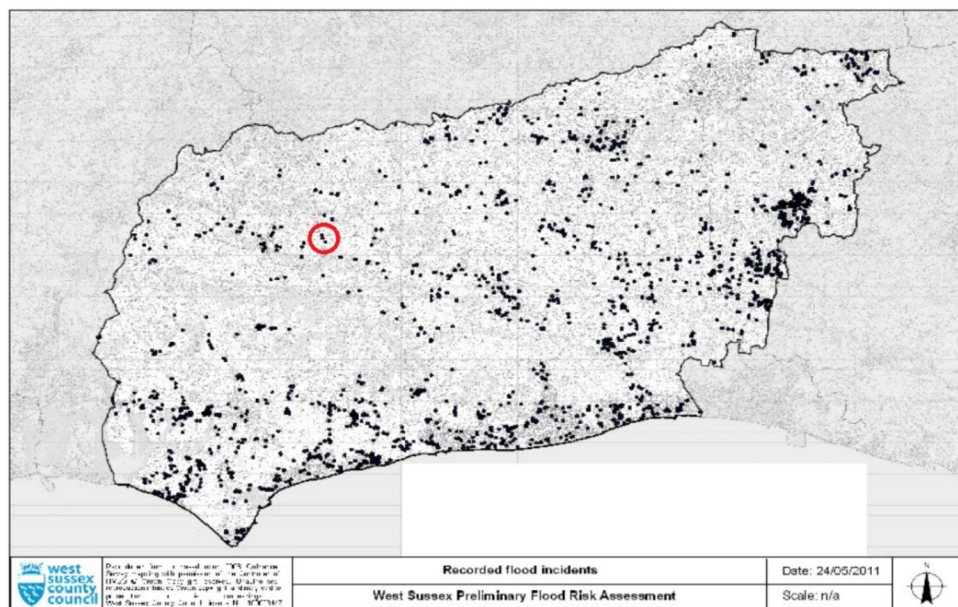


Figure 4.6 – Extract from PFRA showing historical flooding across West Sussex

### 3.8 Flood Risk Mitigation and Means of Escape

- 3.8.1 Any future development will need to be prove how the occupants are kept safe from the effects of the flood.
- 3.8.2 Current requirements require habitable rooms to be a minimum of 600mm above the 1% plus climate change flood level with a means of a safe route for escape should flood waters rise.
- 3.8.3 The finished floor level (FFL) of the lowest habitable room of the any future development must be above the minimum requirements of 600mm above the 1% plus climate change modelled flood level of 16.49m AOD. Therefore, the required minimum FFL of the lowest habitable room is 17.09m AOD.
- 3.8.4 Should the need for evacuation to occur, there should be a safe escape route out of the property to land above the 1% plus climate change flood level. No part of this escape route should be below the modelled flood level.

3.8.5 Future occupants should also sign up to the Environment Agency's flood warning information service which will provide details of any storm events that may impact the development.

3.8.6 Therefore, it is believed that any future development satisfies the requirements to show that the occupants will be kept safe from the effects of flooding and if there is the need for evacuation to occur, a safe escape route is available which is above the highest estimated flood level.

### **3.9 Flood Resilience**

3.9.1 To minimise disruption and cost implications after a flood, any future development should incorporate flood resilience measures where applicable.

3.9.2 Examples of flood resilient elements include but are not limited to; raised electrical sockets, flood resistant building materials and water sensitive equipment to be on plinths.

### **3.10 Flood Risk Summary**

3.10.1 Should any further development follow the measures laid out in this report, the potential flood risk can be summarised as below:

- |                                    |          |
|------------------------------------|----------|
| • Fluvial flood risk               | Low Risk |
| • Tidal flood risk                 | Low Risk |
| • Flooding from the land           | Low Risk |
| • Flooding from groundwater        | Low Risk |
| • Flooding from sewers             | Low Risk |
| • Flooding from drainage           | Low Risk |
| • Flooding from artificial sources | Low Risk |

3.10.2 Having considered the risk of flooding from all sources, the risk of flooding from all sources has been assessed and is considered to be low.

## **4 CONCLUSIONS**

### 4.1.1 This report has concluded the following:

- A review of the Environment Agency online mapping tool has identified that the development site is situated in Flood Zone 3.
- The finished floor level (FFL) of the lowest habitable room of the any future development must be above the minimum requirements of 600mm above the 1% plus climate change modelled flood level of 16.49m AOD. Therefore, the required minimum FFL of the lowest habitable room is 17.09m AOD.
- Should the need for evacuation to occur, there should be a safe escape route out of the property to land above the 1% plus climate change flood level. No part of this escape route should be below the modelled flood level.
- Future occupants should sign up to the Environment Agency's flood warning information service which will provide details of any storm events that may impact any future development.
- Therefore, it is believed that any future development satisfies the requirements to show that the occupants will be kept safe from the effects of flooding and if there is the need for evacuation to occur, a safe escape route is available which is above the highest estimated fluvial flood level.
- Should there be flooding from a failed reservoir, the lowest floor level of the proposed development must be at a height that should be sufficiently above any flood level.
- To minimise disruption and cost implications after a flood, any future development should incorporate flood resilience measures where applicable.
- The risk of flooding from all sources has been assessed and is considered to be low. This conclusion is based on any future development following the current requirements and guidelines, and the measures indicated in this report.
- This report should not be solely used as a method of assessing flood risk for any future development. A development specific flood risk assessment should be produced to current requirements for all future developments on site.

# Appendix 1.0

Flood Map for Planning

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# Flood map for planning

Your reference  
**The Watermill**

Location (easting/northing)  
**493117/121996**

Created  
**21 Sep 2020 10:07**

**Your selected location is in flood zone 3, an area with a high probability of flooding.**

## **This means:**

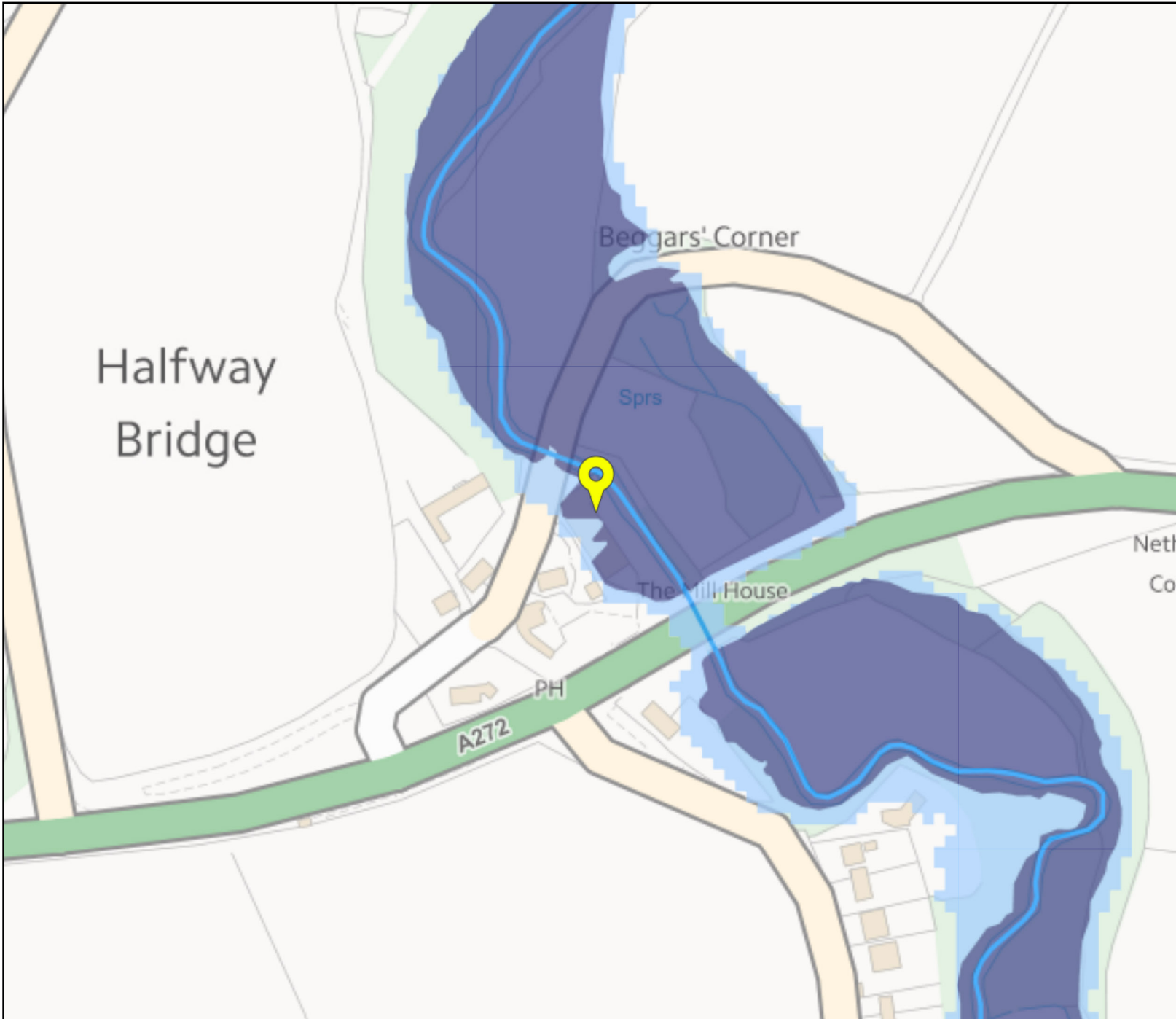
- you must complete a flood risk assessment for development in this area
- you should follow the Environment Agency's standing advice for carrying out a flood risk assessment (see [www.gov.uk/guidance/flood-risk-assessment-standing-advice](http://www.gov.uk/guidance/flood-risk-assessment-standing-advice))

## **Notes**

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

The Open Government Licence sets out the terms and conditions for using government data.  
<https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>



**Flood map for planning**

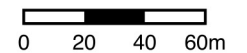
Your reference  
**The Watermill**

Location (easting/northing)  
**493117/121996**

Scale  
**1:2500**

Created  
**21 Sep 2020 10:07**

- Selected point
- Flood zone 3
- Flood zone 3: areas benefitting from flood defences
- Flood zone 2
- Flood zone 1
- Flood defence
- Main river
- Flood storage area



## Appendix 2.0

Environment Agency Fluvial  
Flood Model

---

Craig Searle,  
SWP  
Chalvington Barn,  
Unit C Dittons Business Park,  
Ditton Road,  
Polegate,  
BN26 6HY

**Our ref:** SSD188728  
**Date:** 20/10/2020

Dear Mr Searle,

**Enquiry Regarding a Product 4 for Flood Risk Assessment for Waterside, Halfway Bridge, Petworth, West Sussex, GU28 9BP.**

Thank you for your enquiry which was received on 13 October 2020.

We respond to requests under the Freedom of Information Act 2000 and Environmental Information Regulations 2004. The information is attached.

The information on Flood Zones in the area relating to this address is as follows:

**The site is in an area located within Flood Zone 2 and 3 as shown on our Flood Map for Planning (Rivers and Sea).**

*Note - This information relates to the area that the above named property is in and is not specific to the property itself as it is influenced by factors such as the height of door steps, air bricks or the height of surrounding walls. We do not have access to this information and is not currently used in our flood modelling.*

Flood Zone definitions can be found at [www.gov.uk/guidance/flood-risk-and-coastal-change#Table-1-Flood-Zones](http://www.gov.uk/guidance/flood-risk-and-coastal-change#Table-1-Flood-Zones)

**Flood Defences**

There are no formal raised flood defences in the vicinity of the site.

**Model Information**

The model used was the The River Rother Flood Study which was completed by Peter Brett Associates in 2007.

**Flood History**

We hold no record of previous flooding events affecting this site.

Please note our records are not comprehensive and may not include all events. I recommend contacting the Lead Local Flood Authority, **West Sussex County Council** or the Local Authority, **Chichester District Council** for a more comprehensive flood history check.

[FRA advisory text](#)

Name	Product 4
Description	Detailed Flood Risk Assessment Map for <b>Waterside, Halfway Bridge, West Sussex, Petworth, GU28 9BP.</b>
Licence	<a href="#">Open Government Licence</a>
Information Warning - OS background mapping	<i>The mapping of features provided as a background in this product is © Ordnance Survey. It is provided to give context to this product. The Open Government Licence does not apply to this background mapping. You are granted a non-exclusive, royalty free, revocable licence solely to view the Licensed Data for non-commercial purposes for the period during which the Environment Agency makes it available. You are not permitted to copy, sub-license, distribute, sell or otherwise make available the Licensed Data to third parties in any form. Third party rights to enforce the terms of this licence shall be reserved to OS.</i>
Attribution	Contains Environment Agency information © Environment Agency and/or database rights. Contains Ordnance Survey data © Crown copyright 2020 Ordnance Survey 100024198.

### Data Available Online

Many of our flood datasets are available online:

- Flood Map For Planning ([Flood Zone 2](#), [Flood Zone 3](#), [Flood Storage Areas](#), [Flood Defences](#), [Areas Benefiting from Defences](#))
- [Risk of Flooding from Rivers and Sea](#)
- [Historic Flood Map](#)
- [Current Flood Warnings](#)

Please get in touch if you have any further queries or contact us within two months if you'd like us to review the information we have sent.

Yours sincerely,

**Oli Haydon**

**FCRM Officer, PSO East Sussex | Solent and South Downs**

**Environment Agency | Guildbourne House, Chatsworth Road, Worthing, West Sussex, BN11 1LD**

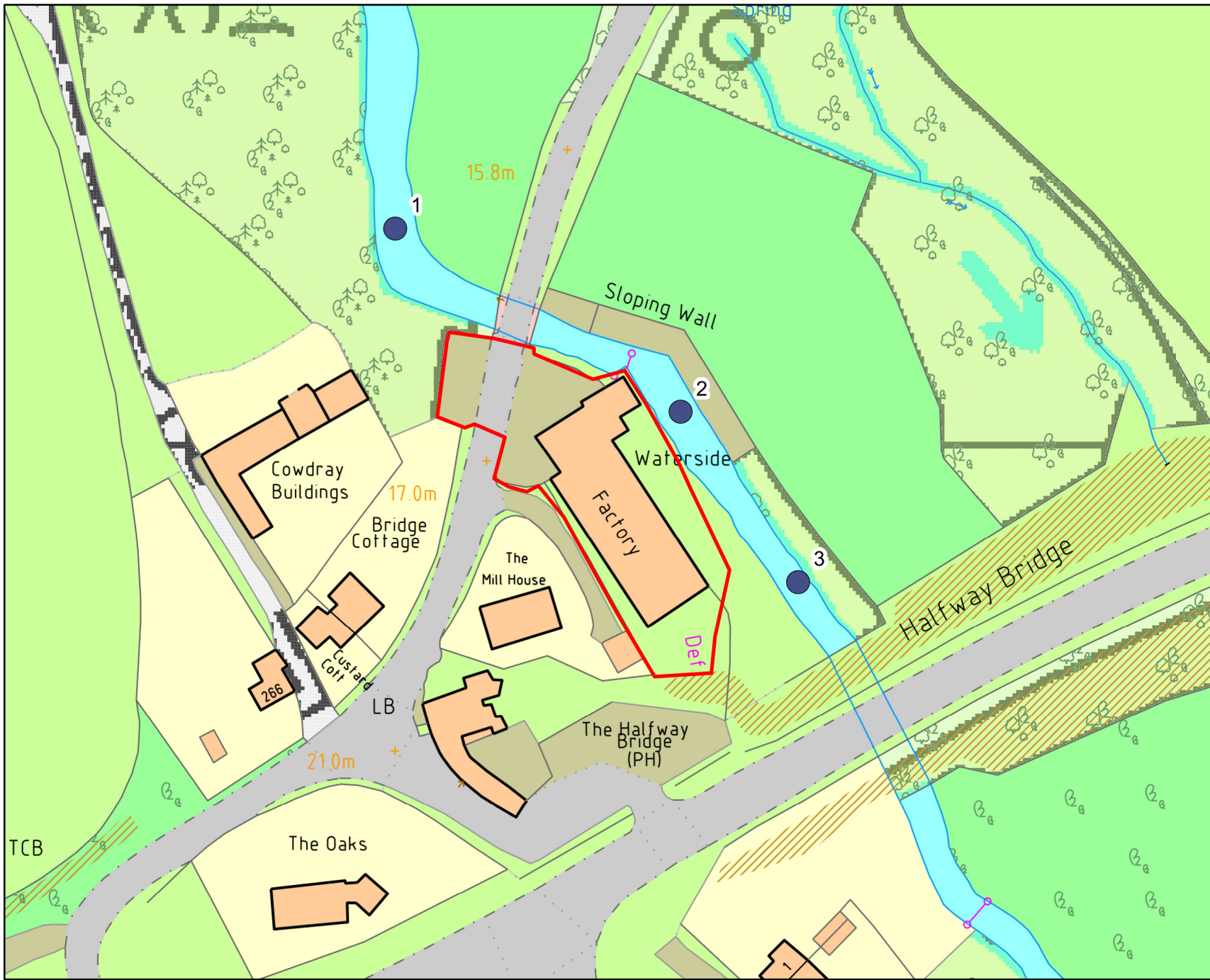
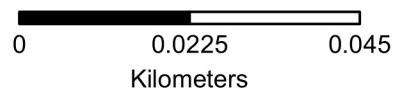


**Legend**

- Site\_Boundary
- Site\_Nodes

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

**Scale: 1:1,000**



**Product 4 Flood Risk Data Requested by:** Craig Searle, SWP

**Site:** Waterside, Halfway Bridge, Petworth, West Sussex, GU28 9BP

**Table 1:** Water Levels: Fluvial undefended

Node Ref	NGR		Modelled Flood Levels in Metres AOD			
	Eastings	Northings	Undefended Annual Exceedance Probability			
			4%	1.3%	1%	1% +CC*
1	493074	122040	15.99	16.24	16.34	16.59
2	493127	122006	15.14	15.83	16.03	16.49
3	493149	121974	15.15	15.83	16.03	16.49

All levels taken from: The River Rother Flood Study (2007)

Produced on: 20/10/2020

**\*Climate Change allowances for this model only show the superseded 20% increase in flows. The current allowances should be checked here:**

**<https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>.**

**There is no additional information or health warnings for these levels/depths or the model from which they have been produced.**

**Product 4 Flood Risk Data Requested by:** Craig Searle, SWP

**Site:** Waterside, Halfway Bridge, Petworth, West Sussex, GU28 9BP

**Table 1:** Water Levels: Fluvial undefended

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All levels taken from: The River Rother Flood Study (2007)

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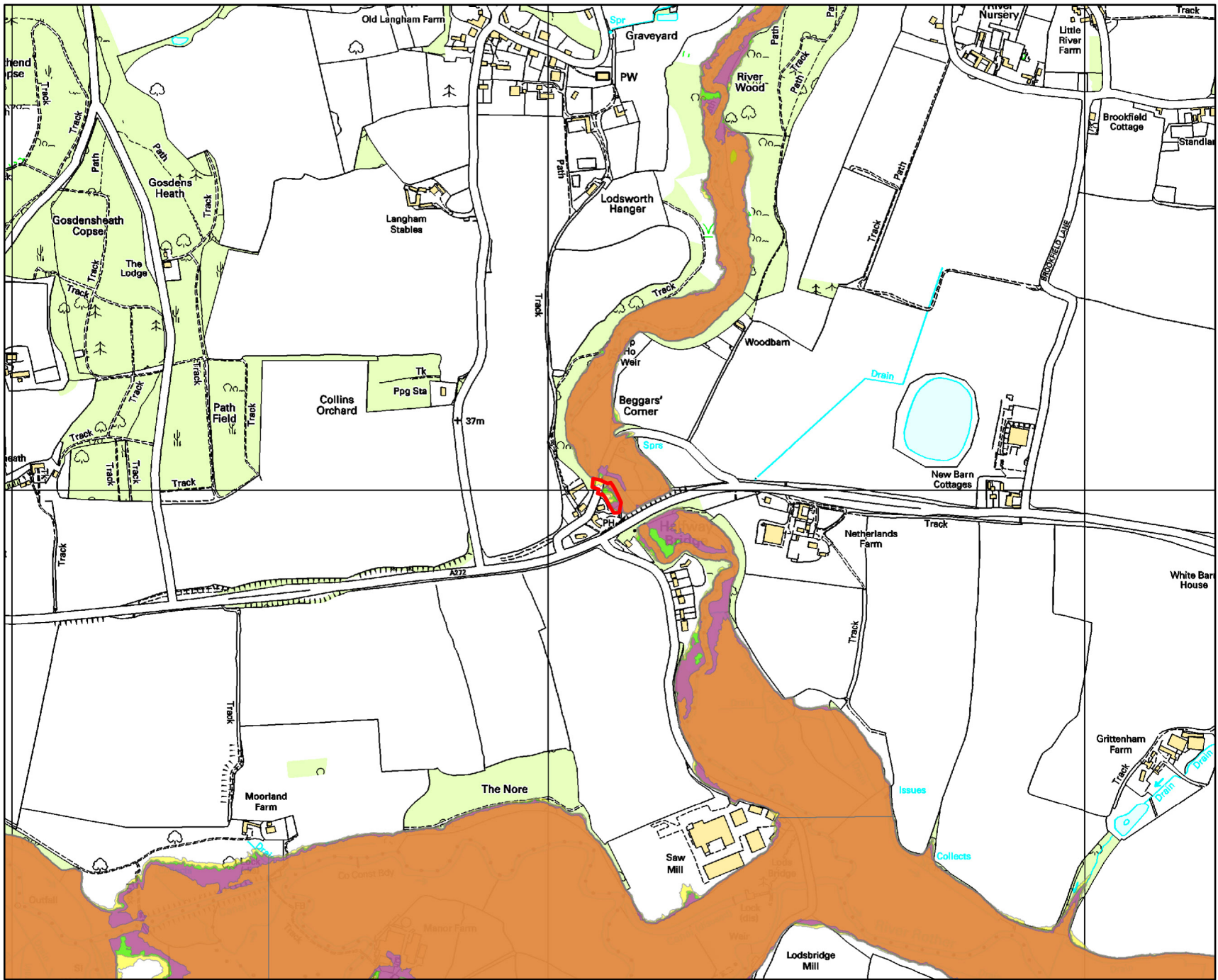
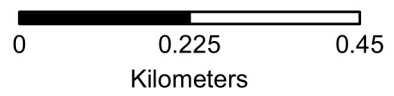
Modelled Flood Outlines (Undefended Fluvial) - Centred GU28 9BP. Created 20/10/2020.



- Legend**
- Site\_Boundary
  - 4% AEP (Undefended Fluvial)
  - 1.3% AEP (Undefended Fluvial)
  - 1% AEP (Undefended Fluvial)
  - 1% AEP Plus Climate Change (Undefended Fluvial)

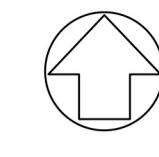
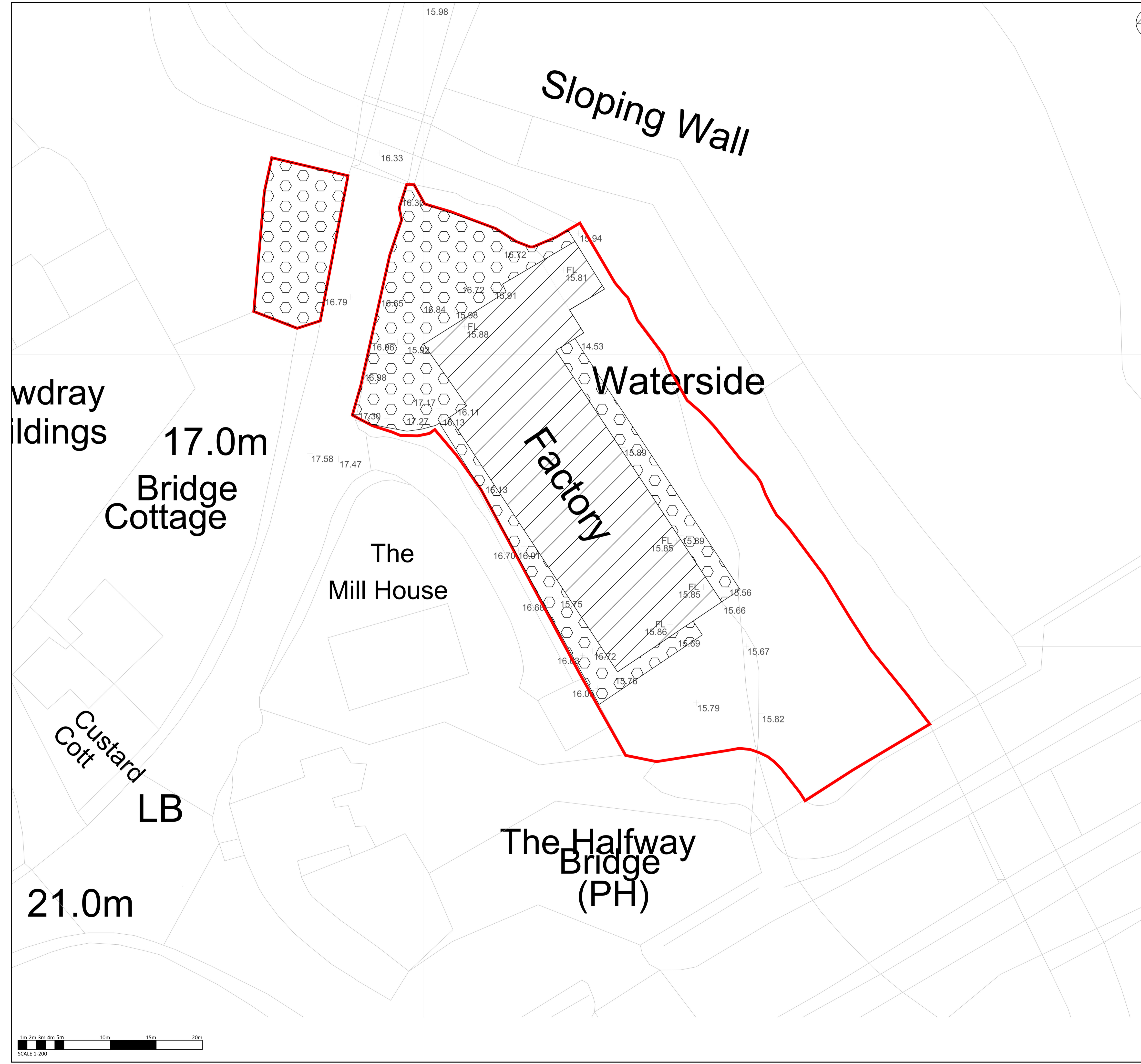
Annual Exceedance Probability (AEP) The probability of a flood of a particular magnitude, or greater occurring in any given year.

**Scale: 1:10,000**



## Appendix 3.0

### Existing Impermeable Areas



Drawing Legend	
	Impermeable Areas
	Roofed Areas
	Existing Hard Paved Areas

**Existing Impermeable Areas**  
Scale 1-200

Total Site Area = 1950m<sup>2</sup>  
Roof Area = 605m<sup>2</sup>  
Hard Paved Area = 605m<sup>2</sup>

- NOTES:**
1. This drawing is to be read in conjunction with all other SWP drawings, and with all relevant architect's and engineer's drawings and specification and any discrepancies found are to be reported immediately to the engineer.
  2. No dimensions are to be scaled from this drawing, unless noted otherwise all dimensions are in millimeters and all levels are in metres from the site datum.
  3. All dimensions to be checked on site. All details and dimensions relating to sub-contractors work must be checked and agreed between the sub-contractor or supplier and the general contractor.
  4. The electronic information from this drawing can not be guaranteed as dimensionally drawn exact. figured dimensions must be used for setting out and detailing. swp logos and company information must be removed from copies if information is re-used.
  5. The main contractor is responsible for the design of all temporary works, and is also responsible for the safe maintenance and stability of existing buildings at all times.
  6. The main contractor is responsible for all occurrences of ground water during the construction period.
  7. Any information given regarding existing underground services is given in good faith after consultation with the relevant authority, however accuracy is not certain. The main contractor is responsible for checking all information on site prior to work commencing and taking due care and attention whilst undertaking the works.
  8. The contractor must comply with all current legislation relating to health & safety.
  9. All products specified shall be installed in strict accordance with the manufacturers recommendations and instructions. If there are discrepancies between that information and the details on any swp drawings, the manufacturers instructions must be used.

Wdray Buildings  
17.0m  
Bridge Cottage

The Mill House

The Halfway Bridge (PH)

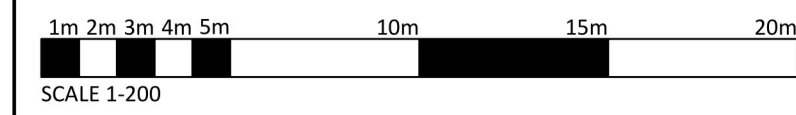
Waterside

Factory

Custard Cott  
LB

21.0m

**PRELIMINARY**



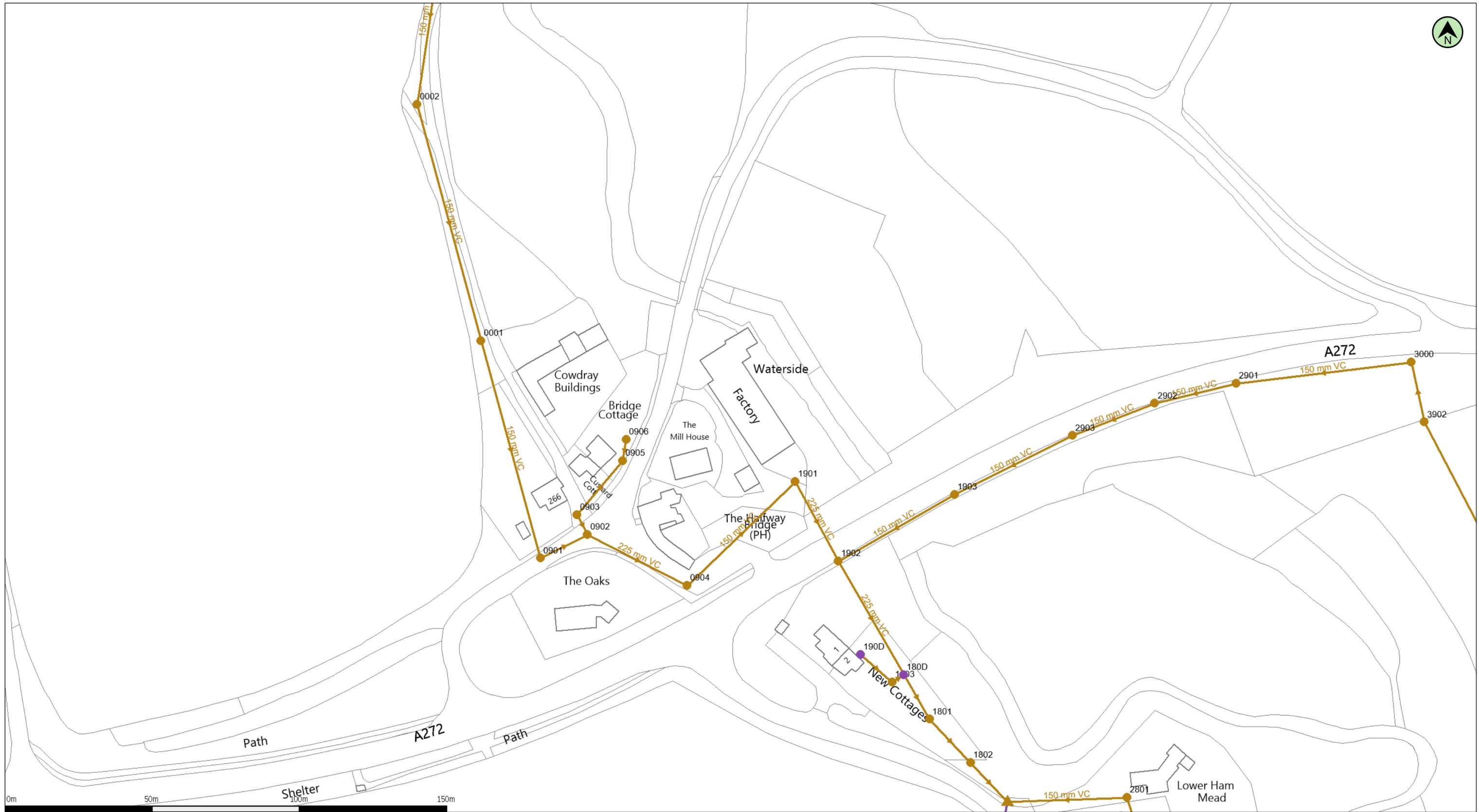
CLIENT	PETER BRADLEY		
ARCHITECT	STICKLAND WRIGHT		
JOB TITLE	THE WATERMILL, HALFWAY BRIDGE PETWORTH, WEST SUSSEX, GU28 9BP		
DRAWING TITLE	EXISTING IMPERMEABLE AREAS		
SCALE AT 1:	DATE	DRAWN	CRS
1-200	OCT 2020	CRS	CRS
	ENG.	CHECKED	DG
	CRS	DG	

REV	DATE	DESCRIPTION
P-	06.10.2020	PRELIMINARY ISSUE

JOB No:	E8017	DRAWING No:	SK200	REV:	P-
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## Appendix 4.0

### Southern Water Sewer Records



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The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site. This plan is produced by Southern Water Services Ltd (c) Crown copyright and database rights 2020 Ordnance Survey 100031673. This map is to be used for the purposes of viewing the location of Southern Water plant only. Any other uses of the map data or further copies is not permitted.

WARNING: BAC pipes are constructed of Bonded Asbestos Cement.  
 WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement.


craig@swphove.co.uk

E8017



Manhole Reference	Liquid Type	Cover Level	Invert Level	Depth to Invert
0001	F	25.08	23.23	
0002	F	26.66	24.67	
0901	F	21.50	19.77	
0902	F	21.08	19.27	
0903	F	21.05	19.66	
0904	F	20.47	18.86	
0905	F	19.19	19.19	
0906	F	21.10	0.00	
1801	F	16.05	0.00	
1802	F	15.09	0.00	
1803	F	0.00	0.00	
180D	F	0.00	0.00	
1901	F	15.77	14.05	
1902	F	19.47	13.97	
1903	F	19.11	17.72	
190D	F	0.00	0.00	
2801	F	17.59	0.00	
2901	F	21.02	19.45	
2902	F	20.18	18.84	
2903	F	19.34	18.02	
3000	F	23.52	20.85	
3902	F	22.66	21.08	

Manhole Reference	Liquid Type	Cover Level	Invert Level	Depth to Invert
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Manhole Reference	Liquid Type	Cover Level	Invert Level	Depth to Invert
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