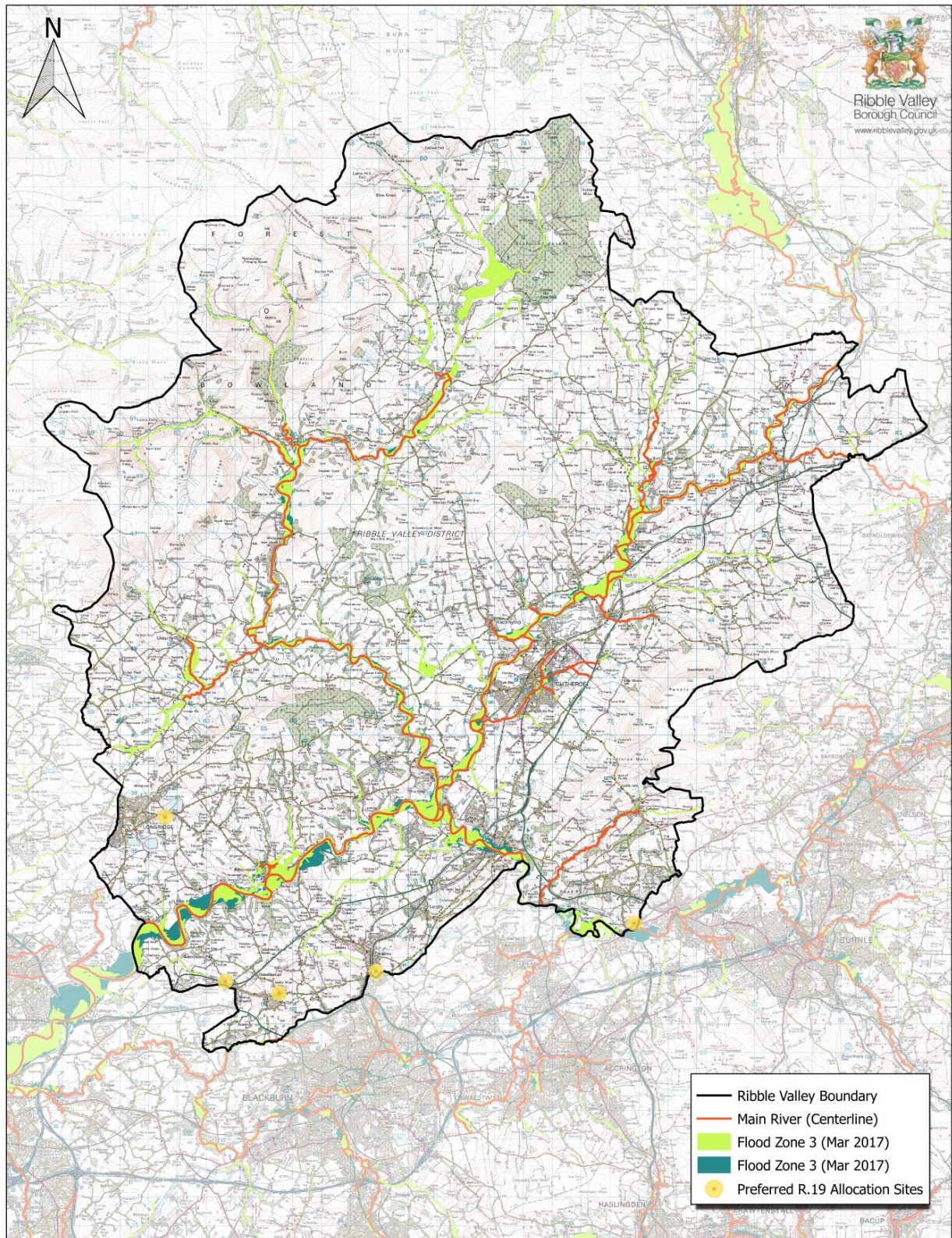


Do not print

Appendix 2 – SFRA Mapping Extracts

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Ribble Valley Strategic Flood Risk Assessment (Level 1)

Scale: 1:115,000

Date: 25 Apr 2017

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Appendix 3 – United Utilities Sewer Asset Plans

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Commercial Drainage and Water Enquiry

Responses to a drainage and water enquiry for commercial premises or development sites.

This document was ordered by: -

Searchflow Ltd

**42 Kings Hill Avenue
Kings Hill
West Malling, Kent
ME19 4AJ**

Client Ref: SF27248563000

FAO:

This document was produced by: -

**United Utilities Water Limited
Property Searches
Lower Ground Floor Haweswater House
Lingley Mere Business Park
Great Sankey
Warrington
WA5 3LP**

Telephone 0370 7510101

e-mail - property.searches@uuplc.co.uk

The information in this document refers to: -

Property: LAND AT 372732 440658 HENTHORN ROAD CLITHEROE BB7 2PL

For any queries relating to this report please e-mail, write or phone our Customer Liaison Team at the above address quoting United Utilities' Reference Number: 1400272

1. Section one: Introduction

The following records were searched in compiling this report:-

- * The map of the public sewers
- * The map of the waterworks
- * Water and Sewerage connection records
- * Adoption of public sewer records
- * Building over public sewers records
- * The properties subject to internal foul flooding
- * Adoption of public water mains records
- * The properties subject to poor water pressure and
- * Water supply clarification.

All these are held by United Utilities Water Limited, Haweswater House, Lingley Mere Business Park, Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP.

Please Note - We must make you aware that due to the introduction of the open market with effect from 1st April 2017 for commercial customers, Property Searches will no longer be able to resolve issues regarding some discrepancies within the report. Due to the change in the structure of the market the retailer is now responsible for taking ownership of certain issues, particularly relating to billing/tariff charges as well as, but not limited to change of usage of a property.

If you are planning works anywhere in the North West, please read our access statement before you start work to check how it will affect our network. <http://www.unitedutilities.com/work-near-asset.aspx>.

United Utilities Water Limited
Registered In England & Wales No. 2366678
Registered Office Haweswater House, Lingley Mere Business Park, Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP.

Interpretation of Drainage and Water Enquiry

Appendix 1 of this report contains definitions of terms and expressions used in the report.

Enquiries and Responses

The records were searched by Jodie Lloyd for United Utilities who does not have, nor is likely to have, any personal or business relationship with any person involved in the sale of the property.

This search report was prepared by Jodie Lloyd for United Utilities who does not have, nor is likely to have, any personal or business relationship with any person involved in the sale of the property.

Appendix 2 of this report contains the terms and conditions of sale

Appendix 3 of this report contains our formal complaints procedures

Commercial drainage and water search complaint procedure

In the event of any queries relating to this report please e-mail, write or phone our Customer Liaison Team at the address above quoting United Utilities reference. We will endeavour to resolve any telephone contact or complaint at the time of the call

Whilst we always try to resolve all complaints straightaway, if this is not possible and you are not happy with the course of action taken by us, you can ask us to escalate the issues internally or take your complaint to an independent third party.

We will listen to your complaint and do our best to deal with it immediately.

If we fail to give you a written substantive response within 5 working days Property Searches will compensate our client the original fee paid for a Property Searches Commercial Drainage and Water enquiry, regardless of the outcome of your complaint.

If it is a complex issue requiring more time, we will still get back to you within 5 days and notify you of progress and update you with the new timescales.

If we consider your complaint to be justified we will or we have made any errors that substantially change to outcome of the search we will-

- Refund your search fee
- Provide you with a revised search
- Take the necessary action within our power to put things right
- Keep you informed of any action required

If we cannot resolve your complaint or have failed to comply with the complaints procedure you can:

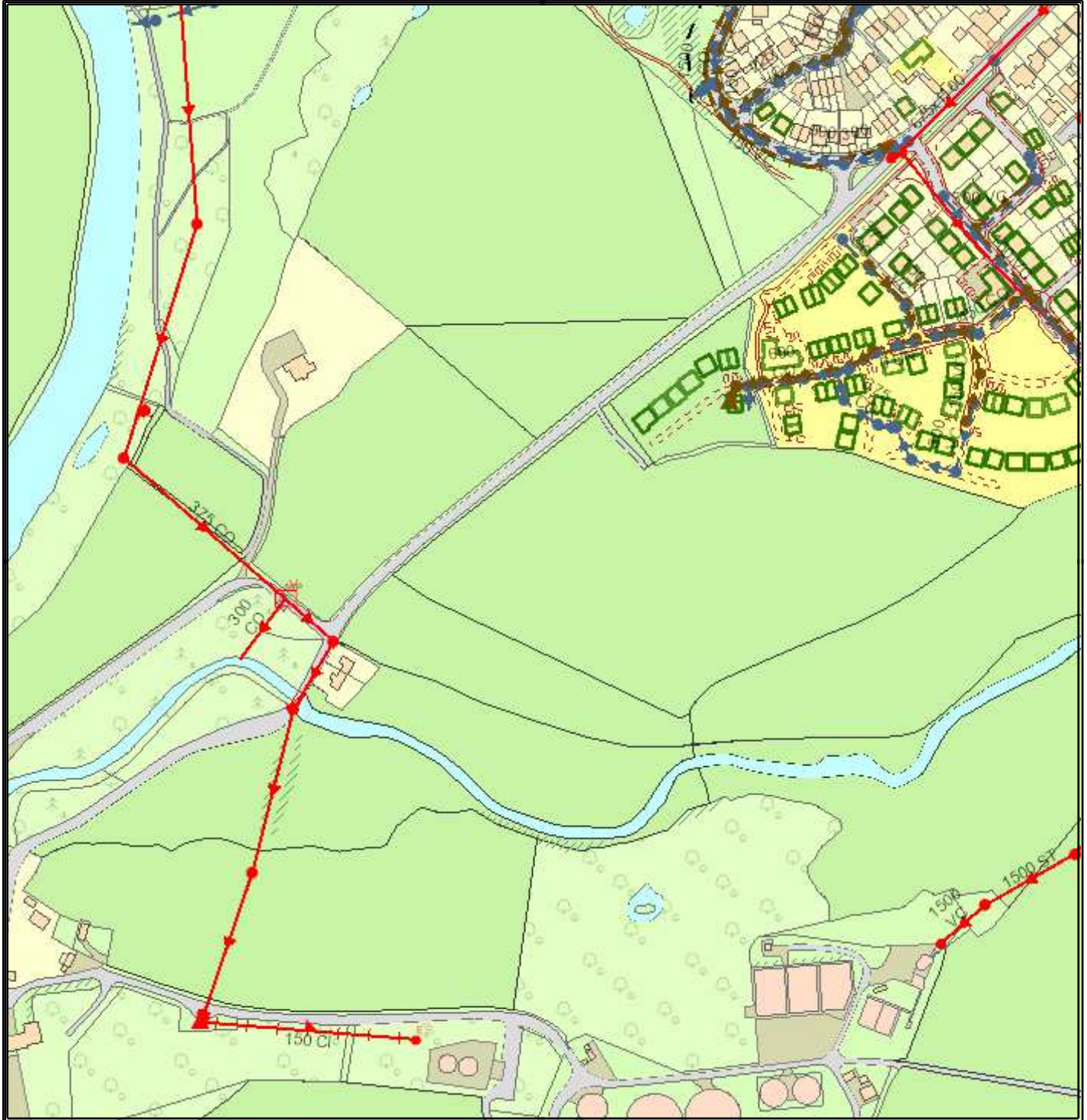
- Let us know and we can escalate your complaint
- Refer the issue to an independent body of your choice.

To help understand the implications of the Drainage and Water Enquiries Report a summary guide to the content of the full report is provided below.

-  **The attention of the purchaser is drawn to this response. The purchaser may wish to make further investigations into this situation.**
-  **This response represents the typical situation for a property.**
-  **This response represents an uncommon situation for a property and the purchaser should carefully consider its implications.**

Question	Report Schedule	Answer
1 Where relevant, please include a copy of an extract from the public sewer map.		Yes & in vicinity 
2 Where relevant, please include a copy of an extract from the map of waterworks.		Yes & in vicinity 
3 Does foul water from the property drain to a public sewer?		Plot of Land 
4 Does surface water from the property drain to a public sewer?		Plot of Land 
5 Is a surface water drainage charge payable?		No 
6 Does the public sewer map indicate any public sewer, disposal main or lateral drain within the boundaries of the property?		Public 
6.1 Does the public sewer map indicate any pumping station or any other ancillary apparatus within the boundaries of the property?		None 
7 Does the public sewer map indicate any public sewer within 30.48 metres (100 feet) of any buildings within the property?		Public 
7.1 Does the public sewer map indicate any public pumping station or any other ancillary apparatus within 50 metres of any buildings within the property?		None 
8.1 Are any sewers or lateral drains serving or which are proposed to serve the property the subject of an existing adoption agreement or an application for such an agreement?		No 
8.2 Are any sewers or lateral drains serving, or which are proposed to serve the property, the subject of an existing adoption agreement or an application for such an agreement?		No 
9 Has a sewerage undertaker approved or been consulted about any plans to erect a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain?		None 
10 Is the property, or part of the property, at risk of internal foul flooding due to overloaded public sewers?		No 
11 Please state the distance from the property to the nearest boundary of the nearest sewage treatment works.		Yes 
12 Is the property connected to mains water supply?		Plot of Land 
13 Are there any water mains, resource mains or discharge pipes within the boundaries of the property?		Yes 
14 Is any water main or service pipe serving or which is proposed to serve the property the subject of an existing adoption agreement or an application for such an agreement?		No 
15 Is the building at risk of receiving low water pressure or flow?		No 
16 What is the clarification of the water supply for the property?		Very Soft 
18 Please include details of the location of any water meter serving the property.		No Meter 
19 Who is responsible for providing the sewerage services for the property?		United Utilities 
19 Who is responsible for providing the water services for the property?		United Utilities 
20 Who bills the property for sewerage services?		Not Billed 
21 Who bills the property for water services?		Not Billed 
AQ1 Has a customer been granted a trade effluent consent at this property?		No 
AQ2 Is there an easement affecting the property?		No 

SEWER RECORD LAND AT 372732 440658 HENTHORN ROAD CLITHEROE BB7 2PL



The position of underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. The actual positions may be different from those shown on the plan and private pipes, sewers or drains may not be recorded. United Utilities Water Limited will not accept any liability for any damage caused by the actual positions being different from those shown.

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Waste Water Symbolology

Combined	Foul	Surface	Overflow					
				Manhole				WW pumping station
				Manhole, side entry				Inspection chamber
				Public sewer				Extent of survey
				Private sewer				Head of system
				S104 sewer				Soakaway
				Rising main, public				Rodding eye
				Rising main, private				Lamp hole
				Rising main, S104				T junction/saddle
				Highway drain, private				Gully
				Screen chamber				Air valve
				Discharge point				Non return valve
				Outfall				Sewer overflow
				Control kiosk				Cascade
				Sludge main				Flow meter

Abandoned pipe			
	Public sewer		
	Rising main		
	Private sewer		
	Sludge main		

Manhole function			
FO	Foul		
SW	Surface Water		
CO	Combined		
OV	Overflow		

Sewer shape			
CI	Circular	U	Unspecified
EG	Egg	SQ	Square
OV	Oval	TR	Trapezoidal
FT	Flat top	AR	Arch
RE	Rectangular	BA	Barrel
		HO	Horse shoe

Sewer material			
AC	Asbestos cement	DI	Ductile iron
BR	Brick	VC	Vitrified clay
CO	Concrete	PP	Polypropylene
CSB	Concrete segment	PF	Pitched fibre
CSU	Concrete segment	MA	Masonry, coursed
CC	Concrete box culverted	MA	Masonry, random
PSC	Plastic	RP	Reinforced plastic
GR	Glass reinforced	CI	Cast iron
GRP	Glass reinforced	SI	Spun iron
PVC	Polyvinyl chloride	ST	Steel
PE	Polyethelene	U	Unspecified

			WW pumping station
			Inspection chamber
			Extent of survey
			Head of system
			Soakaway
			Rodding eye
			Lamp hole
			T junction/saddle
			Gully
			Air valve
			Non return valve
			Sewer overflow
			Cascade
			Flow meter
			Hatch box
			Hydrobrake
			Inlet
			Bifurcation
			Catchpit
			Oil interceptor
			Penstock
			Summit
			Valve
			Valve chamber
			Washout chamber
			Drop shaft
			WW treatment works
			Septic tank
			Vent column
			Network storage tank
			Orifice plate
			Vortex chamber
			Penstock chamber

Clean Water Symbolology

Proposed	Abandoned	Live	
			Distribution Main
			Trunk Main
			Comms Pipe
			Private Pipe
			Concessionary Service
			Raw Water
			LDTM Raw Water
			LDTM Treated Water

Air Valve	Bore Hole	
AC Valve, open	Bulk Supply Point	
AC Valve, closed	Inlet Point	
CC Valve, open	End Cap	
CC Valve, closed	Site Termination	
Non Return Valve	Change of Characteristic	
Pressure Management Valve		
OMS Valve		
Stop Tap		
Flow Meter		
Domestic Meter		
Commercial Meter		
Pump		
Hydrant		
Fire Hydrant		
Anode		
Chlorination Point		
De-chlorination Point		
Strainer Point		
Access Point		
Hatch Box		
IP Point		
Sampling Station		
Logger Box		

Water Tower	
Valve House	
Booster Pumping Station	
Intake Pumping Station	
Water Treatment Works	
Supply Reservoir	
Service Reservoir	
Impounding Reservoir	
Pipe Bridge	
Condition Report	

AC	Asbestos Cement
CI	Cast Iron
CU	Copper
CO	Concrete
DI	Ductile Iron
GI	Galvanised Iron
GR	Grey Iron
OT	Others
PB	Lead
PV	uPVC
SI	Spun Iron
ST	Steel
UN	Unknown
PE	Ployethelene

CL	Cement Lining
TB	Tar or Bitumen
ERL	Epoxy Resin

DD	Die Drawn
DR	Directional Drilling
MO	Moling
PI	Pipeline
SL	Slip Lined

Symbology for proposed assets is the same as above, but shown in **green**.

Symbology for abandoned assets is the same as above, but shown in **black**.

WATER RECORD LAND AT 372732 440658 HENTHORN ROAD CLITHEROE BB7 2PL



The position of underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. The actual positions may be different from those shown on the plan and private pipes, sewers or drains may not be recorded. United Utilities Water Limited will not accept any liability for any damage caused by the actual positions being different from those shown.

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Question 1 **Where relevant, please include a copy of an extract from the public sewer map.**

Answer **A copy of an extract of the public sewer map within the vicinity of the property is included.**

Informative 1. The Water Industry Act 1991 defines Public Sewers as those which (United Utilities) have responsibility for. Other assets and rivers, water courses, ponds, culverts or highway drains may be shown for information purposes only.

2. Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended these details be checked with the developer.

3. The Sewerage Undertaker has a statutory right of access to carry out work on its assets, subject to notice. This may result in employees of the Sewerage Undertaker or its contractors needing to enter the property to carry out work.

Question 2 **Where relevant, please include a copy of an extract from the map of waterworks.**

Answer **A copy of an extract of the map of waterworks is included, showing water mains, resource mains or discharge pipes in the vicinity of the property.**

Informative The "water mains" in this context are those which are vested in and maintainable by the Water Undertaker under statute.

Assets other than public water mains may be shown on the plan, for information only. Water Undertakers are not responsible for private supply pipes connecting the property to the public water main and do not hold details of these. These may pass through land outside of the control of the seller, or may be shared with adjacent properties. The buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair or renewal.

If an extract of the public water main record is enclosed, it will show known public water mains in the vicinity of the property. It should be possible to estimate the likely length and route of any private water supply pipe connecting the property to the public water network.

The presence of a public water main running within the boundary of the property may restrict further development within it. Water Undertakers have a statutory right of access to carry out work on their assets, subject to notice. This may result in employees of the Water Undertaker or its contractors needing to enter the property to carry out work.

Question 3 Does foul water from the property drain to a public sewer?

Answer **This enquiry appears to relate to a plot of land or a recently built property. It is recommended that drainage proposals are checked with the developer.**

Informative Sewerage Undertakers are not responsible for any private drains or sewers that connect the property to the public sewerage system, and do not hold details of these.

The property owner will normally have sole responsibility for private drains serving the property and may have shared responsibility, with other users, if the property is served by a private sewer which also serves other properties. These may pass through land outside of the control of the seller and the buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair or renewal.

If foul water does not drain to the public sewerage system the property may have private facilities in the form of a cesspit, septic tank or other type of treatment plant.

If an extract from the public sewer map is enclosed, this will show known public sewers in the vicinity of the property and it should be possible to estimate the likely length and route of any private drains and/or sewers connecting the property to the public sewerage system.

Question 4 Does surface water from the property drain to a public sewer?

Answer **This enquiry appears to relate to a plot of land or a recently built property. It is recommended that drainage proposals are checked with the developer. If the property was constructed after the 6th April 2015 the surface water drainage may be served by a sustainable drainage system.**

Informative Sewerage Undertakers are not responsible for any private drains or sewers that connect the property to the public sewerage system and do not hold details of these.

The property owner will normally have sole responsibility for private drains serving the property and may have shared responsibility with other users, if the property is served by a private sewer which also serves other properties. These may pass through land outside of the control of the seller and the buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair or renewal.

In some cases, Sewerage Undertakers' records do not distinguish between foul and surface water connections to the public sewerage system. If on inspection the buyer finds that the property is not connected for surface water drainage, the property may be eligible for a rebate of the surface water drainage charge. Details can be obtained from the Sewerage Undertaker.

If surface water does not drain to the public sewerage system the property may have private facilities in the form of a soakaway or private connection to a watercourse.

If an extract from the public sewer map is enclosed, this will show known public sewers in the vicinity of the property and it should be possible to estimate the likely length and route of any private drains and/or sewers connecting the property to the public sewerage system.

Question 5 Is a surface water drainage charge payable?

Answer **Records confirm that a surface water drainage charge is not payable for the property.**

Informative Since 1st April 2017 commercial customers can choose their retailer for clean, waste or both services. For more information on any applicable surface water charges you will need to contact the current owner of the property to find out who the current retailer is. Details of the retailer for a property can be found on the current occupiers bill. For a list of all potential retailers of water and waste water services for the property please visit www.open-water.org.uk.

Please note if the property was constructed after 6th April 2015 the Surface Water drainage may be served by a Sustainable Drainage System. Further information may be available from the Developer.

Question 6 Does the public sewer map indicate any public sewer, disposal main or lateral drain within the boundaries of the property?

Answer **The public sewer map included indicates that there are public sewers, disposal mains or lateral drains within the boundary of the property. However from the 1st October 2011 there may be additional public sewers, disposal mains or lateral drains which are not recorded on the public sewer map which may further prevent or restrict development of the property. If you are considering any future development at this property which may require build over consent, please complete the enquiry form by accessing the following link <http://www.unitedutilities.com/planning-wastewater-guidance.aspx>.**

Informative The approximate boundary of the property has been determined by reference to the Ordnance Survey record or the map supplied.
The presence of a public sewer running within the boundary of the property may restrict further development.

United Utilities has a statutory right of access to carry out work on its assets, subject to notice. This may result in employees of United Utilities or its contractors needing to enter the property to carry out work.

Sewers indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended that these details be checked with the developer, if any.

Assets other than public sewers may be shown on the copy extract, for information only. Please note if the property was constructed after 1st July 2011 any sewers and/or lateral drains within the boundary of the property are the responsibility of the householder.

Question 6.1 Does the public sewer map indicate any pumping station or any other ancillary apparatus within the boundaries of the property?

Answer The public sewer map included indicates that there is no public pumping station or other ancillary apparatus within the boundaries of the property. However, from the 1st October 2016 private pumping stations which serve more than one property will be transferred into public ownership but may not be recorded on the public sewer map until that time

Informative From 1 October 2016 United Utilities will be responsible for private pumping stations (though we may take ownership of some stations before this date) that either:

- serve a single property, and are outside the property boundary or
- serves two or more properties

Only private pumping stations installed before 1st July 2011 will be transferred into our ownership. United Utilities will be responsible for all associated costs, maintenance, repairs and any necessary upgrade work.

United Utilities has rights of access to maintain this asset on a regular basis.

Question 7 Does the public sewer map indicate any public sewer within 30.48 metres (100 feet) of any buildings within the property?

Answer The public sewer map included indicates that there are public sewers within 30.48 (100 feet) of a building within the boundary of the property. However from the 1st October 2011 there may be additional public sewers, disposal mains or lateral drains which are not recorded on the public sewer map which may further prevent or restrict development of the property. Please refer to the answer of the question "sewer in boundary" for further details.

Informative From 1st October 2011 there may be additional lateral drains and/or public sewers which are not recorded on the public sewer map but are also within 30.48 metres (100 feet) of a building within the property.

The presence of a public sewer within 30.48 metres (100 feet) of the building(s) within the property can result in the Local Authority requiring a property to be connected to the public sewer.

The measure is estimated from the Ordnance Survey record, between the building(s) within the boundary of the property and the nearest public sewer.

Sewers indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended that these details are checked with the developer, if any.

Assets other than public sewers may be shown on the copy extract for information only.

Where the property is part of a very recent or ongoing development and the sewers/pumping station are not the subject of an adoption application, buyers should consult with the developer to ascertain the extent of private drains, sewers and pumping stations for which they will hold maintenance and renewal liabilities.

Question 7.1 Does the public sewer map indicate any public pumping station or any other ancillary apparatus within 50 metres of any buildings within the property?

Answer The public sewer map included indicates that there is no public pumping station or other ancillary apparatus within 50 metres of any buildings within the property. However, from 1st October 2016 private pumping stations which serve more than one property will be transferred into public ownership but may not be recorded on the public sewer map until that time.

Informative From 1 October 2016 United Utilities will be responsible for private pumping stations (though we may take ownership of some stations before this date) that either:
" serve a single property, and are outside the property boundary or
" serves two or more properties
Only private pumping stations installed before 1st July 2011 will be transferred into our ownership. United Utilities will be responsible for all associated costs, maintenance, repairs and any necessary upgrade work.

Where the property is part of a very recent or ongoing development and the sewers/pumping station are not the subject of an adoption application, buyers should consult with the developer to ascertain the extent of private drains, sewers and pumping stations for which they will hold maintenance and renewal liabilities.

Question 8.1 Are any sewers or lateral drains serving or which are proposed to serve the property the subject of an existing adoption agreement or an application for such an agreement?

Answer Records confirm that foul sewers and/or lateral drains serving the development, of which the property forms part are not the subject of an existing adoption agreement or an application for such an agreement.

Informative This enquiry is of interest to purchasers of new property who will want to know whether or not the property will be linked to a public sewer.

Where the property is part of a very recent or ongoing development and the sewers are not the subject of an adoption application, buyers should consult with the developer to ascertain the extent of private drains and sewers for which they will hold maintenance and renewal liabilities.

Final adoption is subject to the developer complying with the terms of the adoption agreement under Section 104 of the Water Industry Act 1991.

Question 8.2 Are any sewers or lateral drains serving, or which are proposed to serve the property, the subject of an existing adoption agreement or an application for such an agreement?

Answer the surface water sewer(s) and/or surface water lateral drain(s) are not the subject of an adoption agreement and it is recommended that responsibility for maintenance of these is checked with the Developer as this may be due to a Sustainable Drainage

Informative This enquiry is of interest to purchasers of new property who will want to know whether or not the property will be linked to a public sewer.

Where the property is part of a very recent or ongoing development and the sewers are not the subject of an adoption application, buyers should consult with the developer to ascertain the extent of private drains and sewers for which they will hold maintenance and renewal liabilities.

Final adoption is subject to the developer complying with the terms of the adoption agreement under Section 104 of the Water Industry Act 1991.

Question 9 Has a sewerage undertaker approved or been consulted about any plans to erect a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain?

Answer There are no records in relation to any approval or consultation about plans to erect a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain. However, the sewerage undertaker might not be aware of a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain.

Informative From the 1st October 2011 private sewers, disposal mains and lateral drains were transferred into public ownership and the sewerage undertaker may not have granted approval or been consulted about any plans to erect a building or extension on the property over or in the vicinity of these assets.

Prior to 2003 United Utilities Water Limited had sewerage agency agreements with the local authorities therefore details of any agreements/consents or rejections may not have been forwarded on to our offices before this date.

Buildings or extensions erected over a sewer in contravention of building controls may have to be removed or altered.

Question 10 Is the property, or part of the property, at risk of internal foul flooding due to overloaded public sewers?

Answer **The building is not recorded as being at risk of internal flooding due to overloaded public sewers. From the 1st October 2011 private sewers, disposal mains and lateral drains were transferred into public ownership it is therefore possible that a property may be at risk of internal flooding due to an overloaded public sewer which the sewerage undertaker is not aware of. For further information it is recommended that enquiries are made of the vendor.**

Informative

1. A sewer is "overloaded" when the flow from a storm is unable to pass through it due to a permanent problem (e.g. flat gradient, small diameter). Flooding as a result of temporary problems such as blockages, siltation, collapses and equipment or operational failures are excluded.
2. "Internal flooding" from public sewers is defined as flooding, which enters a building or passes below a suspended floor. For reporting purposes, buildings are restricted to those normally occupied and used for residential, public, commercial, business or industrial purposes.
3. These are defined as properties that have suffered or are likely to suffer internal flooding from public foul, combined or surface water sewers due to overloading of the sewerage system more frequently than the relevant reference period (either once or twice in ten years) as determined by the Sewerage Undertaker's reporting procedure.
4. Flooding as a result of storm events proven to be exceptional and beyond the reference period of one in ten years are not included.
5. Properties may be at risk of flooding but not included where flooding incidents have not been reported to the Sewerage Undertaker.
6. Public sewers are defined as those for which the Sewerage Undertaker holds statutory responsibility under the Water Industry Act 1991.
7. It should be noted that flooding can occur from private sewers and drains which are not the responsibility of the Sewerage Undertaker.
8. This report excludes flooding from private sewers and drains and the Sewerage Undertaker makes no comment upon this matter. For reporting purposes buildings are restricted to those normally occupied and used for residential, public, commercial, business or industrial purposes.

Question 11 Please state the distance from the property to the nearest boundary of the nearest sewage treatment works.

Answer The nearest Sewage Treatment Works is 0.16 miles (0.25 km), South East of the property. The name of the Sewage treatment works is CLITHEROE WWTW.

The owner is United Utilities

Informative The nearest sewage treatment works will not always be the sewage treatment works serving the catchment within which the property is situated i.e. the property may not necessarily drain to this works.

The Sewerage Undertaker's records were inspected to determine the nearest sewage treatment works.

It should be noted therefore that there may be a private sewage treatment works closer than the one detailed above that has not been identified. As a responsible utility operator, United Utilities Water Limited seeks to manage the impact of odour from operational sewage works on the surrounding area.

This is done in accordance with the "Code of Practice on Odour Nuisance from Sewage Treatment Works" issued via the Department of Environment, Food and Rural Affairs (DEFRA).

This Code recognises that odour from sewage treatment works can have a detrimental impact on the quality of the local environment for those living close to works.

However DEFRA also recognises that sewage treatment works provide important services to communities and are essential for maintaining standards in water quality and protecting aquatic based environments. For more information visit www.unitedutilities.com.

Question 12 Is the property connected to mains water supply?

Answer This enquiry relates to a plot of land or a recently built property. It is recommended that the water supply proposals are checked with the developer.

Informative If the property is supplied by private water mains please note that details of private supplies are not kept by the Water Undertaker. The situation should be checked with the current owner of the property.

Question 13 Are there any water mains, resource mains or discharge pipes within the boundaries of the property?

Answer **The map of waterworks indicates that there are water mains, resource mains or discharge pipes within the boundaries of the property.**

Informative The boundary of the property has been determined by reference to the Ordnance Survey record.

The presence of a public water main within the boundary of the property may restrict further development within it. Water Undertakers have a statutory right of access to carry out work on their assets, subject to notice.

This may result in employees of the Water Undertaker or its contractors needing to enter the property to carry out work.

Question 14 Is any water main or service pipe serving or which is proposed to serve the property the subject of an existing adoption agreement or an application for such an agreement?

Answer **Records confirm that water mains or service pipes serving the property are not the subject of an existing adoption agreement or an application for such an agreement.**

Informative This enquiry is of interest to purchasers of new premises who will want to know whether or not the property will be linked to the mains water supply.

Question 15 Is the building at risk of receiving low water pressure or flow?

Answer **Records confirm that the building is not recorded by the water undertaker as being at risk of receiving low water pressure or flow.**

Informative The boundary of the property has been determined by reference to the Ordnance Survey record. "Low water pressure" means water pressure below the regulatory reference level which is the minimum pressure when demand on the system is not abnormal.

Water Undertakers report properties receiving pressure below the reference level, provided that allowable exclusions do not apply (i.e. events which can cause pressure to temporarily fall below the reference level).

The reference level of service is a flow of 9 litres/minute at a pressure of 10 metres head on the customer's side of the main stop tap. The reference level of service must be applied on the customer's side of a meter or any other company fittings that are on the customer's side of the main stop tap. The reference level applies to a single property.

Allowable exclusions:

The Water Undertaker to include in the properties receiving pressure below the reference level, provided that allowable exclusions listed below do not apply.

Abnormal demand:

This exclusion is intended to cover abnormal peaks in demand and not the daily, weekly or monthly peaks in demand, which are normally expected. Water Undertakers exclude from figures properties which are affected by low pressure only on those days with the highest peak demands. During the report year Water Undertakers may exclude, for each property, up to five days of low pressure caused by peak demand.

Planned maintenance:

Water Undertakers will not report low pressures caused by planned maintenance.

It is not intended that Water Undertakers identify the number of properties affected in each instance. However, Water Undertakers must maintain sufficiently accurate records to verify that low-pressure incidents that are excluded because of planned maintenance, are actually caused by maintenance.

One-off incidents:

This exclusion covers a number of causes of low pressure; mains bursts; failures of company equipment (such as pressure reducing valves or booster pumps); fire fighting and action by a third party.

However, if problems of this type affect a property frequently, they cannot be classed as one-off events and further investigation will be required before they can be excluded.

Low pressure incidents of short duration:

Properties affected by low pressures that only occur for a short period, and for which there is evidence that incidents of a longer duration would not occur during the course of the year, may be excluded.

It should be noted that low water pressure can occur from private water mains, private supply pipes (the pipework from the external stop cock to the property) or internal plumbing which are not the responsibility of the Water Undertaker. This report excludes low water pressure from private water mains, supply pipes and internal plumbing and the Water Undertaker makes no comment upon this matter.

Question 16
What is the clarification of the water supply for the property?
Answer

The water supplied to the property has an average water hardness of 55 mg/l calcium carbonate which is defined as very soft by United Utilities.

Informative

The hardness of water is due to the presence of calcium and magnesium minerals that are naturally present in the water. The usual signs of a hard water supply are scaling inside kettles, poor lathering of soaps and scum.

What is water hardness?

Hard water is formed when water passes through or over limestone or chalk areas and calcium and magnesium ions dissolve into the water. The hardness is made up of two parts: temporary (carbonate) and permanent (non-carbonate) hardness. When water is boiled, calcium carbonate scale can form, which can deposit on things like kettle elements. The scale will not stick to kettles that have a plastic polypropylene lining but will float on the surface. The permanent hardness that comprises calcium and magnesium sulphate does not go on to form scale when heated or boiled.

How is water hardness measured?

Hardness is usually expressed in terms of the equivalent quantity of calcium carbonate (CaCO₃) in milligrams per litre or parts per million. You may also see hardness expressed as degrees of hardness in Clark (English) degrees, French or German degrees. Interconversion between the different measurements can be made by using the appropriate conversion factors below.

There are no standard levels as to what constitutes a hard or a soft water. Table 1 gives an indication of the equivalents of calcium and calcium carbonate and the relative degree of hardness.

Water quality standards

There are no regulatory standards for water hardness in drinking water.

Water hardness in the North West

The majority of raw water in the United Utilities region comes from upland surface water reservoirs. The water in the reservoirs has little chance of passing through rocks and to dissolve the minerals that make water hard. Therefore, the majority of water in this region is soft or very soft. We supply water from a number of boreholes in the south of the region that are reasonably hard, but these tend to be blended with softer sources to meet demand. No water supply in the North West is artificially softened.

Can hard water be softened?

Yes, water can be softened artificially by the installation of a water softener or the use of 'jug type' filters. Medical experts recommend that a non-softened supply is maintained for drinking purposes because softened water may contain high levels of sodium. Softeners should be fitted after the drinking water tap and comply with the requirements of the Water Supply (Water Fittings) Regulations 1999. They should be maintained in accordance with manufacturers' instructions.

If you're interested in finding out more about the quality of your drinking water, please visit www.unitedutilities.com/waterquality and enter your postcode..

The Drinking Water Inspectorate is responsible for ensuring the quality of public water supplies. Visit their website at: www.dwi.defra.gov.uk

Table 1 Drinking water hardness

mg Ca/l	mg CaCO ₃ /l	Clark Degrees	French Degrees	German Degrees	Hardness
<30	<75	<5.3	<7.5	<4.2	Very soft
30-50	75 – 125	5.3 – 8.8	7.5 – 12.5	4.0 – 7.0	Soft
50-100	125 – 250	8.8 – 17.5	12.5 – 25.0	7.0 – 14.0	Mod. hard
100-150	250 – 375	17.5 – 26.3	25.0 – 37.5	14.0 – 21.0	Hard
>150	>375	>26.3	>37.5	>21.0	Very hard

Question 18 Please include details of the location of any water meter serving the property.

Answer Records indicate that the property is not served by a water meter.

Informative Where the property is not served by a meter the current occupier can contact the retailer directly to advise on the current charging method, details of the retailer can also be found on the current occupiers bill.

Question 19 Who is responsible for providing the sewerage services for the property?

Answer United Utilities Water Limited, Haweswater House, Lingley Mere Business Park, Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP is the sewerage undertaker for the area and United Utilities Water Limited, Haweswater House, Lingley Mere Business Park, Lingley Green Avenue, Great Sankey, Warrington, WA5 3LP is the water undertaker for the area.

Informative Not Applicable

Question 20 Who bills the property for sewerage services?

Answer Since 1st April 2017 commercial customers can choose their retailer. If you wish to know who currently bills the property for sewerage services you will need to contact the current owner of the property to find out who the current retailer is.

Informative Details of the retailer for a property can be found on the current occupiers bill. For a list of all potential retailers of waste water services for the property please visit www.open-water.org.uk

Question 21 Who bills the property for water services?

Answer Since 1st April 2017 commercial customers can choose their retailer. If you wish to know who currently bills the property for water services you will need to contact the current owner of the property to find out who the current retailer is.

Informative Details of the retailer for a property can be found on the current occupiers bill. For a list of all potential retailers of water services for the property please visit www.open-water.org.uk

Additional Questions

Additional Question 1 Answer

Has a customer been granted a trade effluent consent at this property?

There is no record of a Trade Effluent consent at this property. Applications for Trade Effluent consents should be submitted via your retailer for info please visit <https://www.unitedutilities.com/services/wholesale-services/trade-effluent/>

Informative

The owner/occupiers of Trade Premises do not have the right to discharge Trade Effluent to the public wastewater network. Any Trade Effluent Discharge Consent will be issued under Section 118 of the Water Industry Act 1991 and will be subject to conditions set by the Sewerage Undertaker.

Generally these conditions are to ensure:

- a) The Health and Safety of staff working within the wastewater network and at wastewater treatment plants.
- b) The apparatus of the wastewater network is not damaged.
- c) The flow of the contents of the wastewater network is not restricted.
- d) Equipment, plant, and processes at treatment works are not disrupted or damaged.
- e) Treatment of sewage sludge is not impeded and sludges are disposed of in an environmentally friendly manner.
- f) Final effluent discharge from wastewater treatment plants has no impact on the environment or prevents the receiving waters from complying with EU Directives.
- g) Potential damage to the environment via storm water overflows is minimised.

Disputes between an occupier of a Trade Premise and the Sewerage Undertaker can be referred to the Director General of Water Services (OFWAT).

Protecting Public Sewers - Discharges Section 111 of the Water Industry Act 1991, places prohibition on the discharge of the following into a public sewer, drain or a sewer that communicates with a public sewer.

i) Any matter likely to injure the sewer or drain, to interfere with the free flow of its contents or to affect prejudicially the treatment or disposal of its contents.

ii) Any chemical refuse or waste steam or any liquid of temperature higher than 43.3 degrees Celsius (110 degrees Fahrenheit).

iii) Any petroleum spirit or carbide of calcium.

On summary conviction offences under this Section carry a fine not exceeding the statutory maximum or a term of imprisonment not exceeding two years, or both.

Please note any existing consent is dependant on the business being carried out at the property and will not transfer automatically upon change of ownership.

Additional Question 2 Answer

Is there an easement affecting the property?

There is no record of a formal easement agreement affecting this property.

Informative

Not Applicable.

Appendix 1 - General Interpretation

1. (1) In this Schedule-

"the 1991 Act" means the Water Industry Act 1991(a);

"the 2000 Regulations" means the Water Supply (Water Quality) Regulations 2000(b);

"the 2001 Regulations" means the Water Supply (Water Quality) Regulations 2001(c);

"adoption agreement" means an agreement made or to be made under Section 51A(1) or 104(1) of the 1991 Act (d);

"bond" means a surety granted by a developer who is a party to an adoption agreement;

"bond waiver" means an agreement with a developer for the provision of a form of financial security as a substitute for a bond;

"calendar year" means the twelve months ending with 31st December;

"discharge pipe" means a pipe from which discharges are made or are to be made under Section 165(1) of the 1991 Act;

"disposal main" means (subject to Section 219(2) of the 1991 Act) any outfall pipe or other pipe which-
(a) is a pipe for the conveyance of effluent to or from any sewage disposal works, whether of a sewerage undertaker or of any other person; and
(b) is not a public sewer;

"drain" means (subject to Section 219(2) of the 1991 Act) a drain used for the drainage of one building or any buildings or yards appurtenant to buildings within the same curtilage;

"effluent" means any liquid, including particles of matter and other substances in suspension in the liquid;

"financial year" means the twelve months ending with 31st March;

"lateral drain" means-

- (a) that part of a drain which runs from the curtilage of a building (or buildings or yards within the same curtilage) to the sewer with which the drain communicates or is to communicate; or
- (b) (if different and the context so requires) the part of a drain identified in a declaration of vesting made under Section 102 of the 1991 Act or in an agreement made under Section 104 of that Act (e);

"licensed water supplier" means a company which is the holder for the time being of a water supply licence under Section 17A(1) of the 1991 Act(f);

"maintenance period" means the period so specified in an adoption agreement as a period of time-

- (a) from the date of issue of a certificate by a Sewerage Undertaker to the effect that a developer has built (or substantially built) a private sewer or lateral drain to that undertaker's satisfaction; and
- (b) until the date that private sewer or lateral drain is vested in the Sewerage Undertaker;

"map of waterworks" means the map made available under Section 198(3) of the 1991 Act (g) in relation to the information specified in subsection (1A);

"private sewer" means a pipe or pipes which drain foul or surface water, or both, from premises, and are not vested in a Sewerage Undertaker;

"public sewer" means, subject to Section 106(1A) of the 1991 Act(h), a sewer for the time being vested in a Sewerage Undertaker in its capacity as such, whether vested in that undertaker-

- (a) by virtue of a scheme under Schedule 2 to the Water Act 1989(i);
- (b) by virtue of a scheme under Schedule 2 to the 1991 Act (j);

(c) under Section 179 of the 1991 Act (k); or
(d) otherwise;

"public sewer map" means the map made available under Section 199(5) of the 1991 Act (l);

"resource main" means (subject to Section 219(2) of the 1991 Act) any pipe, not being a trunk main, which is or is to be used for the purpose of-

- (a) conveying water from one source of supply to another, from a source of supply to a regulating reservoir or from a regulating reservoir to a source of supply; or
- (b) giving or taking a supply of water in bulk;

"sewerage services" includes the collection and disposal of foul and surface water and any other services which are required to be provided by a Sewerage Undertaker for the purpose of carrying out its functions;

"Sewerage Undertaker" means the company appointed to be the Sewerage Undertaker under Section 6(1) of the 1991 Act for the area in which the property is or will be situated;

"surface water" includes water from roofs and other impermeable surfaces within the curtilage of the property;

"water main" means (subject to Section 219(2) of the 1991 Act) any pipe, not being a pipe for the time being vested in a person other than the water Undertaker, which is used or to be used by a Water Undertaker or licensed water supplier for the purpose of making a general supply of water available to customers or potential customers of the undertaker or supplier, as distinct from for the purpose of providing a supply to particular customers;

"water meter" means any apparatus for measuring or showing the volume of water supplied to, or of effluent discharged from any premises;

"Water Undertaker" means the company appointed to be the Water Undertaker under Section 6(1) of the 1991 Act for the area in which the property is or will be situated.

(2) In this Schedule, references to a pipe, including references to a main, a drain or a sewer, shall include references to a tunnel or conduit which serves or is to serve as the pipe in question and to any accessories for the pipe.

- (a) 1991 c. 56.
- (b) S.I. 2000/3184. These Regulations apply in relation to England.
- (c) S.I. 2001/3911. These Regulations apply in relation to Wales.
- (d) Section 51A was inserted by Section 92(2) of the Water Act 2003 (c. 37). Section 104(1) was amended by Section 96(4) of that Act.
- (e) Various amendments have been made to Sections 102 and 104 by Section 96 of the Water Act 2003.
- (f) Inserted by Section 56 of and Schedule 4 to the Water Act 2003.
- (g) Subsection (1A) was inserted by Section 92(5) of the Water Act 2003.
- (h) Section 106(1A) was inserted by Section 99 of the Water Act 2003.
- (i) 1989 c. 15.
- (j) To which there are various amendments made by Section 101(1) of and Schedule 8 to the Water Act 2003.
- (k) To which there are various amendments made by Section 101(1) of and Schedule 8 to the Water Act 2003.
- (l) Section 199 was amended by Section 97(1) and (8) of the Water Act 2003.

Appendix 2 - DRAINAGE AND WATER ENQUIRY (COMMERCIAL) AGREEMENT

The Customer, the Client and the Purchaser are asked to note this Agreement which governs the basis on which this drainage and water report is supplied

Definitions

'Company' means United Utilities Water Limited who produce the Report; its registered office being at Haweswater House, Lingley Mere Business Park, Lingley Green Avenue, Great Sankey, Warrington WA5 3LP, company number 2366678.

'Order' means any request completed by the Customer requesting the Report.

'Report' means the drainage and water report prepared by the Company in respect of the Property.

'Property' means the address or location supplied by the Customer in the Order.

'Customer' means the person, company, firm or other legal body placing the Order, either on their own behalf as Client, or, as an agent for a Client.

'Client' means the person, company or body who is the intended recipient of the Report with an actual or potential interest in the Property.

'Purchaser' means the actual or potential purchaser of the Property including their mortgage lender.

Agreement

1.1 The Company agrees to supply the Report to the Customer and the Client subject to this Agreement. The scope and limitations of the Report are described in clause 2 of this Agreement.

Where the Customer is acting as an agent for the Client then the Customer shall be responsible for bringing this Agreement to the attention of the Client and the Purchaser.

1.2 The Customer, the Client and the Purchaser agree that the placing of an Order for a Report and the subsequent provision of a copy of the Report to the Client and/ or the Purchaser indicates their acceptance of this Agreement.

The Report

Whilst the Company will use reasonable care and skill in producing the Report, it is provided to the Customer, the Client and the Purchaser on the basis that they acknowledge and agree to the following:

2.1 The information contained in the Report can change on a regular basis so the Company cannot be responsible to the Customer, the Client and the Purchaser for any change in the information contained in the Report after the date on which the Report was produced and sent to the Client.

2.2 The Report does not give details about the actual state or condition of the Property nor should it be used or taken to indicate or exclude actual suitability or unsuitability of the Property for any particular purpose, or relied upon for determining saleability or value, or used as a substitute for any physical investigation or inspection. Further advice and information from appropriate experts and professionals should always be obtained.

2.3 The information contained in the Report is based upon the accuracy, completeness and legibility of the address and/or plans supplied by the Customer or Client or Purchaser.

2.4 The Report provides information as to the location and connection status of existing services and other information in relation to drainage and water enquiries and should not be relied on for any other purpose. The Report may contain opinions or general advice to the Customer, the Client and the Purchaser. The Company cannot ensure that any such opinion or general advice is accurate, complete or valid and therefore accepts no liability in relation thereto.

2.5 The position and depth of apparatus shown on any maps attached to the Report are approximate and are furnished as a general guide only, and no warranty as to its correctness is given or implied. The exact positions and depths should be obtained by excavation trial holes and the maps must not be relied on in the event of excavation or other works made in the vicinity of the Company's apparatus.

Liability

3.1 The Company shall not be liable to the Client or the Purchaser for any failure defect or non-performance of its obligations arising from any failure to provide or delay in providing the Report to the extent that such failure or delay is due to an event or circumstance beyond the reasonable control of the Company including but not limited to any delay, failure of or defect in any machine, processing system or transmission link or any failure or default of a supplier or sub-contractor of the Company or any provider of any third party Information except to the extent that such failure or delay is caused by the negligence of the Company.

3.2 Where a Report is requested for an address falling within a geographical area where two different companies separately provide Water and Sewerage Services, then it shall be deemed that liability for the information given by either company will remain with that company in respect of the accuracy of the information supplied.

A company supplying information which has been provided to it by another company for the purposes outlined in this agreement will therefore not be liable in any way for the accuracy of that information and will supply that information as an agent for the company from which the information was obtained.

3.2 The Report is produced for use in relation to individual commercial property transactions where the property is used solely for carrying on a trade or business, the property is intended to be developed for commercial gain or the property is not a single residential, domestic property. The Company's entire liability (except to the extent provided by clause 3.5) in respect of all causes of action arising by reason of or in connection with the Report (whether for breach of contract, negligence or any other tort, under statute or statutory duty or otherwise at all) shall be limited to £2,000,000.

3.3 In any event, the Company shall not have any liability in contract, negligence or any other tort or for breach of statutory duty or otherwise in respect of any loss of profit, loss of revenue, loss of opportunity or anticipated savings, or any indirect or consequential loss or damage that may be suffered by the Customer, the Client or the Purchaser howsoever arising. The plans attached to the report are provided pursuant to the Company's statutory duty to make such plans available for inspection (notwithstanding the provisions of this clause) and attention is drawn to the notice on the plan(s) attached to the report which applies to the plan and its contents.

3.4 Where the Customer sells this Report to a Client or Purchaser under its own name or as a reseller of the Company (other than in the case of a bona fide legal adviser recharging the cost of the Report as a disbursement) the Company shall not in any circumstances (whether for breach of contract, negligence or any other tort, under statute or statutory duty, restitution or otherwise at all) be liable to the Customer for any loss (whether direct, indirect or consequential loss (all three of which terms include without limitation, pure economic loss, loss of profit, loss of business, depletion of goodwill and like loss)) or damage whatsoever caused in respect of the Report or any use of the Report or reliance placed upon it and the Customer shall indemnify and keep indemnified the Company in respect of any claim by the Client or the Purchaser that the Company may incur or suffer.

3.5 Nothing in this Agreement shall exclude the Company's liability for death or personal injury arising from its negligence or for fraud.

Copyright and Confidentiality

4.1 The Customer, the Client and the Purchaser acknowledge that the Report is confidential and is intended for the personal use of the Client and the Purchaser. The copyright and any other intellectual property rights in the Report shall remain the property of the Company. No intellectual or other property rights are transferred or licensed to the Customer, the Client or the Purchaser except to the extent expressly provided herein.

4.2 The Customer or the Client or the Purchaser is entitled to make copies of the Report but may only copy Ordnance Survey mapping or data contained in or attached to the Report if they have an appropriate licence from the originating source of that mapping or data.

4.3 The Customer, The Client and the Purchaser agree (in respect of both the original and any copies made) to respect and not to alter any part of the Report including but not limited to the trademark, copyright notice or other property marking which appears on the Report.

4.4 The maps contained in the Report are protected by Crown Copyright and must not be used for any purpose outside the context of the Report.

4.5 The enquiries in the Report are protected by copyright by the Law Society of 113 Chancery Lane, London WC2A 1PL and must not be used for any purpose outside the context of the Report.

4.6 The Customer, the Client and the Purchaser agree to indemnify the Company against any losses, costs, claims and damage suffered by the Company as a result of any breach by either of them of the provisions of clauses 4.1 to 4.4 inclusive.

Payment

5.1 Unless otherwise stated all prices are inclusive of VAT. The Customer shall pay the price of the Report specified by the Company, without any set off, deduction or counterclaim.

5.2 Payment must be received in advance unless an account has been set up with the Company. In these cases, payment terms will be as agreed with the Company, but in any event any invoice must be paid within 30 days.

5.3 The Company reserves the right to increase fees on reasonable prior written notice at any time.

Appendix 2 continued - DRAINAGE AND WATER ENQUIRY (COMMERCIAL) AGREEMENT

Data Protection

6.1 We will process any personal data you provide to us in accordance with the Data Protection Act 1998. Any personal information you provide to us may be used for the purposes for which the information is provided and to assist with our debt recovery processes. We may also disclose it to other companies in the United Utilities group (being United Utilities Group PLC and its subsidiary companies) and their sub-contractors in connection with those purposes, but it will not be processed for other purposes or disclosed to other third parties without your express permission. We may also utilise any information we collect so that we are able to correctly administer, develop and improve the business and services we provide to our customers.

General

7.1 If any provision of this Agreement is or becomes invalid or unenforceable, it will be taken to be removed from the rest of this Agreement to the extent that it is invalid or unenforceable. No other provision of this Agreement shall be affected.

7.2 This Agreement shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts.

7.3 Nothing in this Agreement and conditions shall in any way restrict the Customer's the Client's or the Purchaser's statutory or any other rights of access to the information contained in the Report.

7.4 This Agreement and conditions may be enforced by the Customer, the Client and the Purchaser.

7.5 Before you agree to this Agreement, please note it is your responsibility to ensure your client/customer is aware of them and that any objections are raised accordingly.

Appendix 4 – Environment Agency Correspondence

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Charlotte Whitham

From: CMBLNC Info Requests <Inforequests.cmbInc@environment-agency.gov.uk>
Sent: 04 July 2019 10:02
To: Charlotte Whitham
Subject: CL131637BL
Attachments: CL131637.pdf

Dear Charlotte

Enquiry regarding flood data.

Thank you for your enquiry which was received on 17 June 2019.

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

- **Can you confirm the flood zones within the site?**
- **Are you able to provide comment on the likely source of fluvial flooding to the site?**
- **Please provide any relevant modelled flood levels, including climate change**
- **Do you have any records of historic flooding events on this site, either from fluvial sources or other sources (i.e. surface water, sewers, groundwater, reservoir etc.)? If you are aware of historical flooding at the site, can you please provide us with details of these historical flood events where it is available, including flood levels, estimated return periods, photographs, and other such data as may be relevant to our study?**
- **Do you have any information on drainage within the site and in the local area, including any known drainage problems on site and in the local area?**

Please see attached the product 4 data as requested. For the most up-to-date climate change allowances please see the following link - <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances>

For flood queries related to surface water, ordinary watercourses and groundwater please contact the LLFA Lancashire County Council who may have more information.

- **We would be grateful if you could provide us with any information that you have that may assist in our assessment of infiltration, such as details of sensitive aquifers in the area, known contamination issues, etc.**

The site is underlain by the Clitheroe Limestone Formation And Hodder Mudstone Formation at rock head, which is a Secondary A aquifer. This is overlain by Till which is a Secondary aquifer.

Our records show a licenced and historic land fill 300m to the south of the site

Authorised landfill

LIC_NAME Suez Recycling And Recovery Lancashire Ltd
TYPE_DESC A04: Household, Commercial & Industrial Waste Landfill

Historic landfill

SITE_NAME Henthorn Tip
FIRSTINPUT 31/12/1920
WASTECOM1 Cesspool contents and/or sewage sludge, Incinerator plant residues (Screenings), Incinerator plant residues (Ash and Clinker)

- Please can you also indicate to us whether the EA is aware of any relevant environmentally sensitive receptors (such as aquatic wildlife in receiving watercourses, etc.) in the area around the site that we should be aware of when preparing this Flood Risk Assessment?

The River Ribble is designated Biological Heritage Site (BHS) in this location, details of which can be obtained from the Lancashire Environment Record Network (LERN).

We hold records of invasive species Japanese Knotweed along the River Ribble north of Henthorn Road.

We hold Kingfisher records at Henthorn Gauging Station on Pendleton Brook.

Please refer to [Open Government Licence](#) which explains the permitted use of this information.

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.

Thanks

Becca

Rebecca Lettice

Customers and Engagement Officer, Cumbria and Lancashire

Environment Agency | Ghyll Mount, Gillan Way, Penrith 40 Business Park, Penrith, Cumbria, CA11 9BP

inforequests.cmbInc@environment-agency.gov.uk



From: Enquiries, Unit

Sent: 19 June 2019 13:31

To: 'Charlotte Whitham' <Charlotte.whitham@enzygo.com>

Subject: 190619/MB02 RE: SHF.1132.227 - Henthorn Road, Clitheroe 2 EA consultation

Dear Charlotte,

I have passed your e-mail to the local customer team who will deal with your request.

The Freedom of Information Act and Environmental Information Regulations state that a public authority must respond to requests for information within 20 working days, but we aim to respond to all enquiries as quickly as we can.

You can find more information about our service commitment by clicking on the link below:

<https://www.gov.uk/government/publications/environment-agency-customer-service-commitment>

You can contact our customer team directly on the contact details below, or call the National Customer Contact Centre on 03708 506506 who will transfer you to the area team.

Please quote your enquiry reference 190619/MB02 in any correspondence with us regarding this matter.

Customers and Engagement
Environment Agency

Cumbria and Lancashire Area
Lutra House
Dodd Way
Walton Summit
Bamber Bridge
PRESTON
PR5 8BX

Kind regards

Matthew Bembridge
Customer Service Advisor – NCCC, Email Management Unit
National Customer Contact Centre – Environment Agency

(Tel: 03708 506 506
: Web Site: www.gov.uk/environment-agency

Click an icon to keep in touch with us:-



From: Charlotte Whitham [<mailto:Charlotte.whitham@enzygo.com>]
Sent: 17 June 2019 10:52
To: Enquiries, Unit <enquiries@environment-agency.gov.uk>
Cc: Scott Dawson <scott.dawson@enzygo.com>
Subject: SHF.1132.227 - Henthorn Road, Clitheroe 2 EA consultation

Our Reference: SHF.1132.227 - Henthorn Road, Clitheroe 2

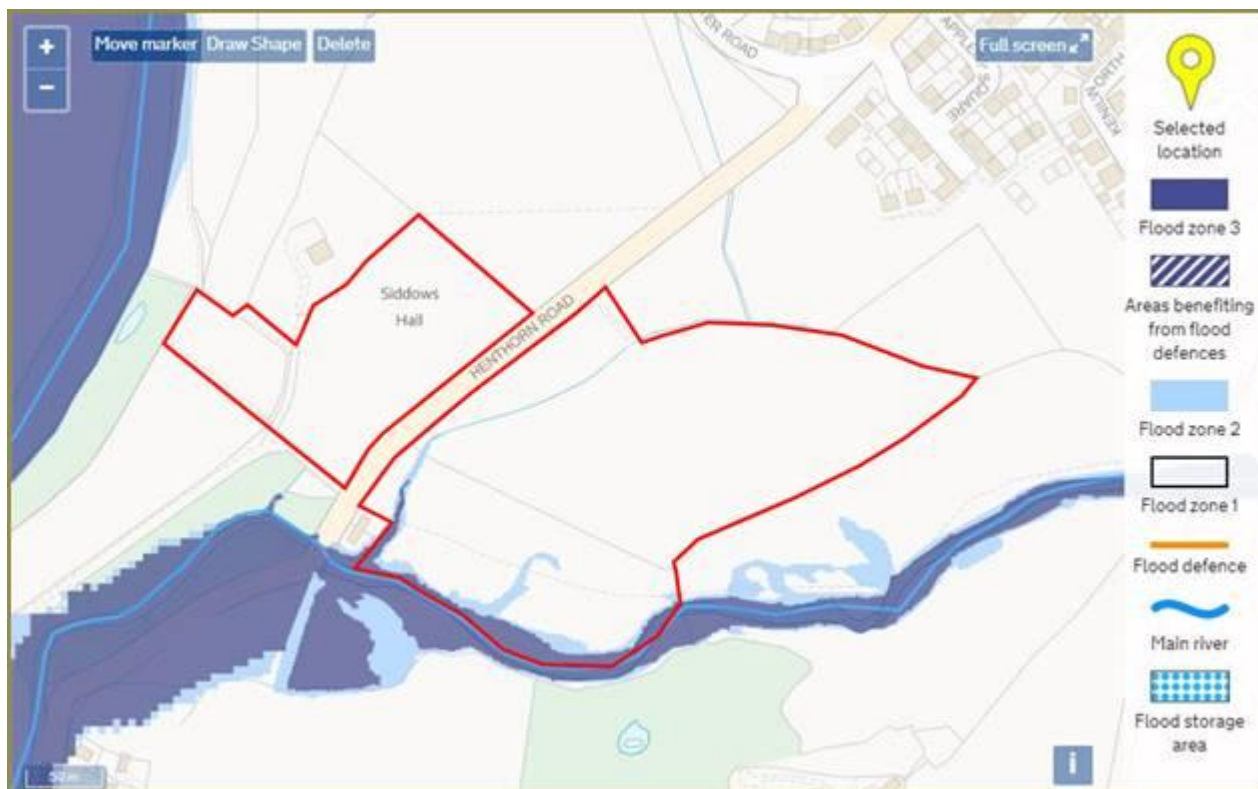
Location: Henthorn Road, Clitheroe, BB7 2PL (NGR: 372882, 440627)

To whom it may concern,

Enzygo have been commissioned to prepare a Flood Risk Assessment (FRA) for a proposed residential development located on land to the north and south of Henthorn Road, Clitheroe (see attached location plan).

Ordnance Survey (OS) mapping shows an unnamed 'ordinary watercourse' conveying flow south-west through the southern land parcel, before joining Pendleton Brook (a 'main river'), which flows west along the southern boundary.

Environment Agency flood map (Figure 1) shows the entire northern land parcel and most of the southern land parcel are located within Flood Zone 1, at 'low' risk of fluvial (river) flooding. The southern extent of the southern land parcel is located in Flood Zones 2 and 3, at 'moderate' to 'high' risk of fluvial (river) flooding.



Could you provide us with flooding data? In relation to the Site we would require clarification on the following points.

- Can you confirm the flood zones within the site?
- Are you able to provide comment on the likely source of fluvial flooding to the site?
- Please provide any relevant modelled flood levels, including climate change
- Do you have any records of historic flooding events on this site, either from fluvial sources or other sources (i.e. surface water, sewers, groundwater, reservoir etc.)? If you are aware of historical flooding at the site, can you please provide us with details of these historical flood events where it is available, including flood levels, estimated return periods, photographs, and other such data as may be relevant to our study?
- Do you have any information on drainage within the site and in the local area, including any known drainage problems on site and in the local area?
- We would be grateful if you could provide us with any information that you have that may assist in our assessment of infiltration, such as details of sensitive aquifers in the area, known contamination issues, etc.
- Please can you also indicate to us whether the EA is aware of any relevant environmentally sensitive receptors (such as aquatic wildlife in receiving watercourses, etc.) in the area around the site that we should be aware of when preparing this Flood Risk Assessment?

Best Regards,

Charlotte Whitham
Assistant Hydrologist



Enzygo Ltd,
Offices in Bristol, Sheffield and Manchester

Landscape, Hydrology, Permitting, Ecology, Geo-environmental, Noise, Transport, Planning and Arboriculture

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Registered in England & Wales registered number: 06525159 **VAT number:** 283 2596 77



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Fluvial Model Outline Map: Henthorn Road, Clitheroe, BB7 2PL

Produced: 02 July 2019

Our Ref: CL131637

NGR: 372,995 440,577

Key

 Main River

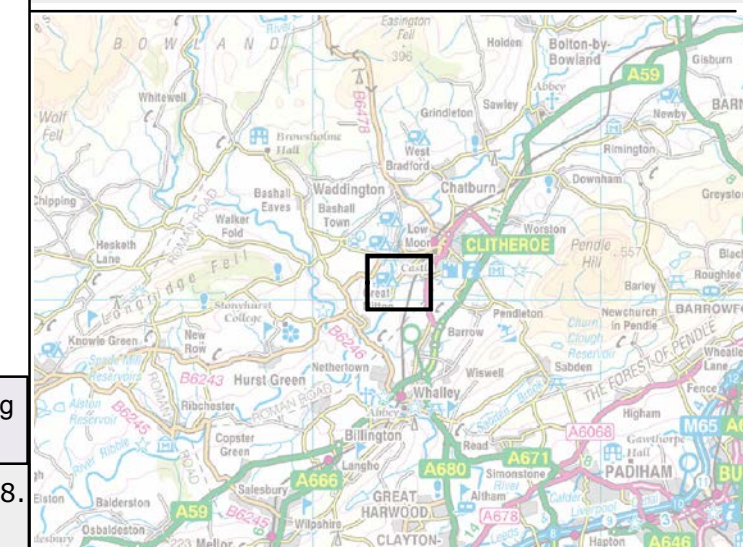
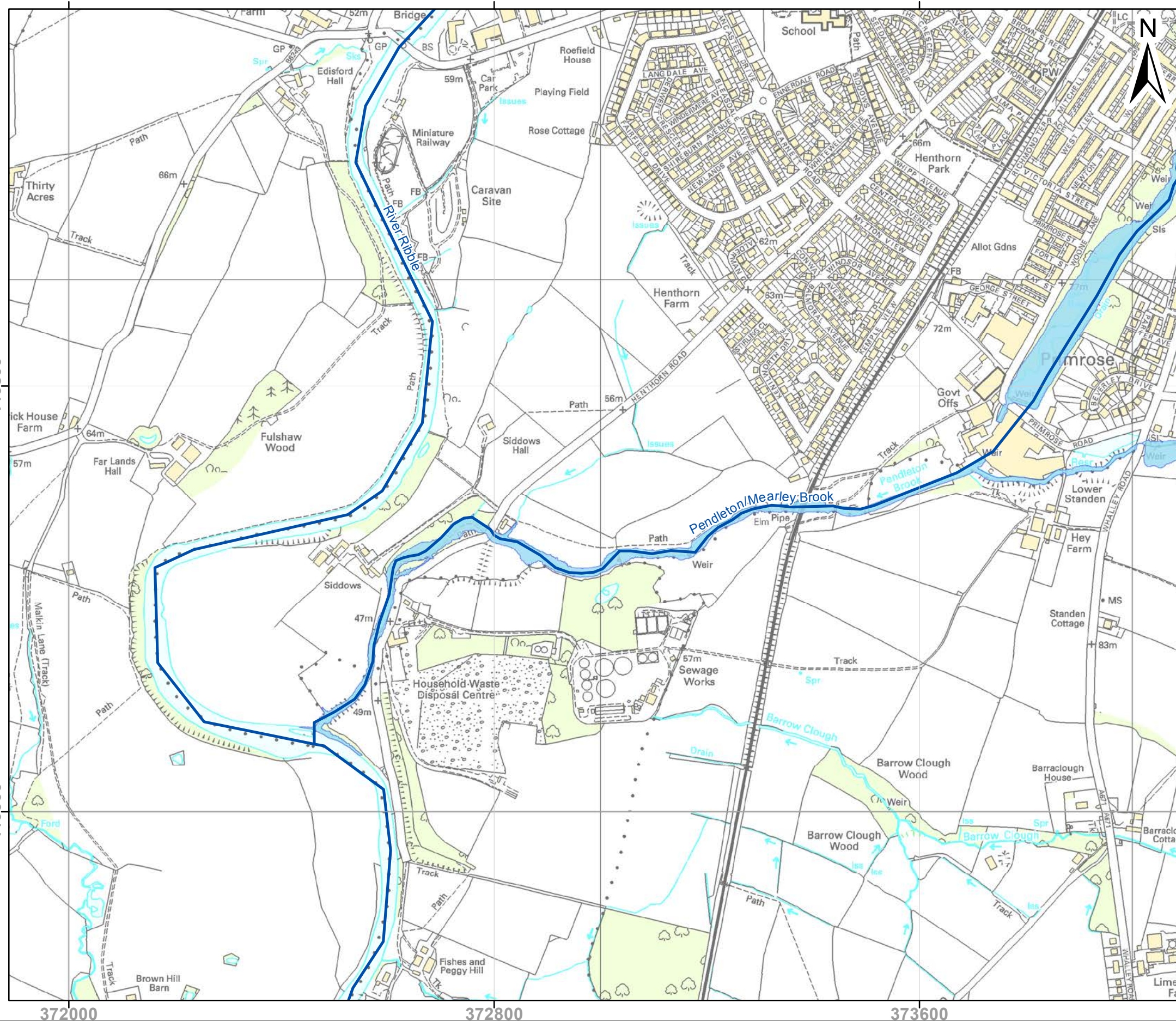
 1 in 20 Defended Outline

Flood Zone 3 shows the area that could be affected by flooding:

- from the sea with a 0.5% or greater chance of happening each year
- or from a river with a 1.0% 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 0.1% chance of occurring each year.

ABDs (Areas Benefiting from Defences) show the area benefiting from defences during a 0.5% tidal, or 1.0% fluvial flood event.



Modelled water levels with climate change using +20% flow allowances are not suitable for the majority of planning purposes. New climate change allowances can be checked on the following website; www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances.

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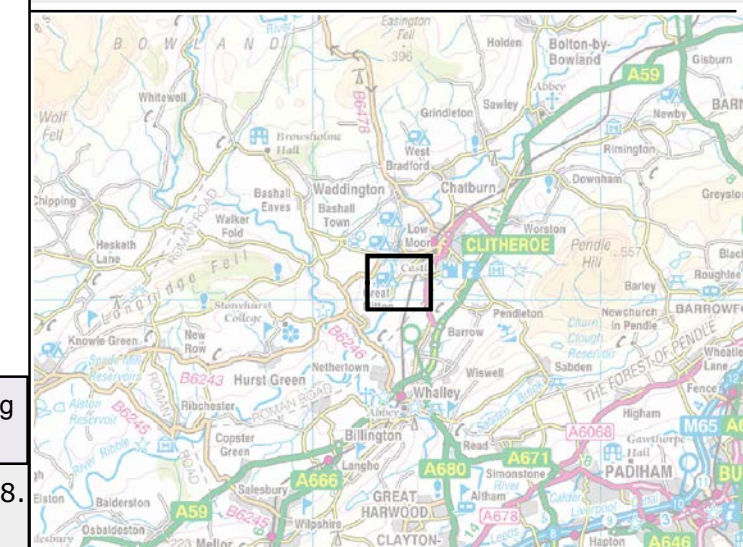
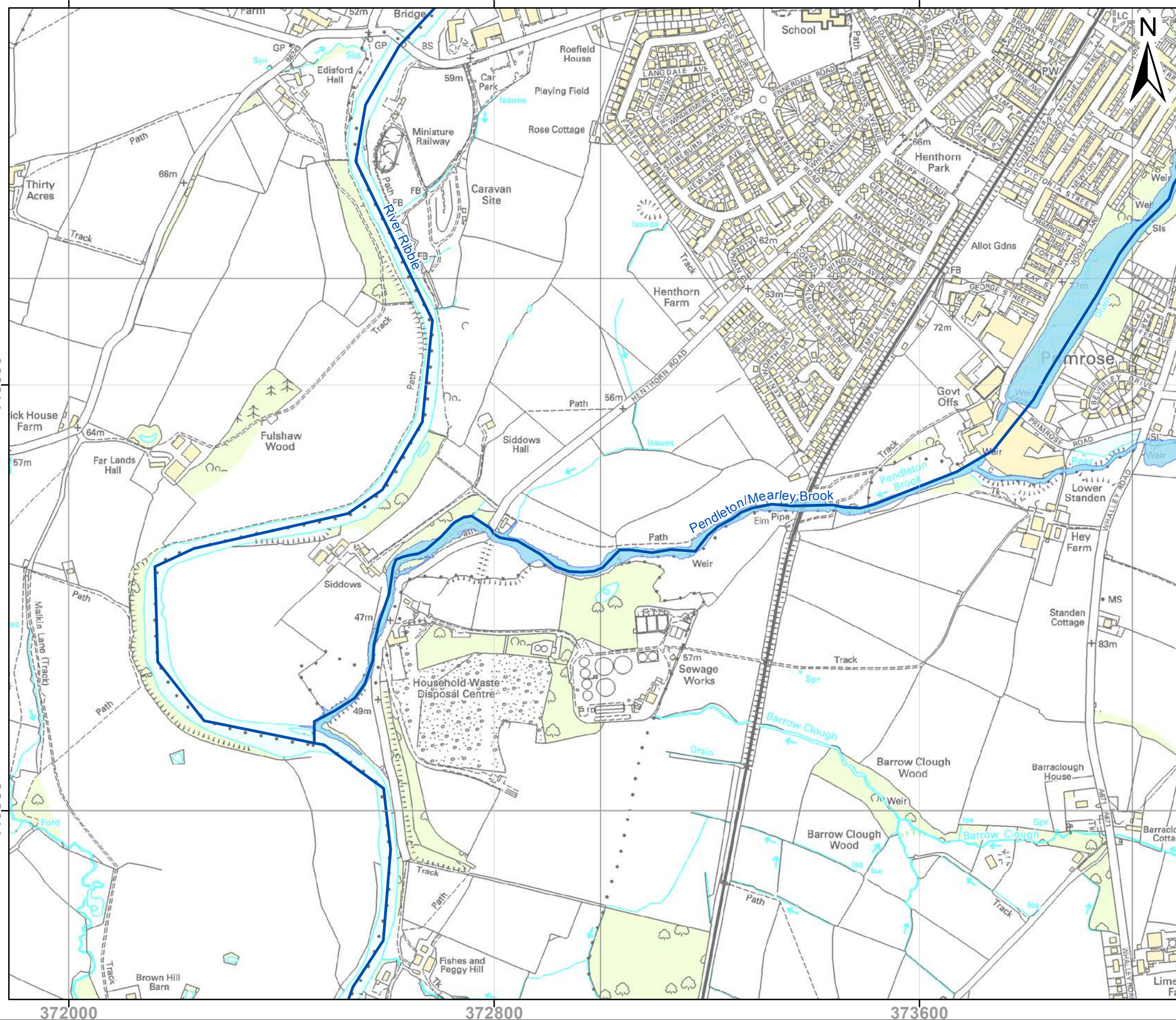
 1 in 20 Undefended Outline

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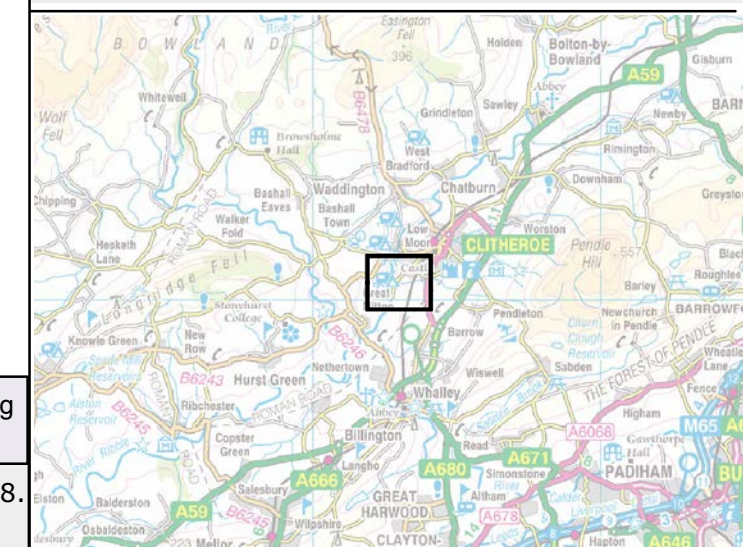
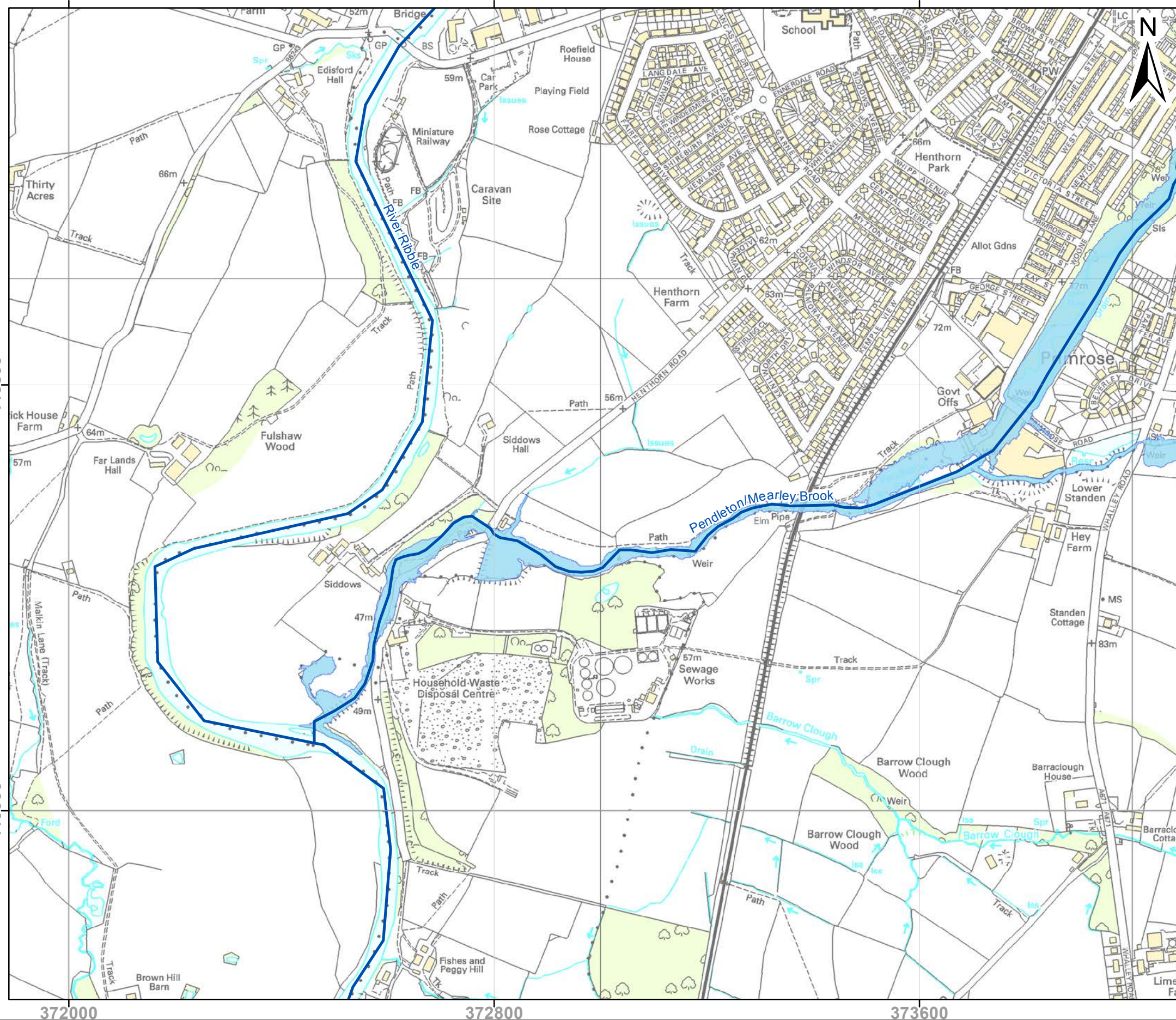
 1 in 100 + CC(30%) Defended

Flood Zone 3 shows the area that could be affected by flooding:

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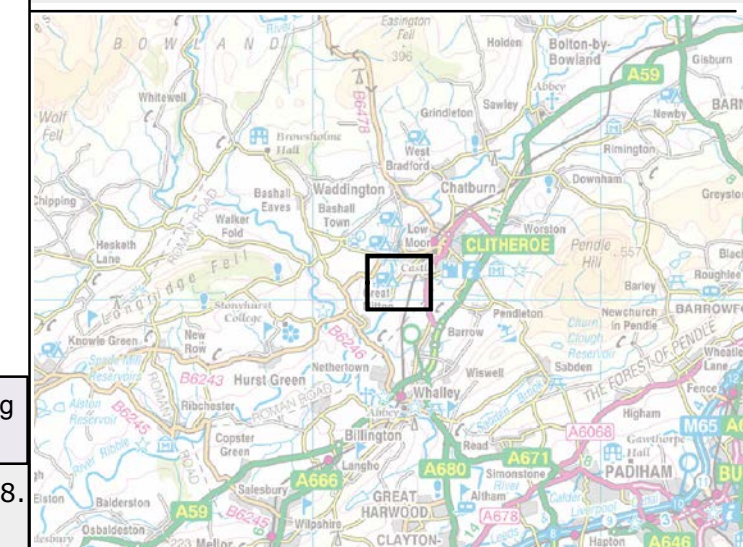
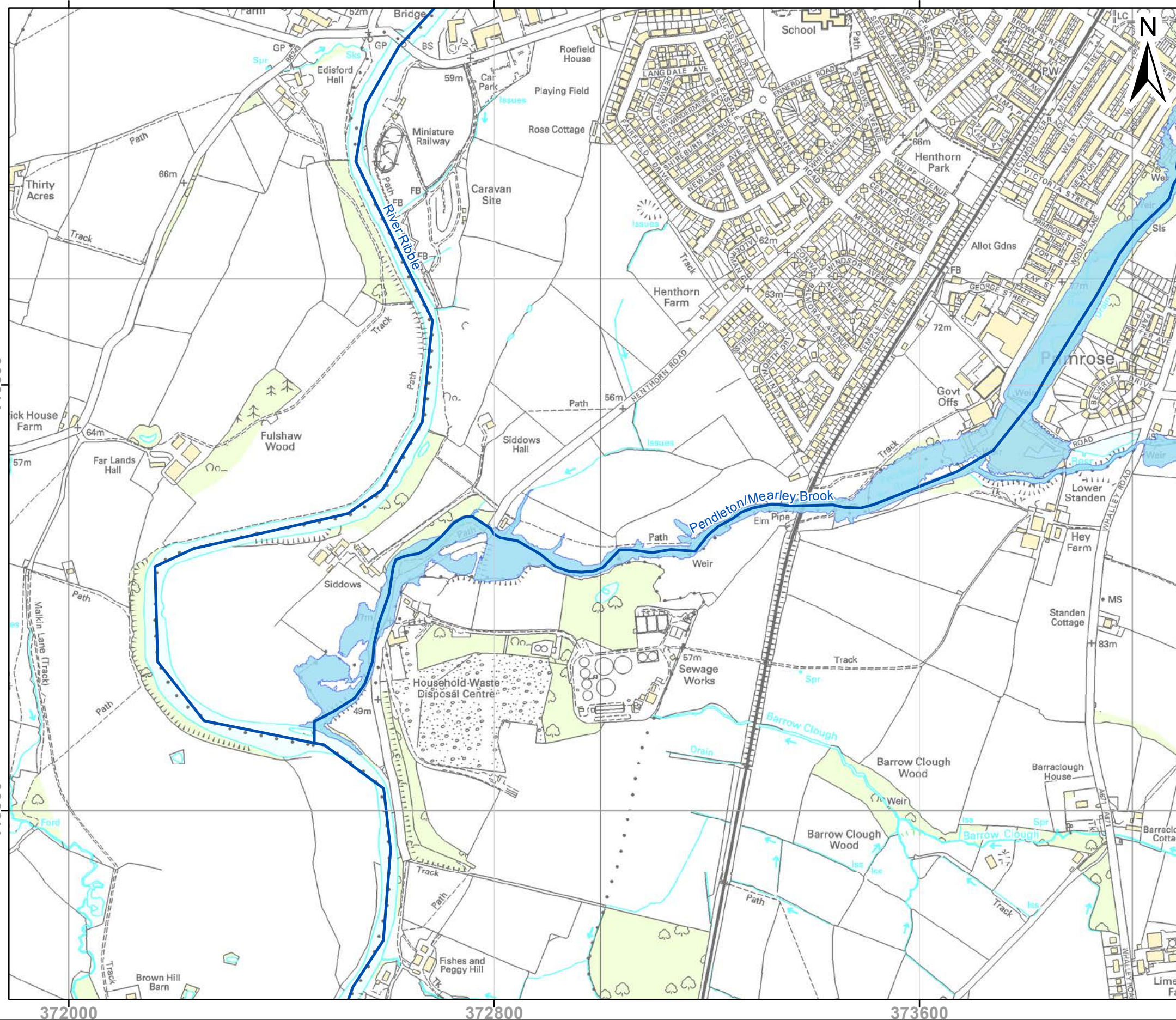
-  Main River
-  1 in 100 + CC (70%) Defended

Flood Zone 3 shows the area that could be affected by flooding:

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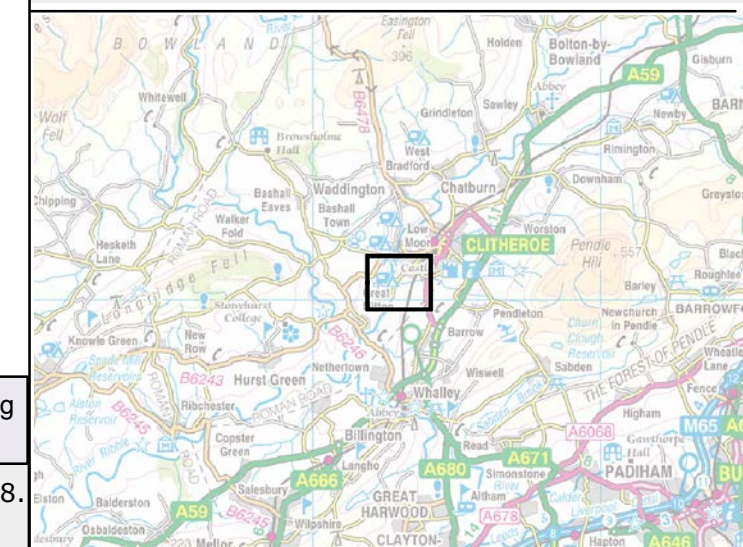
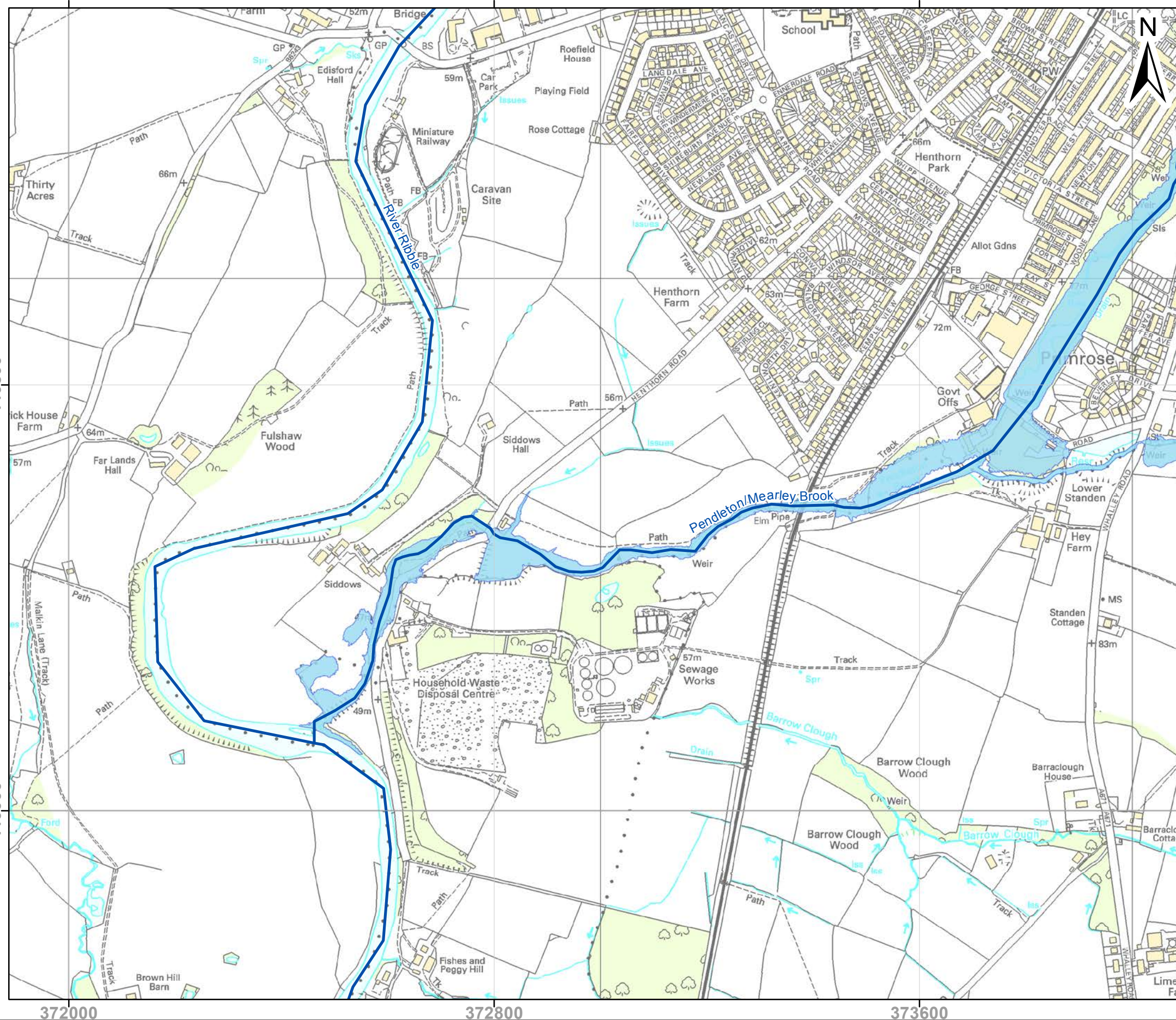
-  Main River
-  1 in 100 + CC(35%) Defended

Flood Zone 3 shows the area that could be affected by flooding:

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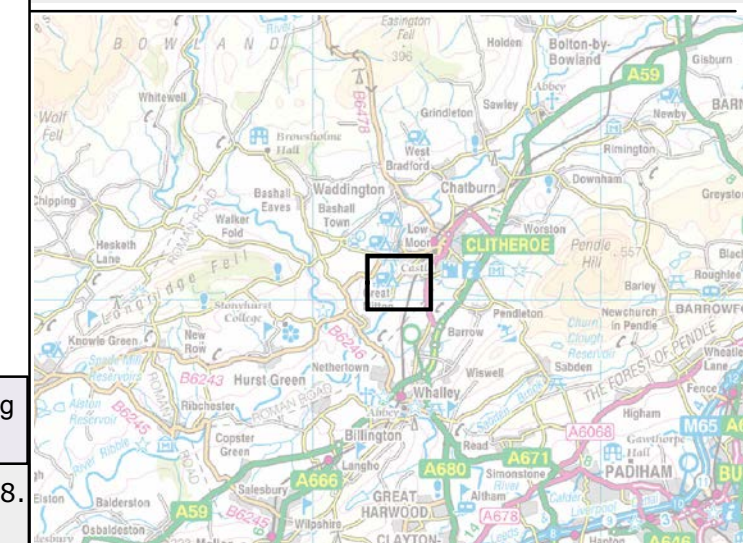
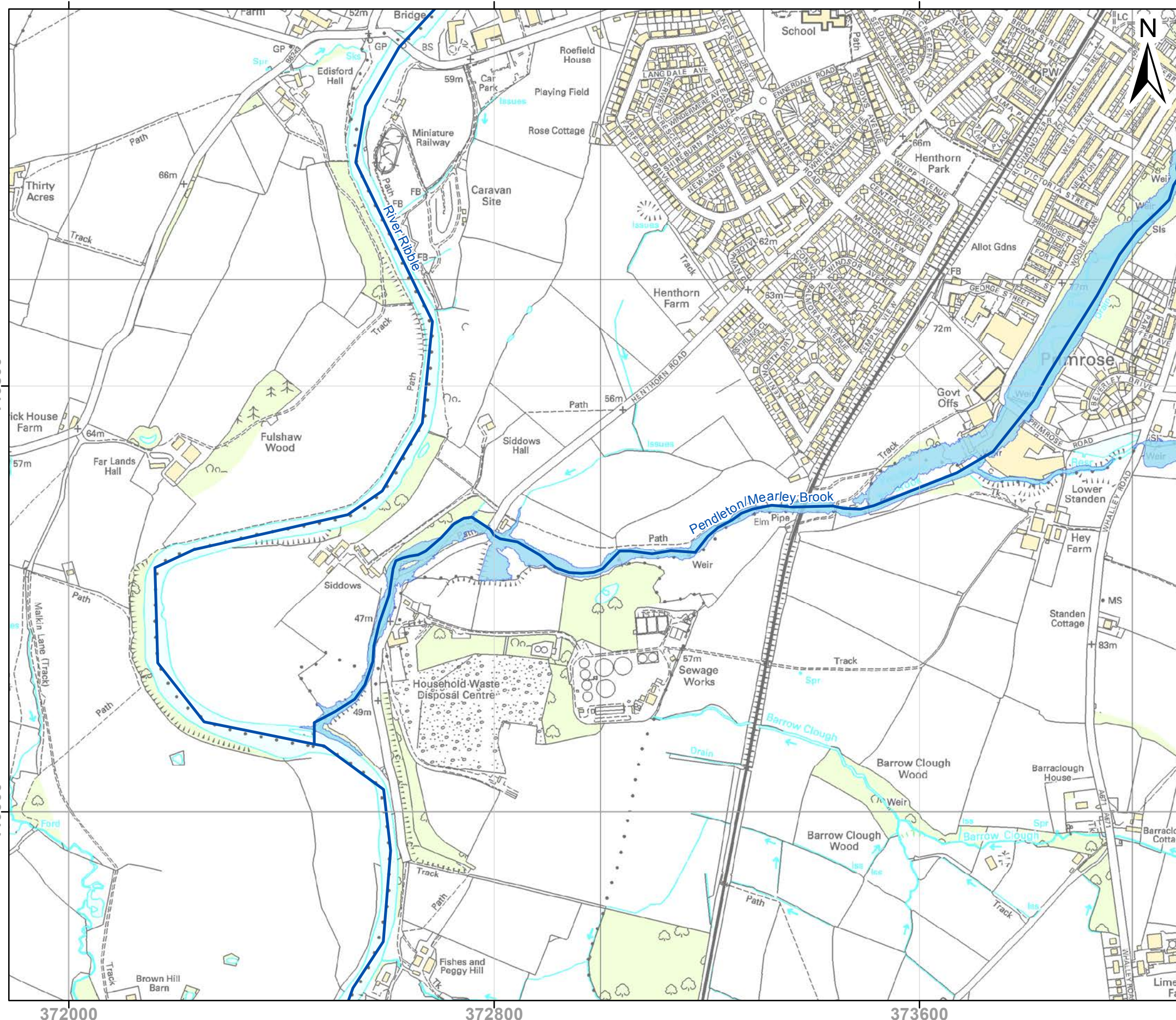
-  Main River
-  1 in 100 Undefended Outline

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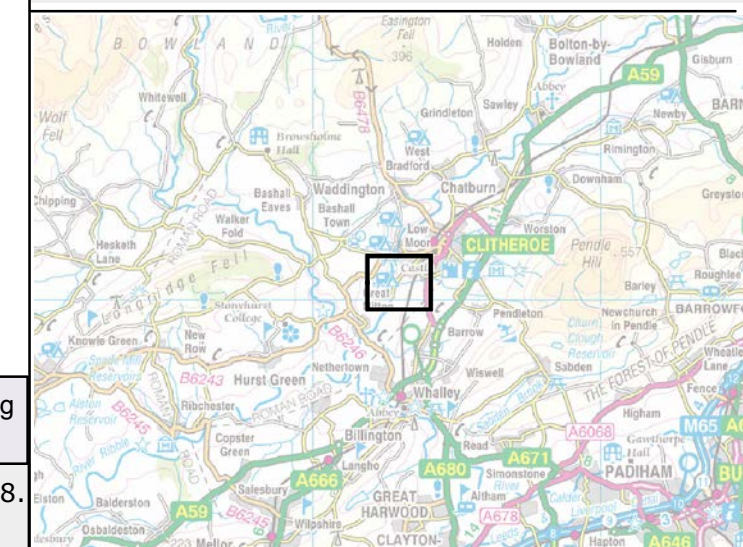
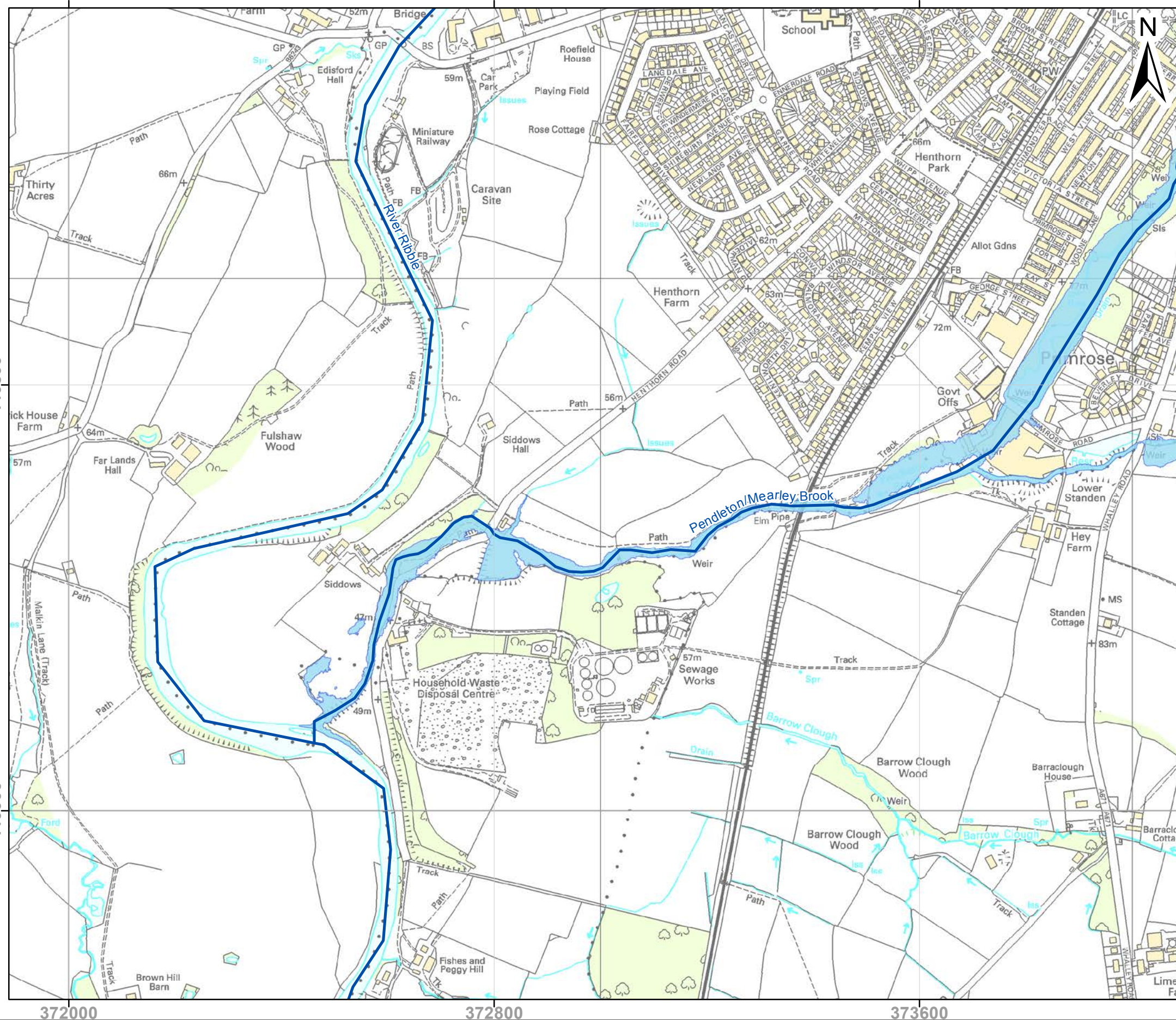
 1 in 200 Defended Outline

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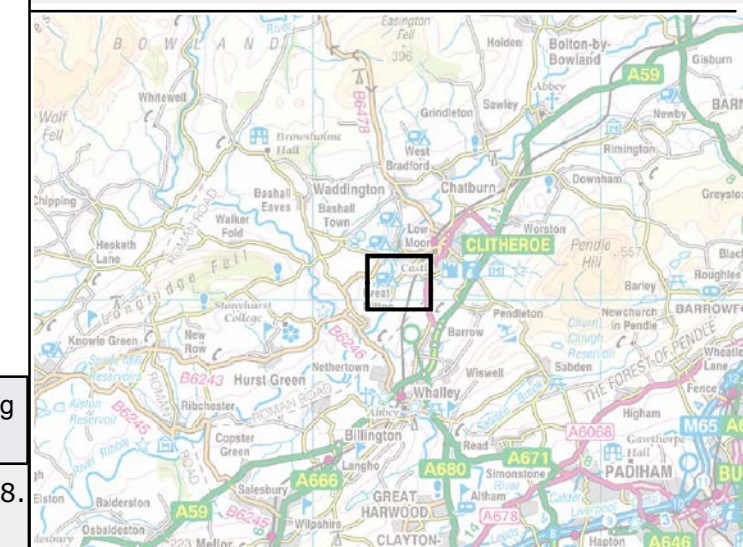
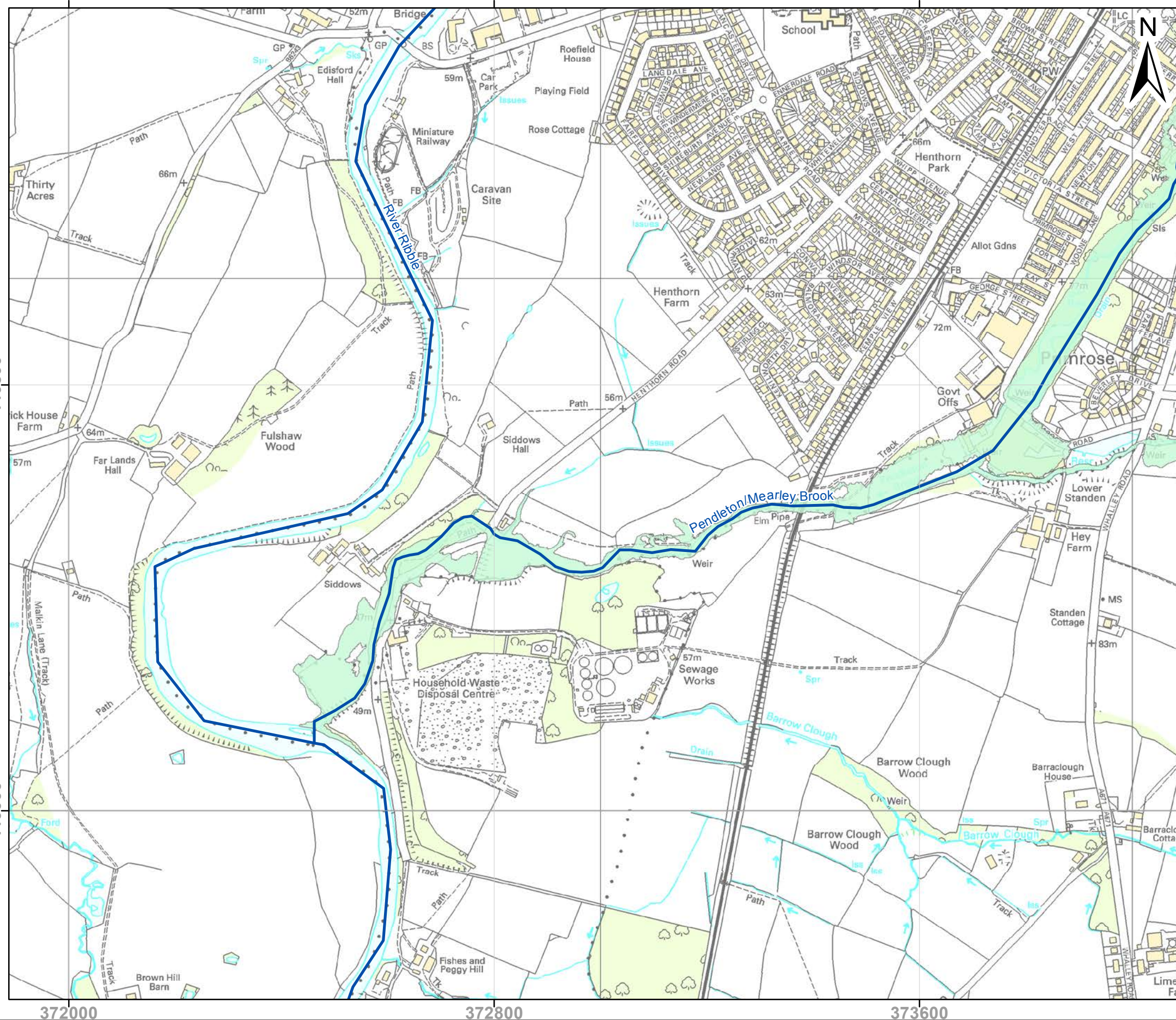
 1 in 1000 Defended Outline

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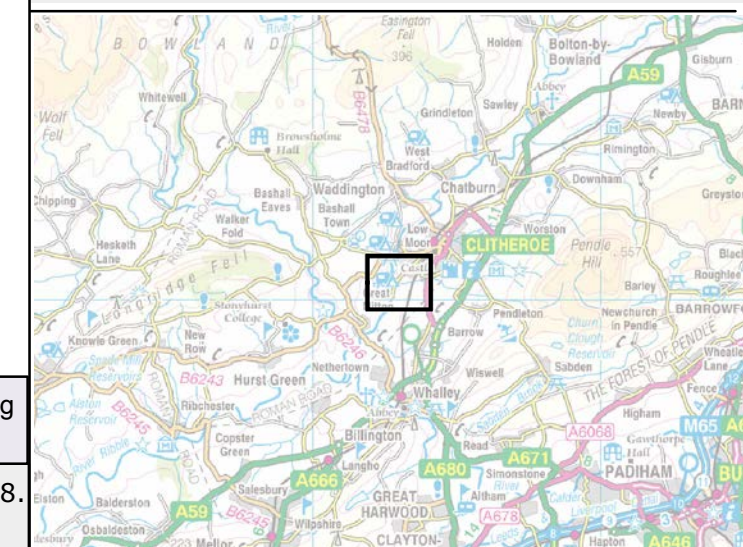
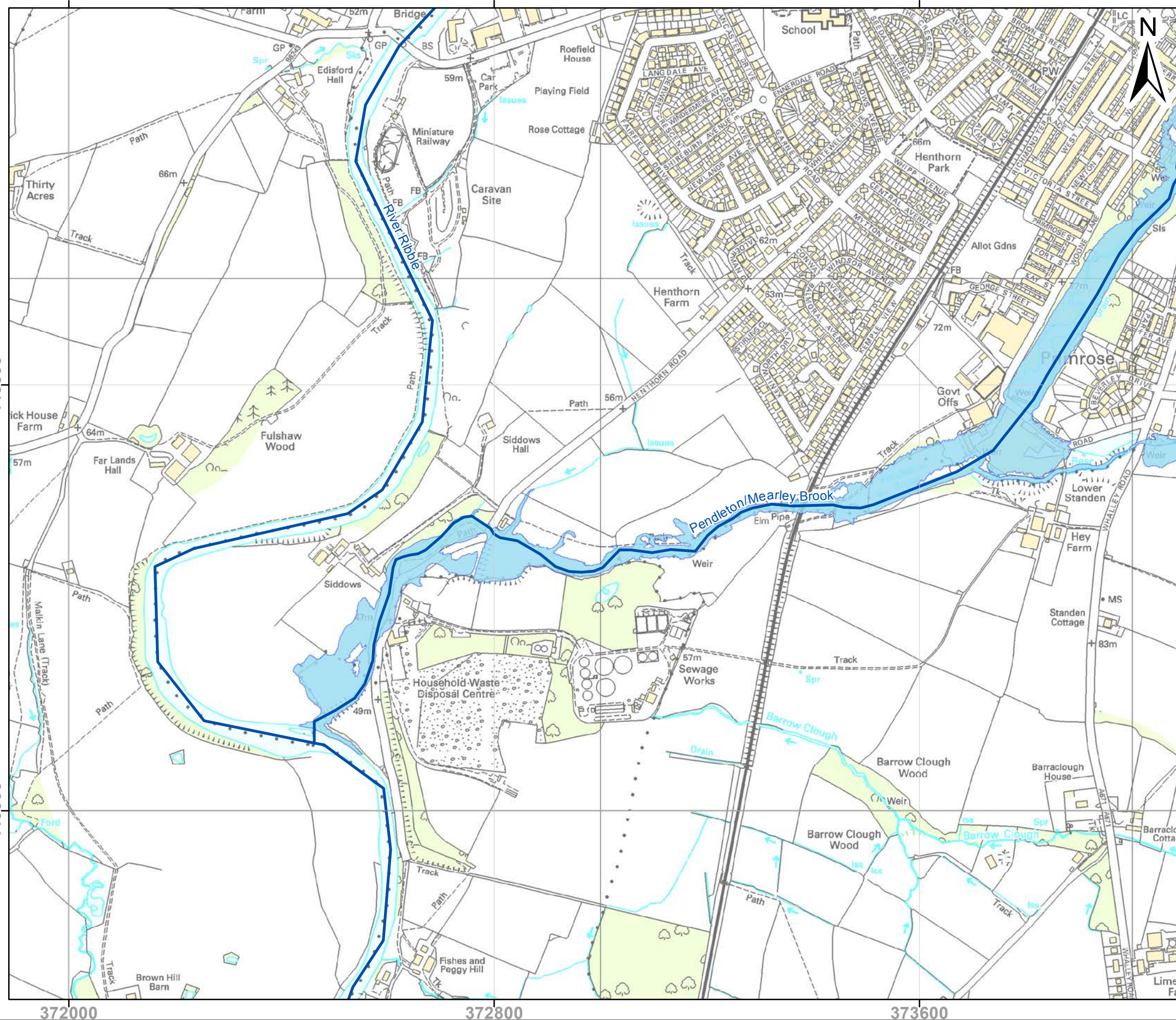
-  Main River
-  1 in 1000 Undefended Outline

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NFCDD_NODE_POINT_ID	NFCDD_MODEL_FLOOD_GROUP	RETURN_PERIOD	WATER_LEVEL	FLOW
PEBR01_01087	Mearley2018_D qqddncsdri	1000	54.78	91.5
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PEBR01_01087	Mearley2018_D qqddncsdri	10	53.79	29.23
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PEBR01_01087	Mearley2018_U qqudncsdri	20	53.9	34.09

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PEBR01_01006	Mearley2018_D qqddncsdi	50	53.08	39.33
PEBR01_01006	Mearley2018_D qqddncsdi	30	53.03	36.76
PEBR01_01006	Mearley2018_D qqddncsdi	25	53	35.62
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PEBR01_00910	Mearley2018_D qqddncsdi	5	51.6	24.4
PEBR01_00910	Mearley2018_D qqddncsdi	50	51.97	39.33
PEBR01_00910	Mearley2018_D qqddncsdi	30	51.91	36.76
PEBR01_00910	Mearley2018_D qqddncsdi	25	51.88	35.62
PEBR01_00910	Mearley2018_D qqddncsdi	2	51.41	19
PEBR01_00910	Mearley2018_D qqddncsdi	20	51.85	34.36
PEBR01_00910	Mearley2018_U qqudncsdi	20	51.84	34.09

PEBR01_00826	Mearley2018_D qqddncsdi	1000	51.76	91.48
PEBR01_00826	Mearley2018_U qqudncsdi	1000	51.76	91.48
PEBR01_00826	Mearley2018_D_30%CC qqddccsdi	1000	52.18	119
PEBR01_00826	Mearley2018_D qqddncsdi	200	51.32	58.16
PEBR01_00826	Mearley2018_D qqddncsdi	10	50.85	29.23
PEBR01_00826	Mearley2018_D qqddncsdi	100	51.11	47.26
PEBR01_00826	Mearley2018_U qqudncsdi	100	51.14	48.95
PEBR01_00826	Mearley2018_D_30%CC qqddccsdi	100	51.42	64.03
PEBR01_00826	Mearley2018_D_35%CC qqddccsdi	100	51.5	69.92
PEBR01_00826	Mearley2018_D_70%CC qqddccsdi	100	51.66	83.11
PEBR01_00826	Mearley2018_D qqddncsdi	75	51.02	42.58
PEBR01_00826	Mearley2018_D qqddncsdi	5	50.77	24.4
PEBR01_00826	Mearley2018_D qqddncsdi	50	50.97	39.33
PEBR01_00826	Mearley2018_D qqddncsdi	30	50.94	36.76
PEBR01_00826	Mearley2018_D qqddncsdi	25	50.92	35.62
PEBR01_00826	Mearley2018_D qqddncsdi	2	50.56	19
PEBR01_00826	Mearley2018_D qqddncsdi	20	50.91	34.36
PEBR01_00826	Mearley2018_U qqudncsdi	20	50.9	34.09

PEBR01_00701	Mearley2018_D qqddncsdri	1000	51.06	91.48
PEBR01_00701	Mearley2018_U qqudncsdri	1000	51.06	91.47
PEBR01_00701	Mearley2018_D_30%CC qqddccsdri	1000	51.28	118.99
PEBR01_00701	Mearley2018_D qqddncsdri	200	50.6	58.12
PEBR01_00701	Mearley2018_D qqddncsdri	10	49.61	29.22
PEBR01_00701	Mearley2018_D qqddncsdri	100	50.23	47.25
PEBR01_00701	Mearley2018_U qqudncsdri	100	50.29	48.94
PEBR01_00701	Mearley2018_D_30%CC qqddccsdri	100	50.74	64.02
PEBR01_00701	Mearley2018_D_35%CC qqddccsdri	100	50.83	69.82
PEBR01_00701	Mearley2018_D_70%CC qqddccsdri	100	50.98	83.1
PEBR01_00701	Mearley2018_D qqddncsdri	75	50.05	42.57
PEBR01_00701	Mearley2018_D qqddncsdri	5	49.4	24.4
PEBR01_00701	Mearley2018_D qqddncsdri	50	49.93	39.33
PEBR01_00701	Mearley2018_D qqddncsdri	30	49.84	36.76
PEBR01_00701	Mearley2018_D qqddncsdri	25	49.8	35.62
PEBR01_00701	Mearley2018_D qqddncsdri	2	49.22	19
PEBR01_00701	Mearley2018_D qqddncsdri	20	49.75	34.36
PEBR01_00701	Mearley2018_U qqudncsdri	20	49.74	34.09

PEBR01_00630	Mearley2018_D qqddncsdri	1000	50.99	92.92
PEBR01_00630	Mearley2018_U qqudncsdri	1000	50.99	92.91
PEBR01_00630	Mearley2018_D_30%CC qqddccsdri	1000	51.22	120.84
PEBR01_00630	Mearley2018_D qqddncsdri	200	50.51	59.03
PEBR01_00630	Mearley2018_D qqddncsdri	10	49.15	29.68
PEBR01_00630	Mearley2018_D qqddncsdri	100	50.01	48.04
PEBR01_00630	Mearley2018_U qqudncsdri	100	50.09	49.75
PEBR01_00630	Mearley2018_D_30%CC qqddccsdri	100	50.67	65.04
PEBR01_00630	Mearley2018_D_35%CC qqddccsdri	100	50.76	70.8
PEBR01_00630	Mearley2018_D_70%CC qqddccsdri	100	50.92	84.45
PEBR01_00630	Mearley2018_D qqddncsdri	75	49.78	43.32
PEBR01_00630	Mearley2018_D qqddncsdri	5	48.94	24.77
PEBR01_00630	Mearley2018_D qqddncsdri	50	49.62	40.01
PEBR01_00630	Mearley2018_D qqddncsdri	30	49.5	37.35
PEBR01_00630	Mearley2018_D qqddncsdri	25	49.45	36.19
PEBR01_00630	Mearley2018_D qqddncsdri	2	48.72	19.28
PEBR01_00630	Mearley2018_D qqddncsdri	20	49.39	34.9
PEBR01_00630	Mearley2018_U qqudncsdri	20	49.38	34.62

PEBR01_00612	Mearley2018_D qqddncsdri	1000	50.89	92.92
PEBR01_00612	Mearley2018_U qqudncsdri	1000	50.89	92.91
PEBR01_00612	Mearley2018_D_30%CC qqddccsdri	1000	51.13	120.84
PEBR01_00612	Mearley2018_D qqddncsdri	200	50.44	59.03
PEBR01_00612	Mearley2018_D qqddncsdri	10	49.12	29.68
PEBR01_00612	Mearley2018_D qqddncsdri	100	49.98	48.04
PEBR01_00612	Mearley2018_U qqudncsdri	100	50.05	49.73
PEBR01_00612	Mearley2018_D_30%CC qqddccsdri	100	50.59	65.04
PEBR01_00612	Mearley2018_D_35%CC qqddccsdri	100	50.68	70.81
PEBR01_00612	Mearley2018_D_70%CC qqddccsdri	100	50.81	84.45
PEBR01_00612	Mearley2018_D qqddncsdri	75	49.76	43.32
PEBR01_00612	Mearley2018_D qqddncsdri	5	48.9	24.77
PEBR01_00612	Mearley2018_D qqddncsdri	50	49.6	40.01
PEBR01_00612	Mearley2018_D qqddncsdri	30	49.48	37.35
PEBR01_00612	Mearley2018_D qqddncsdri	25	49.43	36.19
PEBR01_00612	Mearley2018_D qqddncsdri	2	48.68	19.28
PEBR01_00612	Mearley2018_D qqddncsdri	20	49.36	34.9
PEBR01_00612	Mearley2018_U qqudncsdri	20	49.35	34.62

PEBR01_00605	Mearley2018_D qqddncsdri	1000	50.92	92.92
PEBR01_00605	Mearley2018_U qqudncsdri	1000	50.92	92.91
PEBR01_00605	Mearley2018_D_30%CC qqddccsdri	1000	51.15	120.84
PEBR01_00605	Mearley2018_D qqddncsdri	200	50.44	59.03
PEBR01_00605	Mearley2018_D qqddncsdri	10	49.12	29.68
PEBR01_00605	Mearley2018_D qqddncsdri	100	49.98	48.04
PEBR01_00605	Mearley2018_U qqudncsdri	100	50.05	49.75
PEBR01_00605	Mearley2018_D_30%CC qqddccsdri	100	50.6	65.04
PEBR01_00605	Mearley2018_D_35%CC qqddccsdri	100	50.69	70.81
PEBR01_00605	Mearley2018_D_70%CC qqddccsdri	100	50.85	84.45
PEBR01_00605	Mearley2018_D qqddncsdri	75	49.76	43.32
PEBR01_00605	Mearley2018_D qqddncsdri	5	48.91	24.77
PEBR01_00605	Mearley2018_D qqddncsdri	50	49.6	40.01
PEBR01_00605	Mearley2018_D qqddncsdri	30	49.48	37.35
PEBR01_00605	Mearley2018_D qqddncsdri	25	49.43	36.19
PEBR01_00605	Mearley2018_D qqddncsdri	2	48.69	19.28
PEBR01_00605	Mearley2018_D qqddncsdri	20	49.37	34.9
PEBR01_00605	Mearley2018_U qqudncsdri	20	49.35	34.62

PEBR01_01256	Mearley2018_D qqddncsdri	1000	56.69	89.35
PEBR01_01256	Mearley2018_U qqudncsdri	1000	56.69	89.35
PEBR01_01256	Mearley2018_D_30%CC qqddccsdri	1000	56.97	116.26
PEBR01_01256	Mearley2018_D qqddncsdri	200	56.31	56.75
PEBR01_01256	Mearley2018_D qqddncsdri	10	55.87	28.54
PEBR01_01256	Mearley2018_D qqddncsdri	100	56.18	46.06
PEBR01_01256	Mearley2018_U qqudncsdri	100	56.2	47.74
PEBR01_01256	Mearley2018_D_30%CC qqddccsdri	100	56.38	62.5
PEBR01_01256	Mearley2018_D_35%CC qqddccsdri	100	56.46	68.48
PEBR01_01256	Mearley2018_D_70%CC qqddccsdri	100	56.6	81.12
PEBR01_01256	Mearley2018_D qqddncsdri	75	56.11	41.45
PEBR01_01256	Mearley2018_D qqddncsdri	5	55.77	23.85
PEBR01_01256	Mearley2018_D qqddncsdri	50	56.07	38.31
PEBR01_01256	Mearley2018_D qqddncsdri	30	56.04	35.87
PEBR01_01256	Mearley2018_D qqddncsdri	25	56.02	34.78
PEBR01_01256	Mearley2018_D qqddncsdri	2	55.63	18.59
PEBR01_01256	Mearley2018_D qqddncsdri	20	56	33.56
PEBR01_01256	Mearley2018_U qqudncsdri	20	56	33.28

PEBR01_00599	Mearley2018_D qqddncsdri	1000	49.62	92.92
PEBR01_00599	Mearley2018_U qqudncsdri	1000	49.62	92.91
PEBR01_00599	Mearley2018_D_30%CC qqddccsdri	1000	49.88	120.84
PEBR01_00599	Mearley2018_D qqddncsdri	200	49.37	59.03
PEBR01_00599	Mearley2018_D qqddncsdri	10	48.82	29.68
PEBR01_00599	Mearley2018_D qqddncsdri	100	49.23	48.04
PEBR01_00599	Mearley2018_U qqudncsdri	100	49.26	49.75
PEBR01_00599	Mearley2018_D_30%CC qqddccsdri	100	49.43	65.04
PEBR01_00599	Mearley2018_D_35%CC qqddccsdri	100	49.48	70.81
PEBR01_00599	Mearley2018_D_70%CC qqddccsdri	100	49.57	84.45
PEBR01_00599	Mearley2018_D qqddncsdri	75	49.15	43.32
PEBR01_00599	Mearley2018_D qqddncsdri	5	48.71	24.77
PEBR01_00599	Mearley2018_D qqddncsdri	50	49.07	40.01
PEBR01_00599	Mearley2018_D qqddncsdri	30	49.01	37.35
PEBR01_00599	Mearley2018_D qqddncsdri	25	48.99	36.19
PEBR01_00599	Mearley2018_D qqddncsdri	2	48.56	19.28
PEBR01_00599	Mearley2018_D qqddncsdri	20	48.95	34.9
PEBR01_00599	Mearley2018_U qqudncsdri	20	48.95	34.62

PEBR01_01263	Mearley2018_D qqddncsdri	1000	56.86	89.35
PEBR01_01263	Mearley2018_U qqudncsdri	1000	56.86	89.35
PEBR01_01263	Mearley2018_D_30%CC qqddccsdri	1000	57.14	116.26
PEBR01_01263	Mearley2018_D qqddncsdri	200	56.51	56.75
PEBR01_01263	Mearley2018_D qqddncsdri	10	56.07	28.54
PEBR01_01263	Mearley2018_D qqddncsdri	100	56.38	46.06
PEBR01_01263	Mearley2018_U qqudncsdri	100	56.4	47.74
PEBR01_01263	Mearley2018_D_30%CC qqddccsdri	100	56.58	62.51
PEBR01_01263	Mearley2018_D_35%CC qqddccsdri	100	56.64	68.48
PEBR01_01263	Mearley2018_D_70%CC qqddccsdri	100	56.78	81.12
PEBR01_01263	Mearley2018_D qqddncsdri	75	56.32	41.45
PEBR01_01263	Mearley2018_D qqddncsdri	5	55.97	23.85
PEBR01_01263	Mearley2018_D qqddncsdri	50	56.28	38.31
PEBR01_01263	Mearley2018_D qqddncsdri	30	56.24	35.87
PEBR01_01263	Mearley2018_D qqddncsdri	25	56.23	34.78
PEBR01_01263	Mearley2018_D qqddncsdri	2	55.85	18.59
PEBR01_01263	Mearley2018_D qqddncsdri	20	56.21	33.56
PEBR01_01263	Mearley2018_U qqudncsdri	20	56.2	33.28

PEBR01_01273	Mearley2018_D qqddncsdri	1000	57.21	89.35
PEBR01_01273	Mearley2018_U qqudncsdri	1000	57.21	89.35
PEBR01_01273	Mearley2018_D_30%CC qqddccsdri	1000	57.56	116.26
PEBR01_01273	Mearley2018_D qqddncsdri	200	56.75	56.75
PEBR01_01273	Mearley2018_D qqddncsdri	10	56.21	28.54
PEBR01_01273	Mearley2018_D qqddncsdri	100	56.57	46.06
PEBR01_01273	Mearley2018_U qqudncsdri	100	56.6	47.74
PEBR01_01273	Mearley2018_D_30%CC qqddccsdri	100	56.84	62.51
PEBR01_01273	Mearley2018_D_35%CC qqddccsdri	100	56.92	68.48
PEBR01_01273	Mearley2018_D_70%CC qqddccsdri	100	57.1	81.12
PEBR01_01273	Mearley2018_D qqddncsdri	75	56.49	41.45
PEBR01_01273	Mearley2018_D qqddncsdri	5	56.09	23.85
PEBR01_01273	Mearley2018_D qqddncsdri	50	56.44	38.31
PEBR01_01273	Mearley2018_D qqddncsdri	30	56.39	35.87
PEBR01_01273	Mearley2018_D qqddncsdri	25	56.37	34.78
PEBR01_01273	Mearley2018_D qqddncsdri	2	55.94	18.59
PEBR01_01273	Mearley2018_D qqddncsdri	20	56.35	33.56
PEBR01_01273	Mearley2018_U qqudncsdri	20	56.34	33.28

PEBR01_01028	Mearley2018_D qqddncsdri	1000	54.16	91.49
PEBR01_01028	Mearley2018_U qqudncsdri	1000	54.16	91.49
PEBR01_01028	Mearley2018_D_30%CC qqddccsdri	1000	54.38	119.01
PEBR01_01028	Mearley2018_D qqddncsdri	200	53.62	58.16
PEBR01_01028	Mearley2018_D qqddncsdri	10	53.13	29.23
PEBR01_01028	Mearley2018_D qqddncsdri	100	53.45	47.27
PEBR01_01028	Mearley2018_U qqudncsdri	100	53.48	48.94
PEBR01_01028	Mearley2018_D_30%CC qqddccsdri	100	53.71	64.03
PEBR01_01028	Mearley2018_D_35%CC qqddccsdri	100	53.79	69.97
PEBR01_01028	Mearley2018_D_70%CC qqddccsdri	100	54.08	83.11
PEBR01_01028	Mearley2018_D qqddncsdri	75	53.37	42.58
PEBR01_01028	Mearley2018_D qqddncsdri	5	53.04	24.4
PEBR01_01028	Mearley2018_D qqddncsdri	50	53.31	39.33
PEBR01_01028	Mearley2018_D qqddncsdri	30	53.27	36.76
PEBR01_01028	Mearley2018_D qqddncsdri	25	53.25	35.62
PEBR01_01028	Mearley2018_D qqddncsdri	2	52.93	19
PEBR01_01028	Mearley2018_D qqddncsdri	20	53.23	34.36
PEBR01_01028	Mearley2018_U qqudncsdri	20	53.22	34.09

PEBR01_00972	Mearley2018_D qqddncsdri	1000	53.45	91.49
PEBR01_00972	Mearley2018_U qqudncsdri	1000	53.45	91.48
PEBR01_00972	Mearley2018_D_30%CC qqddccsdri	1000	53.7	119
PEBR01_00972	Mearley2018_D qqddncsdri	200	52.82	58.16
PEBR01_00972	Mearley2018_D qqddncsdri	10	52.36	29.23
PEBR01_00972	Mearley2018_D qqddncsdri	100	52.66	47.26
PEBR01_00972	Mearley2018_U qqudncsdri	100	52.68	48.93
PEBR01_00972	Mearley2018_D_30%CC qqddccsdri	100	52.91	64.03
PEBR01_00972	Mearley2018_D_35%CC qqddccsdri	100	53.01	69.96
PEBR01_00972	Mearley2018_D_70%CC qqddccsdri	100	53.27	83.11
PEBR01_00972	Mearley2018_D qqddncsdri	75	52.58	42.58
PEBR01_00972	Mearley2018_D qqddncsdri	5	52.27	24.4
PEBR01_00972	Mearley2018_D qqddncsdri	50	52.53	39.33
PEBR01_00972	Mearley2018_D qqddncsdri	30	52.49	36.76
PEBR01_00972	Mearley2018_D qqddncsdri	25	52.47	35.62
PEBR01_00972	Mearley2018_D qqddncsdri	2	52.14	19
PEBR01_00972	Mearley2018_D qqddncsdri	20	52.45	34.36
PEBR01_00972	Mearley2018_U qqudncsdri	20	52.45	34.09

PEBR01_01225	Mearley2018_D qqddncsdri	1000	56.3	89.35
PEBR01_01225	Mearley2018_U qqudncsdri	1000	56.3	89.35
PEBR01_01225	Mearley2018_D_30%CC qqddccsdri	1000	56.59	116.26
PEBR01_01225	Mearley2018_D qqddncsdri	200	55.88	56.74
PEBR01_01225	Mearley2018_D qqddncsdri	10	55.44	28.54
PEBR01_01225	Mearley2018_D qqddncsdri	100	55.73	46.06
PEBR01_01225	Mearley2018_U qqudncsdri	100	55.76	47.74
PEBR01_01225	Mearley2018_D_30%CC qqddccsdri	100	55.96	62.5
PEBR01_01225	Mearley2018_D_35%CC qqddccsdri	100	56.04	68.47
PEBR01_01225	Mearley2018_D_70%CC qqddccsdri	100	56.2	81.12
PEBR01_01225	Mearley2018_D qqddncsdri	75	55.66	41.45
PEBR01_01225	Mearley2018_D qqddncsdri	5	55.34	23.85
PEBR01_01225	Mearley2018_D qqddncsdri	50	55.62	38.31
PEBR01_01225	Mearley2018_D qqddncsdri	30	55.58	35.87
PEBR01_01225	Mearley2018_D qqddncsdri	25	55.56	34.78
PEBR01_01225	Mearley2018_D qqddncsdri	2	55.18	18.59
PEBR01_01225	Mearley2018_D qqddncsdri	20	55.54	33.56
PEBR01_01225	Mearley2018_U qqudncsdri	20	55.53	33.28

Node Point Location Map: Henthorn Road, Clitheroe, BB7 2PL

Produced: 02 July 2019

Our Ref: CL131637

NGR: 372,995 440,577

Key

• Modelled Node Point

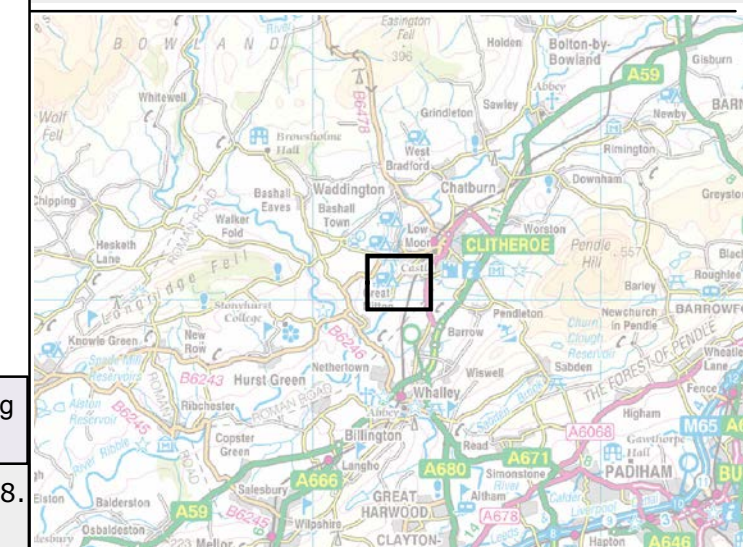
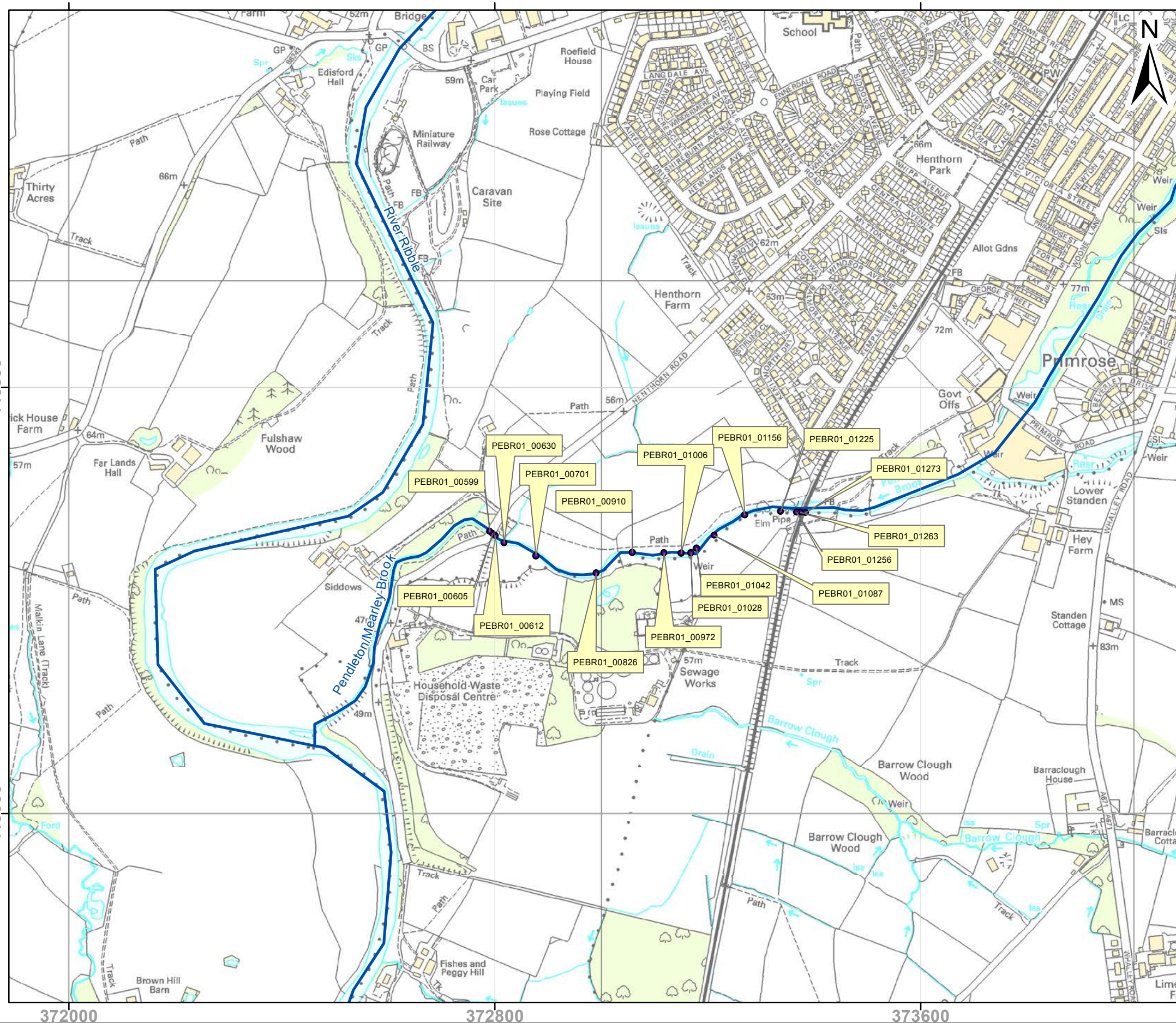
~ Main River

Flood Zone 3 shows the area that could be affected by flooding:

- from the sea with a 0.5% or greater chance of happening each year
- or from a river with a 1.0% 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 0.1% chance of occurring each year.

ABDs (Areas Benefiting from Defences) show the area benefiting from defences during a 0.5% tidal, or 1.0% fluvial flood event.



Modelled water levels with climate change using +20% flow allowances are not suitable for the majority of planning purposes. New climate change allowances can be checked on the following website; www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances.

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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

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Appendix 5 – Borehole Logs

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Name and Number of Shaft or Borehole :

SD 73NW/2

National Grid Reference

Surface leure c. 45-72m.

c. 7238 3940

[illegible]

Name and Number of Shaft or Borehole :

Surface level c. 39.47

SD 73 NW/3

National Grid Reference

c. 7238 3940

Geological Classification	Description of Strata	Thickness metres	Depth metres
	Brought Forward		
	River bed gravel	0.91	0.91
	Sandy brown clay & gravel	3.81	4.72
	Slr sandstone	0.61	5.33
	Red & blue marl and stones.	3.81	9.14
British Geological Survey	British Geological Survey	British Geological Survey	British Geological Survey
British Geological Survey	British Geological Survey	British Geological Survey	British Geological Survey
British Geological Survey	British Geological Survey	British Geological Survey	British Geological Survey
British Geological Survey	British Geological Survey	British Geological Survey	British Geological Survey
British Geological Survey	British Geological Survey	British Geological Survey	British Geological Survey
British Geological Survey	British Geological Survey	British Geological Survey	British Geological Survey

Appendix 6 – Causeway Flow Calculations

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Design Settings

Rainfall Methodology	FEH-13	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	0.750	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	Cover Level (m)	Diameter (mm)	Depth (m)
1	0.560	100.000	1500	1.800

Simulation Settings

Rainfall Methodology	FEH-13	Skip Steady State	x	1 year (l/s)	11.7
Summer CV	0.750	Drain Down Time (mins)	240	30 year (l/s)	22.9
Winter CV	0.840	Additional Storage (m³/ha)	20.0	100 year (l/s)	28.0
Analysis Speed	Normal	Check Discharge Rate(s)	✓	Check Discharge Volume	x

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440
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Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
100	40	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 years	1.70
Greenfield Method	FEH	Growth Factor 100 years	2.08
Positively Drained Area (ha)	1.020	Betterment (%)	0
SAAR (mm)	1178	QMed	12.5
Host	14	QBar	13.5
BFIHost	0.371	Q 1 year (l/s)	11.7
Region	10	Q 30 year (l/s)	22.9
QBar/QMed conversion factor	1.075	Q 100 year (l/s)	28.0
Growth Factor 1 year	0.87		

Node 1 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	98.200	Product Number	CTL-SHE-0159-1350-1500-1350
Design Depth (m)	1.500	Min Outlet Diameter (m)	0.225
Design Flow (l/s)	13.5	Min Node Diameter (mm)	1500

Node 1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	98.200
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	198

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	180.0	0.0	1.500	180.0	0.0	1.501	0.0	0.0

Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	1	84	98.416	0.216	27.0	40.6237	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)	Discharge Vol (m³)
120 minute winter	1	Hydro-Brake®	12.4	74.9

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	1	118	99.695	1.495	123.2	281.1166	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)	Discharge Vol (m³)
120 minute winter	1	Hydro-Brake®	13.5	251.1

Design Settings

Rainfall Methodology	FEH-13	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	0.750	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	Cover Level (m)	Diameter (mm)	Depth (m)
1	0.900	100.000	1500	1.800

Simulation Settings

Rainfall Methodology	FEH-13	Skip Steady State	x	1 year (l/s)	18.8
Summer CV	0.750	Drain Down Time (mins)	240	30 year (l/s)	36.8
Winter CV	0.840	Additional Storage (m³/ha)	20.0	100 year (l/s)	45.1
Analysis Speed	Normal	Check Discharge Rate(s)	✓	Check Discharge Volume	x

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440
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Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
100	40	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 years	1.70
Greenfield Method	FEH	Growth Factor 100 years	2.08
Positively Drained Area (ha)	1.640	Betterment (%)	0
SAAR (mm)	1178	QMed	20.2
Host	15	QBar	21.7
BFIHost	0.371	Q 1 year (l/s)	18.8
Region	10	Q 30 year (l/s)	36.8
QBar/QMed conversion factor	1.075	Q 100 year (l/s)	45.1
Growth Factor 1 year	0.87		

Node 1 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	98.200	Product Number	CTL-SHE-0199-2170-1500-2170
Design Depth (m)	1.500	Min Outlet Diameter (m)	0.225
Design Flow (l/s)	21.7	Min Node Diameter (mm)	1500

Node 1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	98.200
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	196

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	293.0	0.0	1.500	293.0	0.0	1.501	0.0	0.0

Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	1	120	98.426	0.226	34.9	68.8761	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)	Discharge Vol (m³)
180 minute winter	1	Hydro-Brake®	20.1	144.4

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	1	118	99.691	1.491	198.1	454.3619	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)	Discharge Vol (m³)
120 minute winter	1	Hydro-Brake®	21.7	403.7

Design Settings

Rainfall Methodology	FEH-13	Minimum Velocity (m/s)	1.00
Return Period (years)	2	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.200
CV	0.750	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	✓
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	Cover Level (m)	Diameter (mm)	Depth (m)
1	0.740	100.000	1500	1.800

Simulation Settings

Rainfall Methodology	FEH-13	Skip Steady State	x	1 year (l/s)	15.5
Summer CV	0.750	Drain Down Time (mins)	240	30 year (l/s)	30.3
Winter CV	0.840	Additional Storage (m³/ha)	20.0	100 year (l/s)	37.1
Analysis Speed	Normal	Check Discharge Rate(s)	✓	Check Discharge Volume	x

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440
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Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
100	40	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 years	1.70
Greenfield Method	FEH	Growth Factor 100 years	2.08
Positively Drained Area (ha)	1.350	Betterment (%)	0
SAAR (mm)	1178	QMed	16.6
Host	14	QBar	17.8
BFIHost	0.371	Q 1 year (l/s)	15.5
Region	10	Q 30 year (l/s)	30.3
QBar/QMed conversion factor	1.075	Q 100 year (l/s)	37.1
Growth Factor 1 year	0.87		

Node 1 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	98.200	Product Number	CTL-SHE-0182-1780-1500-1780
Design Depth (m)	1.500	Min Outlet Diameter (m)	0.225
Design Flow (l/s)	17.8	Min Node Diameter (mm)	1500

Node 1 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	98.200
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	196

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	240.0	0.0	1.500	240.0	0.0	1.501	0.0	0.0

Results for 2 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	1	84	98.421	0.221	35.7	55.3698	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)	Discharge Vol (m³)
120 minute winter	1	Hydro-Brake®	16.4	98.0

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	1	118	99.691	1.491	162.9	372.8474	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	Outflow (l/s)	Discharge Vol (m³)
120 minute winter	1	Hydro-Brake®	17.8	331.5

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