FLOODPLAN LIMITED

Project Title: 00294 Abbotsford

Product: Level 3 Flood Risk Assessment

Date: 20 July 2023

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Web: www.floodplanreports.co.uk

Email: Reports@floodplanreports.co.uk

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This document has been created for the purpose of a Flood Risk Assessment only and should only be used by Mr N. Pagett for its intended purpose. FloodPlan Limited accepts no responsibility or liability for misuse of the document.

Report Revision Log

Report Reference	Date Issued	Issued To	Notes
00294 Abbotsford	20/07/2023	Client	

1. INTRODUCTION

1.1. PURPOSE OF THE REPORT

FloodPlan have been commissioned on behalf of Mr N. Pagett to produce a Flood Risk Assessment for the Abbotsford, The Bury, Thorverton, Exeter, EX5 5NT. This assessment has been conducted with the understanding that the document will be used as part of a planning permission proposal by Mr N. Pagett.

1.2. LOCATION OF SUBJECT SITE

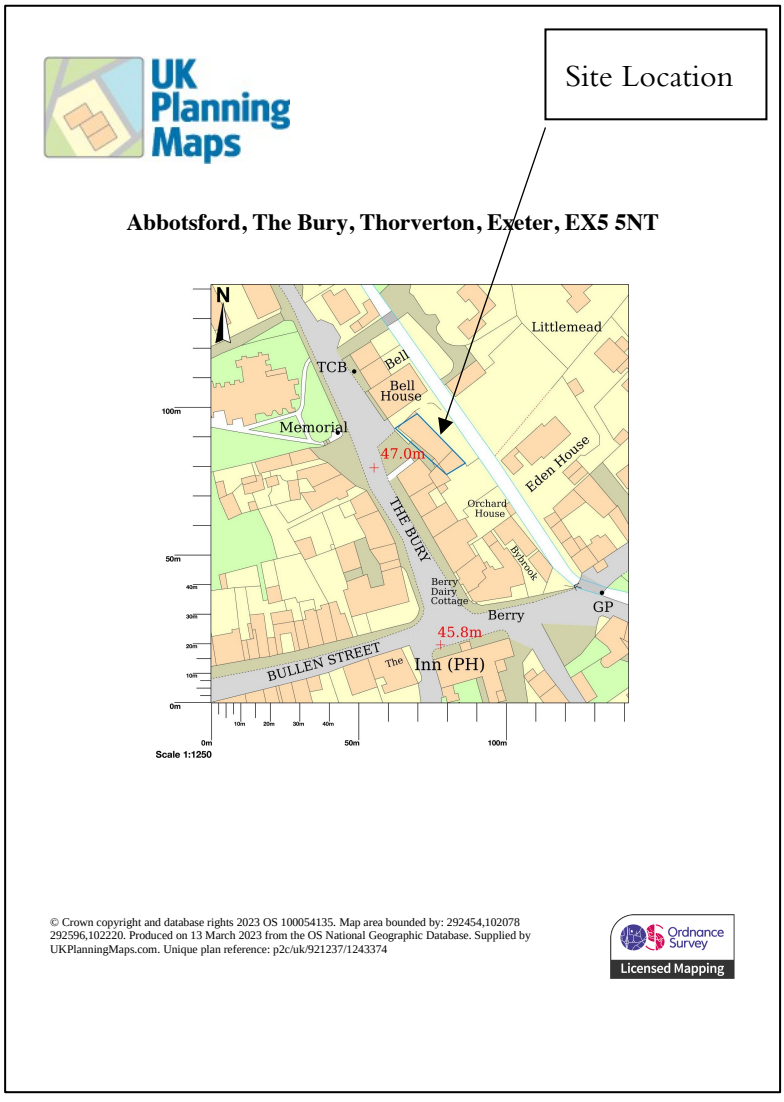


Figure 1: Site Location

1.3. SITE PROPOSALS

The development proposes the construction of a rear decking area (4m x 7m) and the construction of a small shed (6ft x 8ft). The land is currently used as an amenity area for the existing residential dwelling.

2. INTRODUCTION TO NPPF

2.1. INTRODUCTION TO NPPF

The National Planning Policy Framework (NPPF) document provides guidance to local planning authorities to ensure the effective implementation of the planning policy. The policy seeks to direct development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere. For these purposes:

- "areas at risk of flooding" means land within Flood Zones 2 and 3; or land within Flood Zone 1 which has critical drainage problems, and which has been notified to the local planning authority by the Environment Agency.
- "flood risk" means risk from all sources of flooding - including from rivers and the sea, directly from rainfall on the ground surface and rising groundwater, overwhelmed sewers, and drainage systems, and from reservoirs, canals and lakes and other artificial sources.

Flood risk (from river and sea) are categorised inro one of the below:

2.2. FLOOD RISK CLASSIFICATIONS

Flood Zone	Probability of flooding
Zone 1	Low probability
Zone 2	Medium probability
Zone 3a	High probability
Zone 3b	Functional Floodplain

2.3. FLOOD RISK VULNERABILITY CLASSIFICATION

NPPF categorises land by vulnerability. A summary of categories can be seen below:

Vulnerability Class	Infrastructure
Essential Infrastructure	Power stations, water treatment works, wind turbines etc.

Highly vulnerable	Police stations, basement dwellings, caravans, mobile homes etc
More vulnerable	Hospitals, residential buildings, landfill sites, drinking establishments etc
Less Vulnerable	Emergency services stations, shops and building that offer professional services etc
Water compatible development	Pumping stations, docks, marinas etc

2.4. SUITABLE DEVELOPMENT MATRIX

The below table outlines the suitable development type for the flood zone classification assigned by the Environment Agency flood maps.

Flood risk vulnerability classification	Essential infrastructure	Water compatible	Highly vulnerable	More vulnerable	Less vulnerable
Zone 1					
Zone 2			Exception Test Required		
Zone 3a	Exception Test Required			Exception Test Required	
Zone 3b Functional floodplain	Exception Test Required				

Figure 2: Suitable Development Matrix

Key: Blue Development is appropriate; Red Development should not be permitted; Green Development is appropriate with the passing of an Exception Test.

3. NPPF SITE ASSESSMENT

3.1. FLOOD ZONE CLASSIFICATION

As per Figure 3, the site is within flood zone 1 and 3.

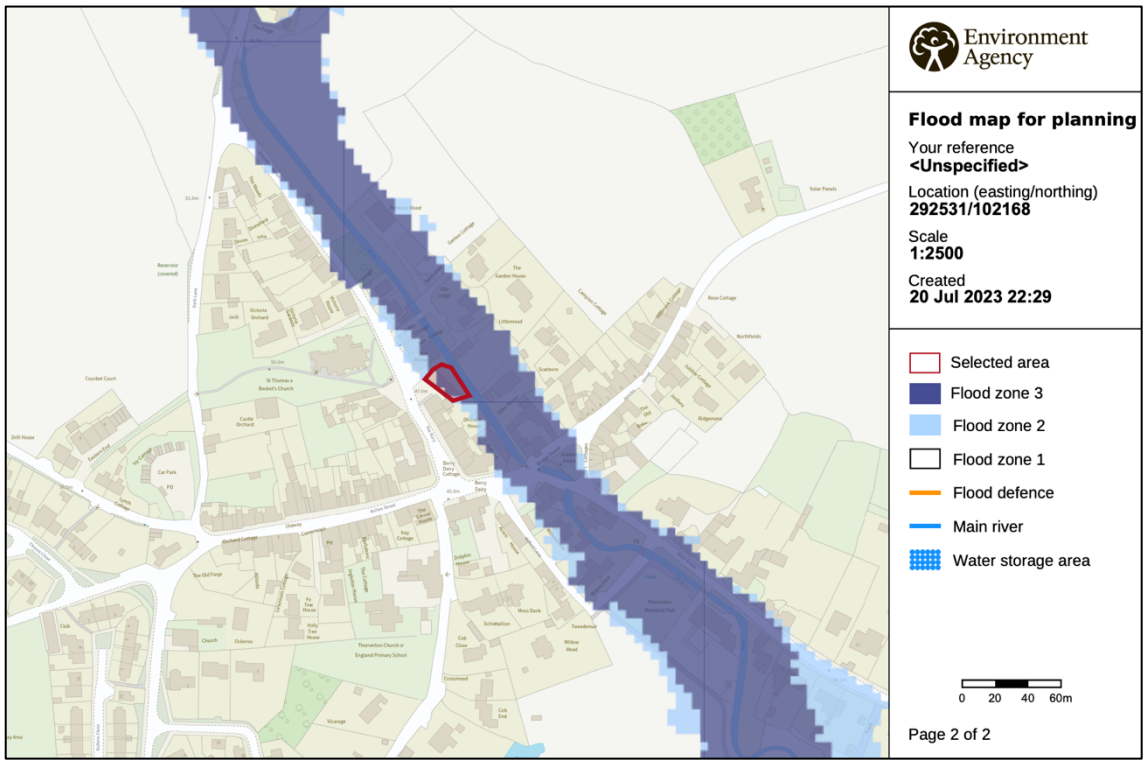


Figure 3: Flood Zone

3.2. LAND VULNERABILITY CLASSIFICATION

The existing land is used as an amenity area for the existing residential use dwelling. The land is therefore designated as 'less vulnerable' by NPPF. The proposed development will be designated 'more vulnerable' due to its residential use. The development therefore increases the vulnerability classification of the land.

3.3. SITE SUITABILITY (NPPF)

'More vulnerable' development is suitable for flood zone 1 and 3, as per Figure 2.

4. SITE FLOOD RISK

4.1. THIRD PARTY FLOOD RISK DATA SUMMERY

A 'Groundsure' flood report has been acquired for advising this assessment. The full report can be found in Appendix B. The main findings are summarised below:

Type of Risk	Assessment of Risk
Overall Flood Risk	High
Rivers and the Sea	High
Surface Water	Significant
Groundwater	High
Historic Flood	Not Identified
Flood Defences	No
FloodScoreTM – insurance rating	High

4.2. SURFACE WATER FLOODING

The Environment Agency surface water flood map Figure 4, shows the site to be at a high risk from surface water flooding.

Figure 4: EA Surface Water Flood Map

Where the dark blue shaded area denotes high risk of surface water flooding; the light blue denotes low risk with white areas having very low risk of surface water flooding. The risk classification is comparable to the 'Groundsure' flood report.

4.3. TIDAL AND FLUVIAL FLOODING

The site is classified as having a medium risk of flooding from tidal or river sources by the EA mapping.

Figure 5: EA Tidal and Fluvial Flood Map

Where the dark blue shaded area denotes high risk of tidal and pluvial flooding; the light blue denotes low risk with the lightest blue areas having a very low risk of flooding.

LiDAR downloaded on the 20th of July 2023 identifies the site to have a ground level of 44.8mOD – 43.5mOD.

4.4. FLOOD MODELLING DATA

As part of the commission, FloodPlan obtained Environment Agency flood data. The Environment Agency supplied flood modelling outputs derived from the 'Devon Hydrology Strategy, 2012' (JFLOW). Flood depth information has been calculated as a by-product of the study and come with the disclaimer that they should be used for flood outline information only.

4.5. GROUNDWATER FLOODING

The 'Groundsure' flood report indicates that the site has a high risk of groundwater flooding.

4.6. RESERVOIR FLOODING

The risk of reservoir flooding is considered unlikely.

4.7. HISTORIC FLOODING

The 'Groundsure' flood report failed to identify any historic flood events. The EA product 4 information also fails to demonstrate any historic flood events.

5. FURTHER SITE ASSESSMENT

5.1. SITE ACCESS AND EGRESS ROUTES

The site is at risk from fluvial / pluvial sources. Consideration should be given to adopting a flood evacuation plan

5.2. FLOOD COMPENSATION

Flood compensation should be considered for any theoretically lost flood volume.

5.3. FLOOD WARNING AREAS

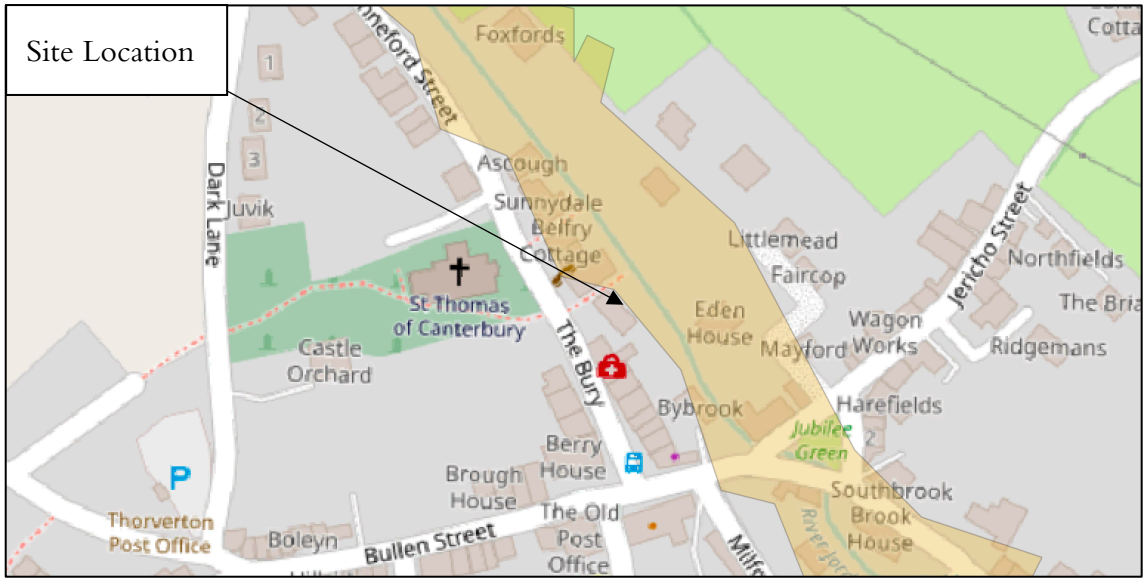


Figure 6: Flood Warning Areas

The site may benefit from flood warnings.

5.4. AWARENESS OF FLOOD RISK

The developer should be aware that the site is not immune from flooding. It is recommended that all residents take the opportunity to develop emergency and non-emergency plans.

5.5. SEQUENTIAL TEST

The development proposes the construction of a rear decking area (4m x 7m) and the construction of a small shed (6ft x 8ft). The land is currently used as an amenity area for the existing residential dwelling.. The nature of the proposals means the development cannot happen elsewhere. The land is already under the ownership of the applicant and would be unviable to develop elsewhere. It is for these reasons the report finds scope for the development to have an acceptable sequential test.

5.6. EXCEPTION TEST

The NPPF Technical Guidance Document dictates that the exception test should be applied where a 'more vulnerable' type of development is located in flood risk zone 3a and is judged to have passed the sequential test.

Sites which meet the above criteria must pass the following tests. Sites must pass all elements to be appropriate for allocation.

1. "How can wider sustainability benefits to the community that outweigh flood risk be demonstrated."

The development will renew housing standards and upkeep the standard of the local area. For a community to prosper, housing must be maintained. A benefit of maintaining the existing property will enforce the area and properties longevity. The construction would also employ local tradespeople.

2. "What needs to be considered to demonstrate that development will be safe for its lifetime."

This report has identified a flood evacuation plan should be considered to identify flood protocols.

"What is considered to be the lifetime of development in terms of flood risk and coastal change."

It is reasonable to suggest that the development lifetime is 100 years, with regular maintenance. Therefore, in terms of flood risk, any surface water network design for the property must follow the SUDS hierarchy with a design to cope with events up to 100-year events plus 40% climate change allowance. There should be no displacement of water.

6. FINDINGS AND RECOMMENDATIONS

6.1. FINDINGS

The development proposes the construction of a rear decking area (4m x 7m) and the construction of a small shed (6ft x 8ft). The land is currently used as an amenity area for the existing residential dwelling. NPPF categorises buildings used for residential purposes as 'more vulnerable'. More vulnerable developments may be suitable for flood zone 1 and 3.

6.2. RECOMMENDATIONS

This report recommends the following be considered to lower the risk and/or consequences that flooding may cause to the proposed development:

- Property level flood protection and resilience should be considered
- A bespoke evacuation plan should be considered.
- No third parties are negatively impacted by the proposed development
- Finished floor levels set at a flood free level, where appropriate

List of Appendices

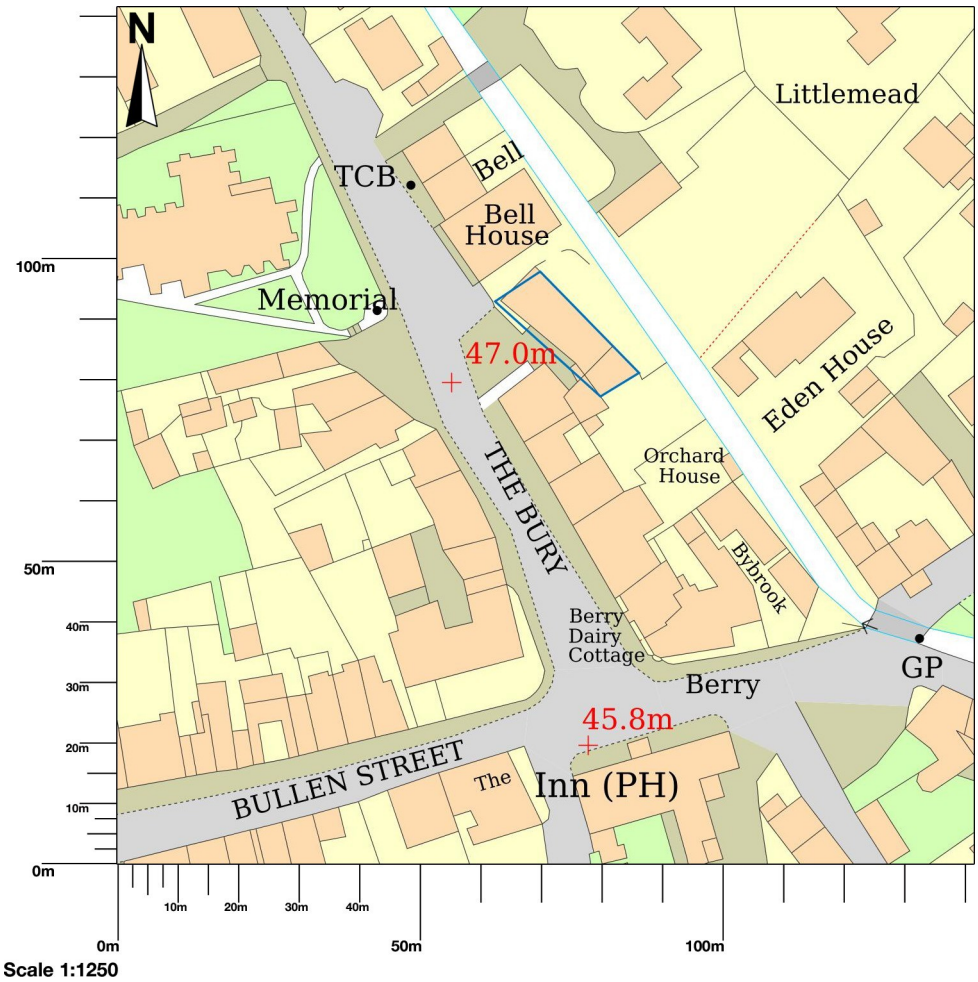
Appendix A: Development Plan

Appendix B: Groundsure Flood Report

Appendix C: Environment Agency Flood Modelling Data

Appendix A: Development Plan

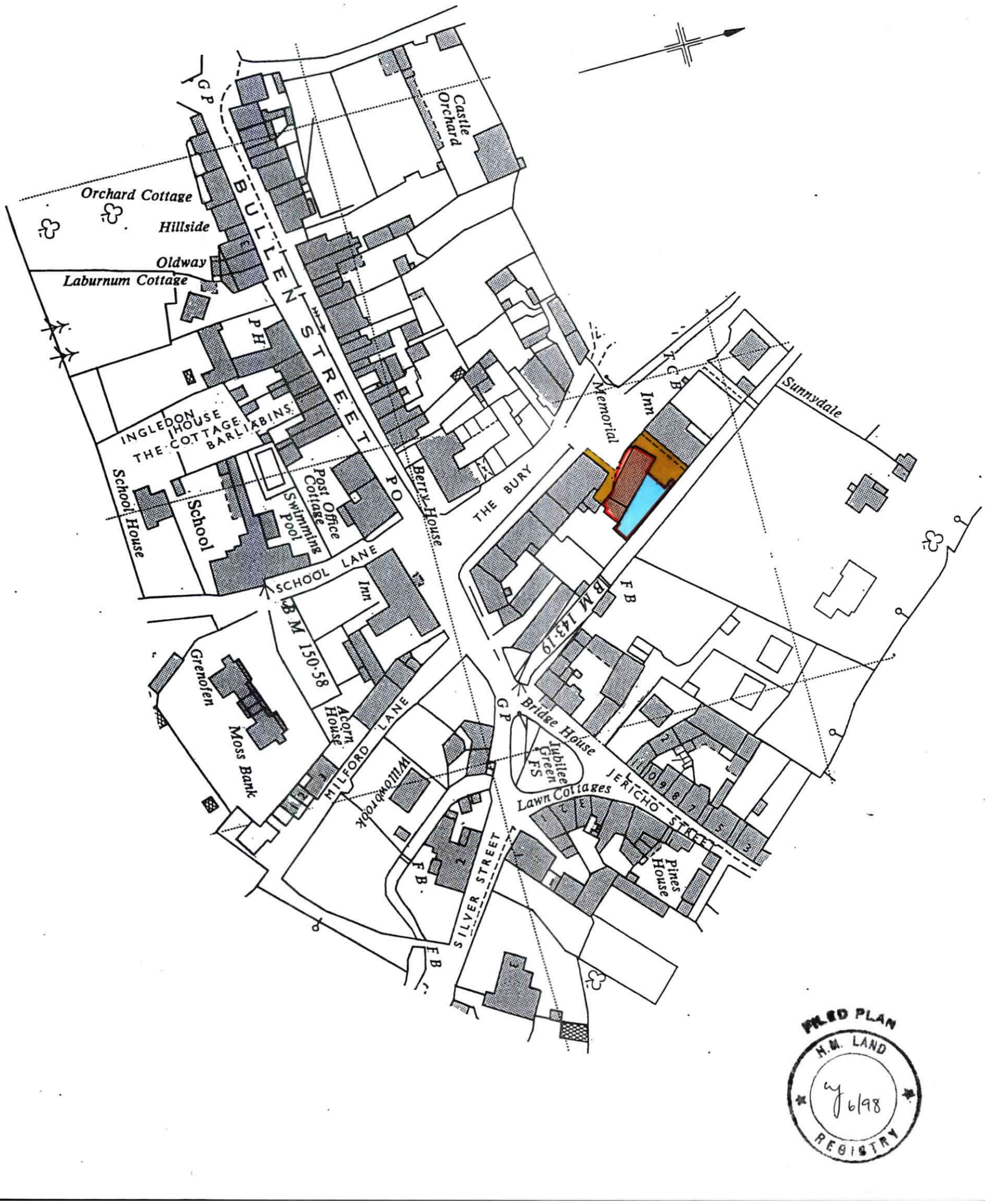
Abbotsford, The Bury, Thorverton, Exeter, EX5 5NT



H.M. LAND REGISTRY

		TITLE NUMBER	
		DN 392388	
ORDNANCE SURVEY PLAN REFERENCE	SS 9202	SECTION B	Scale 1/1250 Enlarged from 1/2500
COUNTY DEVON	DISTRICT MID DEVON		© Crown copyright 1978

THORVERTON



Appendix B: Groundsure Flood Report

Groundsure
LOCATION INTELLIGENCE

Flood

Abbotsford The Bury, Exeter, Thorverton, EX5 5NT

Overall Flood Risk

HIGH

Groundsure Flood complies with relevant Law Society practice notes on flood risk in property transactions.

Site plan

Search Results

Rivers and the Sea
High
page 3 >

Surface Water
Significant
page 4 >

Groundwater
High
page 5 >

Historic Flood
Not identified

Flood Defences
No

FloodScore™ insurance rating
High
page 7 >

Full assessments for other environmental risks are available in additional Groundsure searches including the Groundsure Avista 7 in 1 report. Contact Groundsure or your search provider for further details.

Overview of findings and recommendations

To save you time when assessing the report, we only provide maps and data tables of features within the search radius that we have identified to be of note. These relate to environmental risks that may have liability implications, affect insurance premiums, property values and/or a lender's willingness to lend.

You can view the fully comprehensive library of information we have searched on **page 6 >**.

Flooding

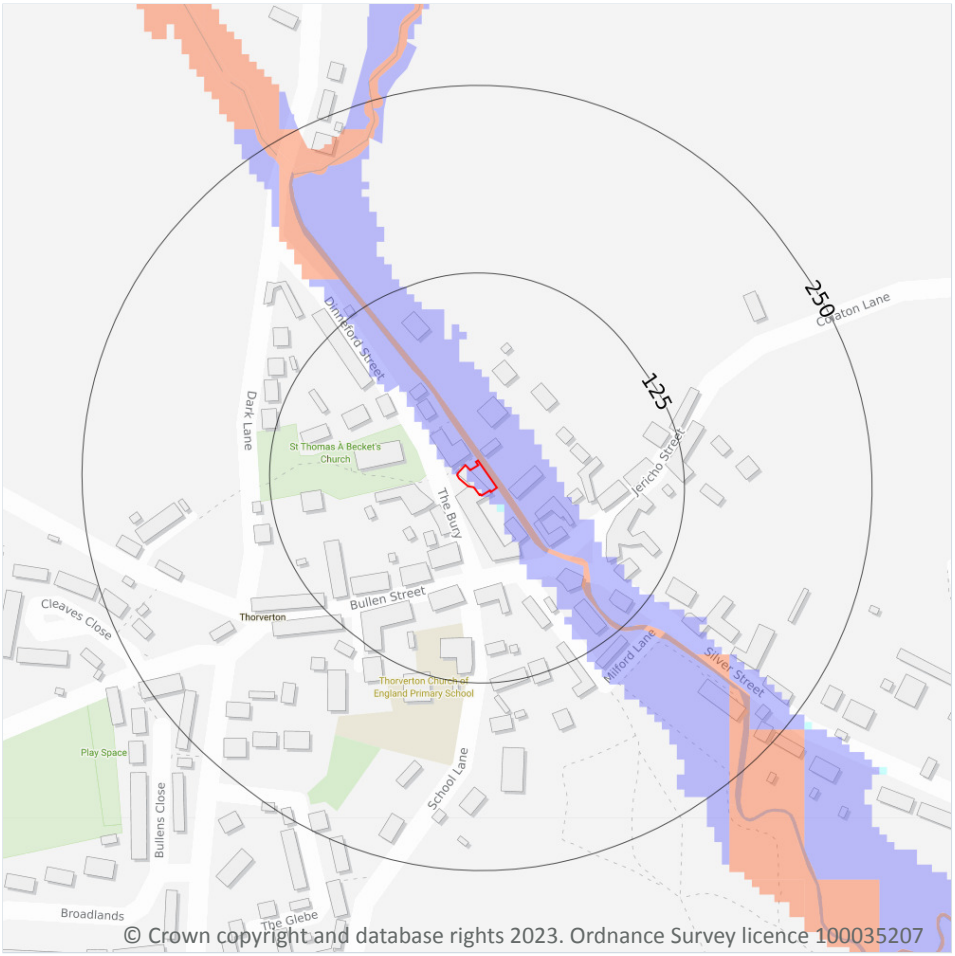
Flooding

An elevated level of flood risk has been identified at the property.

Next steps for consideration:

- check to see if the property is eligible for the Flood Re scheme, which enables many properties at risk of flooding to be insured at reasonable rates: http://www.floodre.co.uk/homeowner/about-us/ ↗
- investigate the insurance on offer for the property to ensure any implications on premiums are fully understood before completion
- a risk of groundwater flooding has been identified at the site. This will be more of an issue for properties with a basement or other section below ground. Further advice on groundwater flooding has been produced by the Environment Agency and the Local Government Association and can be found at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/297421/flho0911bugi-e-e.pdf ↗
- the assessment in this report is based on the highest flood risk found within the site boundary. The detailed maps within the flood section clearly highlight which parts of the site are affected by flooding, allowing you to visualise whether flood risk affects the buildings or the associated land. If you would prefer an assessment that provides separate flood ratings for the main dwelling and the associated land, Groundsure can provide this for a fee of £35 plus VAT
- if the property has recently been constructed, the flood risk assessment contained within this report will not take into account any measures put in place by the developer to deal with flooding. You should seek further information from the developer on flood risk mitigation for the site
- investigate the various forms of flood resistance and resilience measures that will help protect your property in the event of a flood

Flooding / Risk of flooding from rivers and the sea



Site Outline

Search buffers in metres (m)

River and coastal flooding:

- High
- Medium
- Low
- Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Proposed Flood Defence Scheme
- Flood Defences

Risk of flooding from rivers and the sea

The property has a High chance of flooding in any given year, according to Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) data. This could cause problems with insuring the property against flood risk. However, if built before 2009, it may be eligible for insurance assistance from the Flood Re scheme: www.floodre.co.uk/ ↗

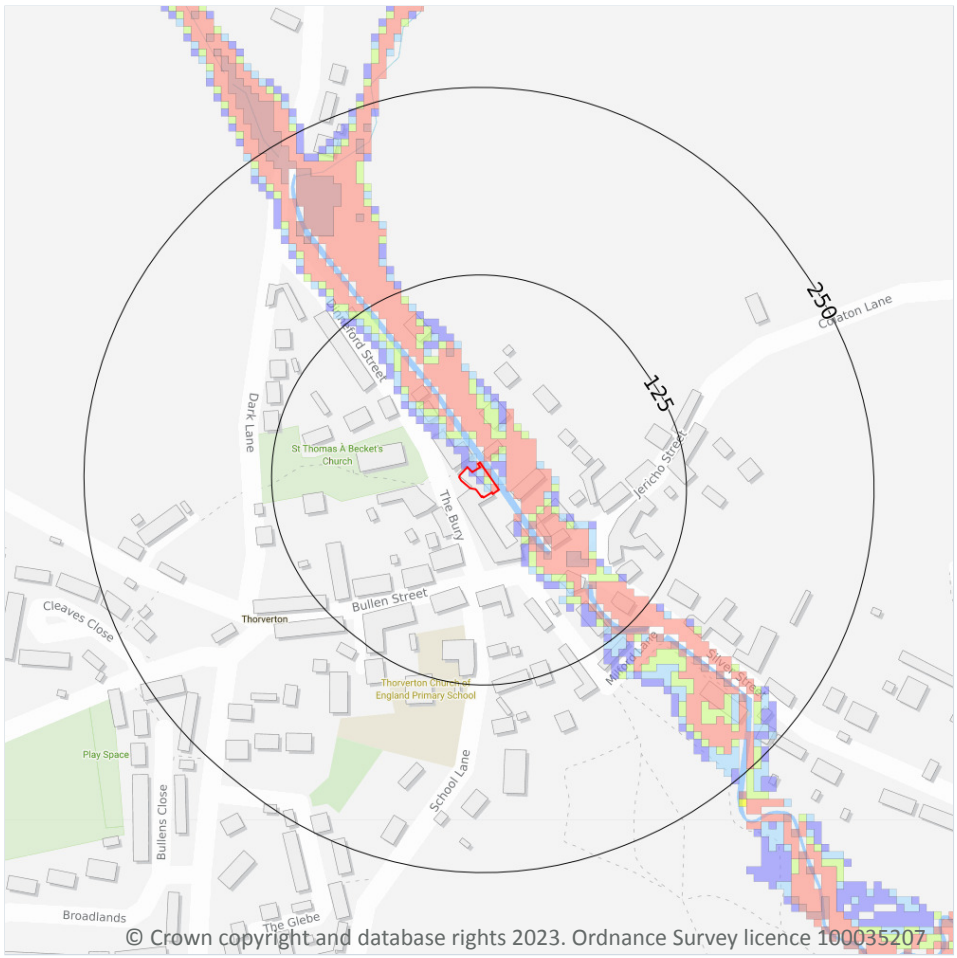
RoFRaS/FRAW assesses flood risk from rivers and the sea in England and Wales, using local data and expertise. It shows the chance of flooding from rivers or the sea, taking account of flood defences and the condition those defences are in. The model uses local water level and flood defence data to model flood risk. See page **page 7 >** for explanation of the levels of flood risk.

Please see **page 2 >** for further advice.

This data is sourced from the Environment Agency and Natural Resources Wales.

Contact us with any questions at:
info@groundsure.com ↗
01273 257 755

Flooding / Surface water flood risk



Site Outline

Search buffers in metres (m)

Surface water flood risk

- Highly significant
- Significant
- High
- Moderate to high
- Moderate
- Low to moderate
- Low

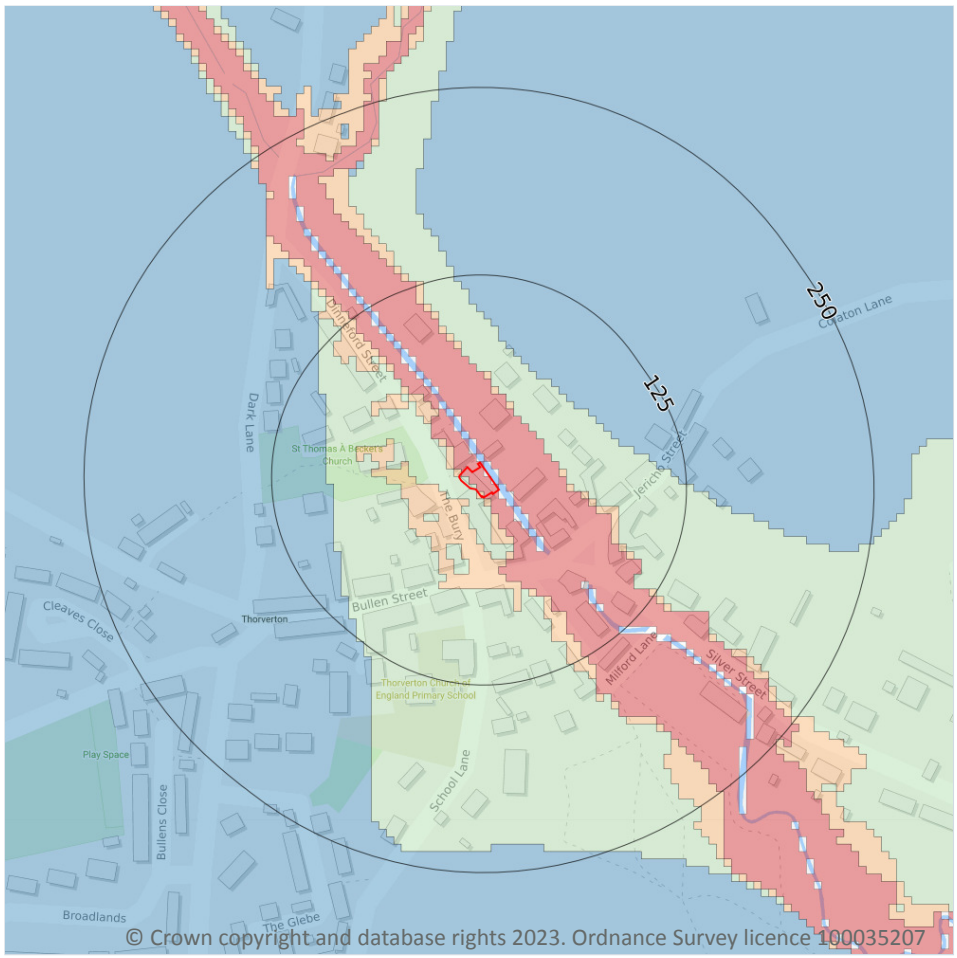
Surface water flood risk

The property is likely to be prone to flooding following extreme rainfall, which may have an impact on insuring the property against flood risk. However, if built before 2009, it may be eligible for insurance assistance from the Flood Re scheme: www.floodre.co.uk/ ↗

The area in which the property is located has been assessed to be at a Significant risk of surface water flooding. This area is considered to have a 1 in 30 probability of surface water flooding due to rainfall in a given year to a depth of between 0.3m and 1.0m. However, as is the case with probability statistics and predictions, this information should be used as a guideline only. The area may flood several years in a row, or not at all for many years. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

These risk calculations are based on Ambiental Risk Analytics maps.

Flooding / Groundwater flooding



Site Outline

Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

Ambiental data indicates that the property is in an area with a high risk of groundwater flooding. Should a 1 in 100-year groundwater flood occur, groundwater levels could rise above ground level to depth of over 25cm. Basement areas may become inundated.

Some of the responses contained in this report are based on data and information provided by the Natural Environment Research Council (NERC) or its component body British Geological Survey (BGS). Your use of any information contained in this report which is derived from or based upon such data and information is at your own risk. Neither NERC nor BGS gives any warranty, condition or representation as to the quality, accuracy or completeness of such information and all liability (including for negligence) arising from its use is excluded to the fullest extent permitted by law. Your use of the data/report/assessment constitutes your agreement to bring no claim against NERC or BGS in connection with it.

Datasets searched

This is a full list of the data searched in this report. If we have found results of note we will state "Identified". If no results of note are found, we will state "Not identified". Our intelligent filtering will hide "Not identified" sections to speed up your workflow.

Flooding	
Risk of flooding from rivers and the sea	**Identified**
Flood storage areas: part of floodplain	Not identified
Historical flood areas	Not identified
Areas benefiting from flood defences	Not identified
Flood defences	Not identified
Proposed flood defences	Not identified
Surface water flood risk	**Identified**
Groundwater flooding	**Identified**

Flood information

The Flood Risk Assessment section is based on datasets covering a variety of different flooding types. No inspection of the property or of the surrounding area has been undertaken by Groundsure or the data providers. The modelling of flood hazards is extremely complex and in creating a national dataset certain assumptions have been made and all such datasets will have limitations. These datasets should be used to give an indication of relative flood risk rather than a definitive answer. Local actions and minor variations, such as blocked drains or streams etc. can greatly alter the effect of flooding. A low or negligible modelled flood risk does not guarantee that flooding will not occur. Nor will a high risk mean that flooding definitely will occur. Groundsure's overall flood risk assessment takes account of the cumulative risk of river and coastal data, historic flood events and areas benefiting from flood defences provided by the Environment Agency/Natural Resources Wales (in England and Wales) and surface water (pluvial) and groundwater flooding provided by Ambiental Risk Analytics. In Scotland the river and coastal flood models are also provided by Ambiental Risk Analytics.

Risk of flooding from rivers and the sea

This is an assessment of flood risk for England and Wales produced using local data and expertise, provided by the Environment Agency (RoFRaS model) and Natural Resources Wales (FRAW model). It shows the chance of flooding from rivers or the sea presented in categories taking account of flood defences and the condition those defences are in. The model uses local water level and flood defence data to model flood risk.

The categories associated with the Environment Agency and Natural Resources Wales models are as follows:

RoFRaS (rivers and sea) and FRAW (rivers):

Very Low - The chance of flooding from rivers or the sea is considered to be less than 1 in 1000 (0.1%) in any given year.

Low - The chance of flooding from rivers or the sea is considered to be less than 1 in 100 (1%) but greater than or equal to 1 in 1000 (0.1%) in any given year.

Medium - The chance of flooding from rivers or the sea is considered to be less than 1 in 30 (3.3%) but greater than 1 in 100 (1%) in any given year.

High - The chance of flooding from rivers or the sea is considered to be greater than or equal to 1 in 30 (3.3%) in any given year.

FRAW (sea):

Very Low - The chance of flooding from the sea is considered to be less than 1 in 1000 (0.1%) in any given year.

Low - The chance of flooding from the sea is considered to be less than 1 in 200 (0.5%) but greater than or equal to 1 in 1000 (0.1%) in any given year.

Medium - The chance of flooding from the sea is considered to be less than 1 in 30 (3.3%) but greater than 1 in 200 (0.5%) in any given year.

High - The chance of flooding from the sea is considered to be greater than or equal to 1 in 30 (3.3%) in any given year.

Historic flood events

Over 86,000 events are recorded within this database. This data is used to understand where flooding has occurred in the past and provides details as available. Absence of a historic flood event for an area does not mean that the area has never flooded, but only that Environment Agency/Natural Resources Wales do not currently have records of flooding within the area. Equally, a record of a flood footprint in previous years does not mean that an area will flood again, and this information does not take account of flood management schemes and improved flood defences.

Surface water flooding

Ambiental Risk Analytics surface water flood map identifies areas likely to flood following extreme rainfall events, i.e. land naturally vulnerable to surface water or “pluvial” flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1000 year rainfall events. The flood risks for these rainfall events are reported where the depth would be greater than the threshold for a standard property to modern building standards. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though older ones may even flood in a 1 in 5 year rainstorm event.

Proposed flood defences

The data includes all Environment Agency/Natural Resources Wales's projects over £100K that will change or sustain the standards of flood defence in England and Wales over the next 5 years. It also includes the equivalent schemes for all Local Authority and Internal Drainage Boards.

Flood storage areas

Flood Storage Areas may also act as flood defences. A flood storage area may also be referred to as a balancing reservoir, storage basin or balancing pond. Its purpose is to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel. It may also delay the timing of a flood peak so that its volume is discharged over a longer time interval. These areas are also referred to as Zone 3b or 'the functional floodplain' and has a 5% or greater chance of flooding in any given year, or is designed to flood in the event of an extreme (0.1%) flood or another probability which may be agreed between the Local Planning Authority and Environment Agency/Natural Resources Wales, including water conveyance routes. Development within Flood Storage Areas is severely restricted.

Groundwater flooding

Groundwater flooding is flooding caused by unusually high groundwater levels. It occurs as excess water emerging at the ground surface or within underground structures such as basements. Groundwater flooding tends to be more persistent than surface water flooding, in some cases lasting for weeks or months, and it can result in significant damage to property. This risk assessment is based on a 5m Digital Terrain Model (DTM) and 1 in 100 year and 1 in 250 year return periods.

Ambiental FloodScore™ insurance rating

The property has been rated as **High** risk. Please see **page 2 >** for further advice.

Ambiental's FloodScore™ risk rating gives an indicative assessment of the potential insurance risk classification from flooding, which can provide an indication of how likely it is that a property's policy will be ceded to Flood Re. The assessment is based on Ambiental's river, tidal and surface water flood data and other factors which some insurers may use in their assessment are not included.

Flood Re is a re-insurance scheme that makes flood cover more widely available and affordable as part of your residential property home insurance. Properties at higher risk of flooding may have the flood part of their policy ceded to Flood Re by their insurer. It is important to understand that Flood Re does not apply to all situations. Exclusions from Flood Re includes properties constructed after 1 January 2009; properties not within domestic Council Tax bands A to H (or equivalent); commercial properties, certain buy to let scenarios and buildings comprising four or more residential units. A full list of the exemptions can be found on the Flood Re website (https://www.floodre.co.uk/can-flood-re-help-me/eligibility-criteria/) ↗.

The Ambiental FloodScore™ insurance rating is classified into six different bandings:

Very High indicates a level of risk that may make it more likely that standard insurance premiums will be higher, or additional terms may apply to the provision of flood cover. There is a very high possibility that the cover for flooding at the property will be ceded into the Flood Re scheme, particularly if the property has flooded in the past.

High indicates a level of risk that may make it more likely that standard insurance premiums will be higher, or additional terms may apply to the provision of flood cover. There is a high possibility that the cover for flooding at the property will be ceded into the Flood Re scheme, particularly if the property has flooded in the past.

Moderate-High indicates a level of risk that may make it more likely that standard insurance premiums will be higher, or additional terms may apply to the provision of flood cover. There is a moderate possibility that the cover for flooding at the property will be ceded into the Flood Re scheme, particularly if the property has flooded in the past.

Moderate indicates a level of risk that may make it more likely that standard insurance premiums will be higher, or additional terms may apply to the provision of flood cover. There is a low possibility that the cover for flooding at the property will be ceded into the Flood Re scheme, unless the property has flooded in the past.

Low indicates a level of risk that is likely to mean standard cover and premiums are available for flood cover. There is a low possibility the cover for flooding at the property will be ceded into the Flood Re scheme, unless the property has flooded in the past.

Very Low indicates a level of flood risk that should not have any impact on the provision of flood cover for the property.

Conveyancing Information Executive and our terms & conditions

IMPORTANT CONSUMER PROTECTION INFORMATION

This search has been produced by Groundsure Ltd, Nile House, Nile Street, Brighton, BN1 1HW. Tel: 01273 257 755. Email: info@groundsure.com ↗. Groundsure adheres to the Conveyancing Information Executive Standards.

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- Conveyancing Information Executive Members shall act in a professional and honest manner at all times in line with the Conveyancing Information Executive Standards and carry out the delivery of the Search with integrity and due care and skill.
- Compliance with the Conveyancing Information Executive Standards will be a condition within the Conveyancing Information Executive Member's Terms and Conditions.
- Conveyancing Information Executive Members will promote the benefits of and deliver the Search to the agreed standards and in the best interests of the customer and associated parties.

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If you have a query or complaint about your search, you should raise it directly with the search firm, and if appropriate ask for any complaint to be considered under their formal internal complaints procedure.

If you remain dissatisfied with the firm's final response, after your complaint has been formally considered, or if the firm has exceeded the response timescales, you may refer your complaint for consideration under The Property Ombudsman scheme (TPOs). The Ombudsman can award up to £5,000 to you if the Ombudsman finds that you have suffered actual financial loss and/or aggravation, distress or inconvenience as a result of your search provider failing to keep to the Standards.

Please note that all queries or complaints regarding your search should be directed to your search provider in the first instance, not to TPOs.

COMPLAINTS PROCEDURE: If you want to make a complaint, we will:

- acknowledge it within 5 working days of receipt
- normally deal with it fully and provide a final response, in writing, within 20 working days of receipt
- liaise, at your request, with anyone acting formally on your behalf

Complaints should be sent to:
Operations Director, Groundsure Ltd, Nile House, Nile Street, Brighton, BN1 1HW. Tel: 01273 257 755. Email: info@groundsure.com ↗ If you are not satisfied with our final response, or if we exceed the response timescales, you may refer the complaint to The Property Ombudsman scheme (TPOs): Tel: 01722 333306, E-mail: admin@tpos.co.uk ↗ We will co-operate fully with the Ombudsman during an investigation and comply with their final decision.

Groundsure's Terms and Conditions can be viewed online at this link: www.groundsure.com/terms-and-conditions-april-2023/ ↗

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Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information in your Flood report. To find out who they are and their areas of expertise see www.groundsure.com/sources-reference ↗.

Appendix C: Flood Modelling Data

Use of Environment Agency Information for Flood Risk Assessments

Important

The Environment Agency are keen to work with partners to enable development which is resilient to flooding for its lifetime and provides wider benefits to communities. If you have requested this information to help inform a development proposal, then we recommend engaging with us as early as possible by using the pre-application form available from our website:

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

We recognise the value of early engagement in development planning decisions. This allows complex issues to be discussed, innovative solutions to be developed that both enables new development and protects existing communities. Such engagement can often avoid delays in the planning process following planning application submission, by reaching agreements up-front. We offer a charged pre-application advice service for applicants who wish to discuss a development proposal.

We can also provide a preliminary opinion for free which will identify environmental constraints related to our responsibilities including flooding, waste, land contamination, water quality, biodiversity, navigation, pollution, water resources, foul drainage or Environmental Impact Assessment.

In preparing your planning application submission, you should refer to the Environment Agency's Flood Risk Standing Advice and the Planning Practice Guidance for information about what flood risk assessment is needed for new development in the different Flood Zones. This information can be accessed via:

https://www.gov.uk/flood-risk-assessment-standing-advice
http://planningguidance.planningportal.gov.uk/

You should also consult the Strategic Flood Risk Assessment or other relevant materials produced by your local planning authority.

You should note that:

1. Information supplied by the Environment Agency may be used to assist in producing a Flood Risk Assessment (FRA) where one is required, but does not constitute such an assessment on its own.

2. This information covers flood risk from main rivers and the sea, and you will need to consider other potential sources of flooding, such as groundwater or surface water runoff. Information produced by the local planning authority referred to above may assist here.

3. Where a planning application requires an FRA and this is not submitted or is deficient, the Environment Agency may raise an objection.

JFLOW Disclaimer

You asked us to provide you with depths and/or extent data from the JFLOW model used to produce Flood Zones.

Jflow is a 2-D modelling package developed by JBA in partnership with the Environment Agency that uses simplified equations to efficiently model flood extents for whole catchments.

The water depths have been produced from the JFLOW model as a 'by-product' of running the model to produce Flood Zones. No water level data exists as a direct output from this modelling.

You should be aware of the following points.

- In order to complete national Flood Zones we have used a generalised approach. The Flood Zones are therefore not as accurate as we would normally specify for detailed river modelling, but they do provide indicative flood depths and extents so that developers can consider flood risk as part of their proposals. To improve its accuracy, our flood zone mapping has been scrutinised by local teams.

- Our digital terrain model (DTM) uses LiDAR (Light Detection and Ranging) generalised to a 5m grid resolution. The latest LiDAR is available from our Geomatics Group (http://www.geomatics-group.co.uk).

- For catchments in Devon, we have improved the input hydrology. We used the best available local data, and recommend these values are used in the first instance (available by data request).

- The JFLOW modelling method was developed, tested and reviewed for production of the Flood Zone **extents** only. We have not verified water depth at most locations and this data should be treated as indicative only. For this reason they can not be used to infer levels of flood water or engineering design levels.

- The flood zones model floodplain spreading without the presence of defences, to better identify the "natural floodplain". Local in channel water levels may be affected by hydraulic effects, structures and blockages due to debris.

- Any assessment of Flood Risk undertaken must be appropriate for the decisions that need to be based upon it, consider the risks and also take into account any limitations of the data used.

- Please read the enclosed Notice and be aware that the Environment Agency does not guarantee that this data is suitable for your purposes.

Position statement on Devon Hydrology Strategy

Evidence & Risk – National Flood Hydrology Team Published: 05/10/2022

Audience: Environment Agency

Background

The Devon Hydrology Strategy (DHS) was developed by the Environment Agency South West Region Devon Area, to provide a definite peak flow dataset for the Devon area giving consistency of approach and making use of all available gauge records. The DHS was originally produced in 2007 and updated in 2012.

In the time since the DHS analysis was undertaken, there have been significant changes to data and methodologies. The continued use of the 2012 DHS to determine peak river flows for flood risk assessments, modelling and mapping studies, and flood risk management schemes, is therefore open to challenge, as it no longer uses the most up-to-date data and methods available.

Position Statement

We have undertaken a review of the DHS and concluded that for local modelling and site-specific studies, the DHS dataset should no longer be used.

Many of the concerns that prompted the DHS to be developed have now been addressed through new methods such as the FEH Local project, the FEH Small Catchments project, and the inclusion of additional stations in the NRFA dataset. In particular, the small catchments statistical method generally gives higher growth curve estimates than the DHS.

All new local modelling or site-specific studies, including modelling undertaken for flood risk assessments, should follow the latest version of the Environment Agency's flood estimation guidelines (LIT 11832). Studies should make best use of local data including level gauges and flow duration curves to improve confidence in flow estimates, including donors from nearby catchments. Environment Agency area staff should be consulted to provide local knowledge and data. Modelling results must be sense-checked for realism and compared to historic flooding extents.

This position statement makes guidance for the Devon area consistent with all other Environment Agency areas. For further information, please contact the National Flood Hydrology team via FloodHydrology@environment-agency.gov.uk

Devon Cornwall and Isles of Scilly Area

Preliminary Opinion Advice Note January 2019

This document sets out the environmental issues we will consider when providing our planning application consultation advice to Local Planning Authorities. It can be used by applicants, developers and consultants at the pre-planning stage.

Further pre-application options

We are able to provide detailed and bespoke advice and answer technical questions for a charged fee which equates to £100 per hour plus VAT.

If you are interested in finding out more about this service, please email:

SPDC@environment-agency.gov.uk

We can explain this service and provide you with a bespoke quote for further pre-application advice that you may require.

Fluvial/Tidal Flood Risk

Development must be safe and should not increase the risk of flooding.

You can view a site's flood zone on the Flood Map for Planning on the .gov.uk website

https://flood-warning-information.service.gov.uk/long-term-flood-risk

If your proposed development is located within flood zone 2 or 3 you should consult the Flood Risk and Coastal Change pages of the National Planning Policy Guidance (NPPG)
http://planningguidance.communities.gov.uk/blog/guidance/flood-risk-and-coastal-change/

Here you can determine whether the flood risk vulnerability of your proposed development and the flood zone are compatible. You can also establish if there are flood risk sequential test and exception test requirements for your proposed development.

If your proposed development is located within flood zone 2 or 3 and its vulnerability and flood zone are considered acceptable under the NPPG then a site specific Flood Risk Assessment (FRA) is required to support any subsequent planning application. This is required by paragraph 103 of the National Planning Policy Framework (NPPF)
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

Guidance on the content of a site specific FRA can be found on the NPPG and the .gov website:
https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications

We are in the process of making the majority of our data open source. Flood risk data is available from .gov.uk https://data.gov.uk/data/search?q=Flood&publisher=environment-agency&unpublished=false

However, if you need more detailed flood risk modelling data to help you produce a FRA then please contact our Customers and Engagement team at DCISEnquiries@environment-agency.gov.uk

Climate Change Allowances

On 19 February 2016, we published new guidance for planners and developers on how to use climate change allowances in a site-specific FRA: https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

If you have any questions regarding this guidance, please contact our Customers and Engagement team:

DCISEnquiries@environment-agency.gov.uk

Groundwater Quality

Development must not cause pollution to the water environment.

Source Protection Zones

These zones indicate that an area is very sensitive to pollution risks due to the proximity of drinking water sources and the way groundwater flows. In these areas we may consider it inappropriate for development to discharge foul or surface water into the ground.

To see if your proposed development is located within a Source Protection Zone, please use our online map: http://apps.environment-agency.gov.uk/wiyby/37833.aspx

Contaminated land

The NPPF takes a precautionary approach to land contamination. Before the principle of development can be determined, land contamination should be investigated to see whether it could preclude certain development due to environmental risk or cost of remediation.

Where contamination is known or suspected, a desk study, site investigation, remediation and other works may be required to enable safe development (paragraph 121 of the NPPF). Minimum requirements for submission with a planning application are a preliminary risk assessment, such as a site walkover or desk top study.

Site investigation and remediation strategy reports may be required for submission with a planning application for sensitive land use types or where significant contamination, or uncertainty, is found. When dealing with land affected by contamination, developers should follow the risk management framework provided in the CLR11, Model Procedures for the Management of Land Contamination: https://www.gov.uk/guidance/land-contamination-risk-management

Pollution

If the proposed development use has the potential to pollute ground or surface water receptors then an assessment to establish whether the risk of pollution is acceptable or can be satisfactorily mitigated for will be required within any planning application.

Foul Drainage

When drawing up wastewater treatment proposals for any new development, the first presumption is to provide a system of foul drainage discharging into a public sewer to be treated at a public sewage treatment works (those provided and operated by the water and sewerage companies). This should be done in consultation with the sewerage company of the area prior to the submission of a formal planning application.

If connection to the public sewerage system is not feasible, a private foul drainage system may be considered. Under the Environmental Permitting Regulations 2010 any discharge of sewage or trade effluent made to either surface water or groundwater will need to be registered as an exempt discharge activity or hold a permit issued by the Environment Agency, in addition to planning permission. This applies to any discharge to inland freshwaters, coastal waters or relevant territorial waters.

Further guidance is available at:

https://www.gov.uk/government/publications/small-sewage-discharges-in-england-general-binding-rules.

Main Rivers

Ecology

If a Main River is located on or within 8 metres of your proposed development site an ecological survey is required to establish whether development is likely to have a detrimental impact on the biodiversity of the watercourse. We would not support development proposals if there was shown to be a likely detrimental impact on the water environment. In accordance with the National Planning Policy Framework (NPPF), any development proposal should avoid significant harm to biodiversity and seek to protect and enhance it. Opportunities to incorporate biodiversity in and around the development will be encouraged.

Your scheme should be designed with a naturalised buffer zone of at least 8 metres from the main river to protect and enhance the conservation value of the watercourse and ensure access for flood defence maintenance.

This buffer zone should be managed for the benefit of biodiversity for example by the planting of locally appropriate, UK native species. The buffer zone should be undisturbed by development with no fencing, footpaths or other structures. This buffer zone will help provide more space for flood waters, provide improved habitat for local biodiversity and allows access for any maintenance requirements.

To identify any Main Rivers in proximity to your proposed development please see our Main Rivers Consultation Map: http://apps.environment-agency.gov.uk/wiyby/151293.aspx

Water Framework Directive (WFD)

With any development alongside watercourses, consideration should be given to the requirements of the Water Framework Directive (WFD) http://ec.europa.eu/environment/water/water-framework/ . This includes preventing overall deterioration in water quality and promoting improvement in the ecological status of any water body. Actions to achieve this are listed in the South West River Basin Management Plan (RBMP) https://www.gov.uk/search?q=River+Basin+Management+Plans.

Where appropriate, a WFD Assessment (http://planningguidance.communities.gov.uk/blog/guidance/water-supply-wastewater-and-water-quality/water-supply-wastewater-and-water-quality-considerations-for-planning-applications/) should assess any potential impacts on the watercourse and demonstrate that the required enhancements will be delivered. In some cases the requirements of a WFD assessment can be incorporated into an Environmental Impact Assessment (EIA). Any development that has the potential to cause deterioration in classification under WFD or that precludes the recommended actions from being delivered in the future is likely to be considered unacceptable to us.

Environmental Permitting Regulations

To see if your proposed development requires an Environmental Permit under the Environment Permitting Regulations please refer to our website:

https://www.gov.uk/guidance/check-if-you-need-an-environmental-permit

From 6 April 2016 an Environmental Permit is required for any proposed works or structures, in, under, over or within 8 metres of the top of the bank of a designated Main River and within 16 metres of a tidal defence.

Please note

This document is a response to a pre-application enquiry only and does not represent our final view in relation to any future planning application made in relation to any site. You should seek your own expert advice in relation to technical matters relevant to any planning application before submission.

If you have any questions please contact the Sustainable Places team:

SPDC@environment-agency.gov.uk

Flood risk assessment data

Location of site: 292528 / 102166 (shown as easting and northing coordinates)
Document created on: 27 June 2023
This information was previously known as a product 4.
Customer reference number: 569UM8EUMPNC

Map showing the location that flood risk assessment data has been requested for.

Flood map for planning (rivers and the sea)

Your selected location is in flood zone 3.

Flood zone 3 shows the area at risk of flooding for an undefended flood event with a:

- 0.5% or greater probability of occurring in any year for flooding from the sea
- 1% or greater probability of occurring in any year for fluvial (river) flooding

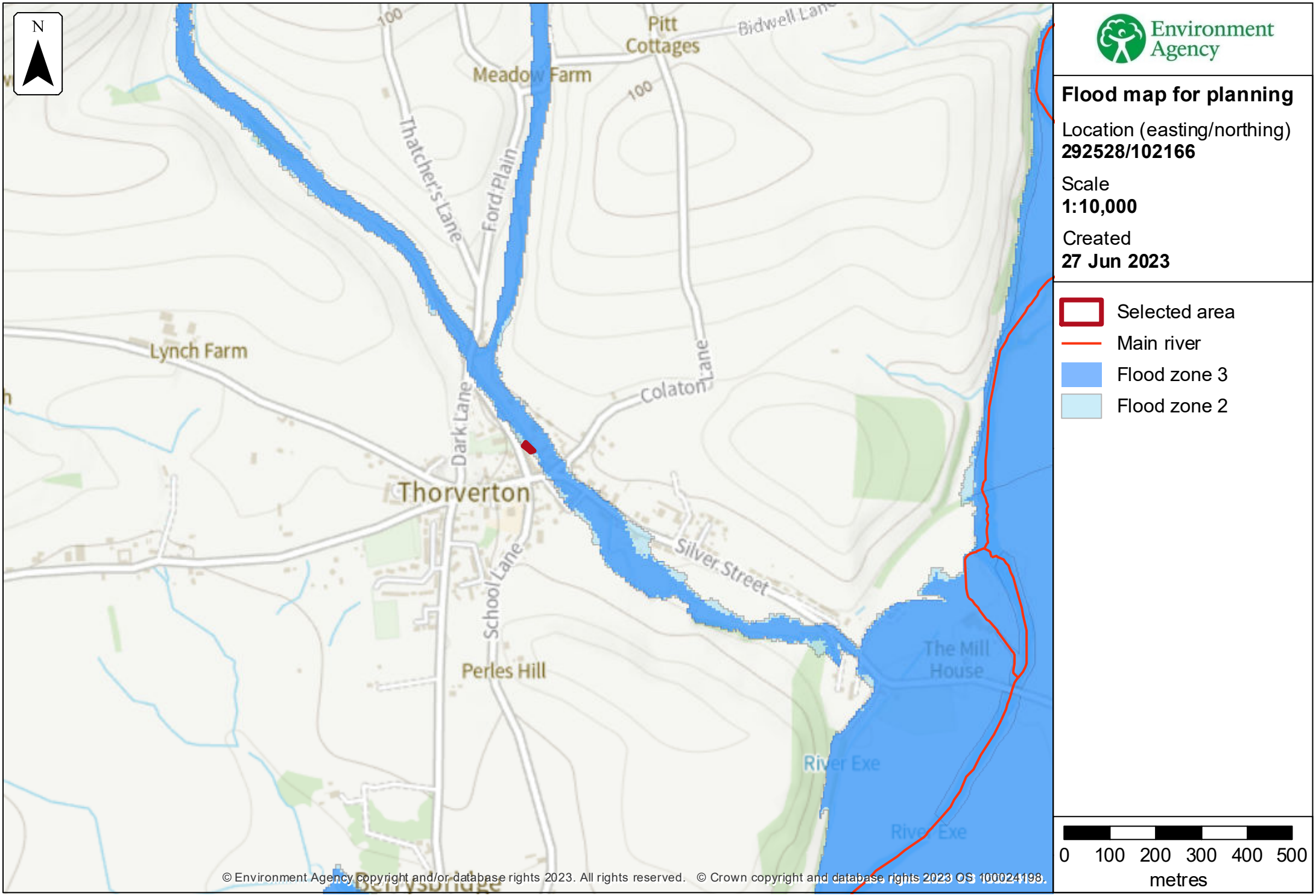
Flood zone 2 shows the area at risk of flooding for an undefended flood event with:

- between a 0.1% and 0.5% probability of occurring in any year for flooding from the sea
- between a 0.1% and 1% probability of occurring in any year for fluvial (river) flooding

It's important to remember that the flood zones on this map:

- refer to the land at risk of flooding and do not refer to individual properties
- refer to the probability of river and sea flooding, ignoring the presence of defences
- do not take into account potential impacts of climate change

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



Environment Agency

Flood map for planning

Location (easting/northing)
292528/102166

Scale
1:10,000

Created
27 Jun 2023

- Selected area
- Main river
- Flood zone 3
- Flood zone 2

0 100 200 300 400 500
metres

Historic Information

The map below is an indicative outline of areas that have previously flooded.

Historic outlines may not be visible where they overlap. You can download the outlines separately via the link below.

Download recorded flood outlines in GIS format

Our historic flood event outlines:

- are an indication of the geographical extent of an observed flood event. We map flooding to land, not individual properties.
- do not give any indication of flood levels for individual properties. They also do not imply that any property within the outline has flooded internally.
- are based on a combination of anecdotal evidence, Environment Agency staff observations and survey.
- do not provide a definitive record of flooding.

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

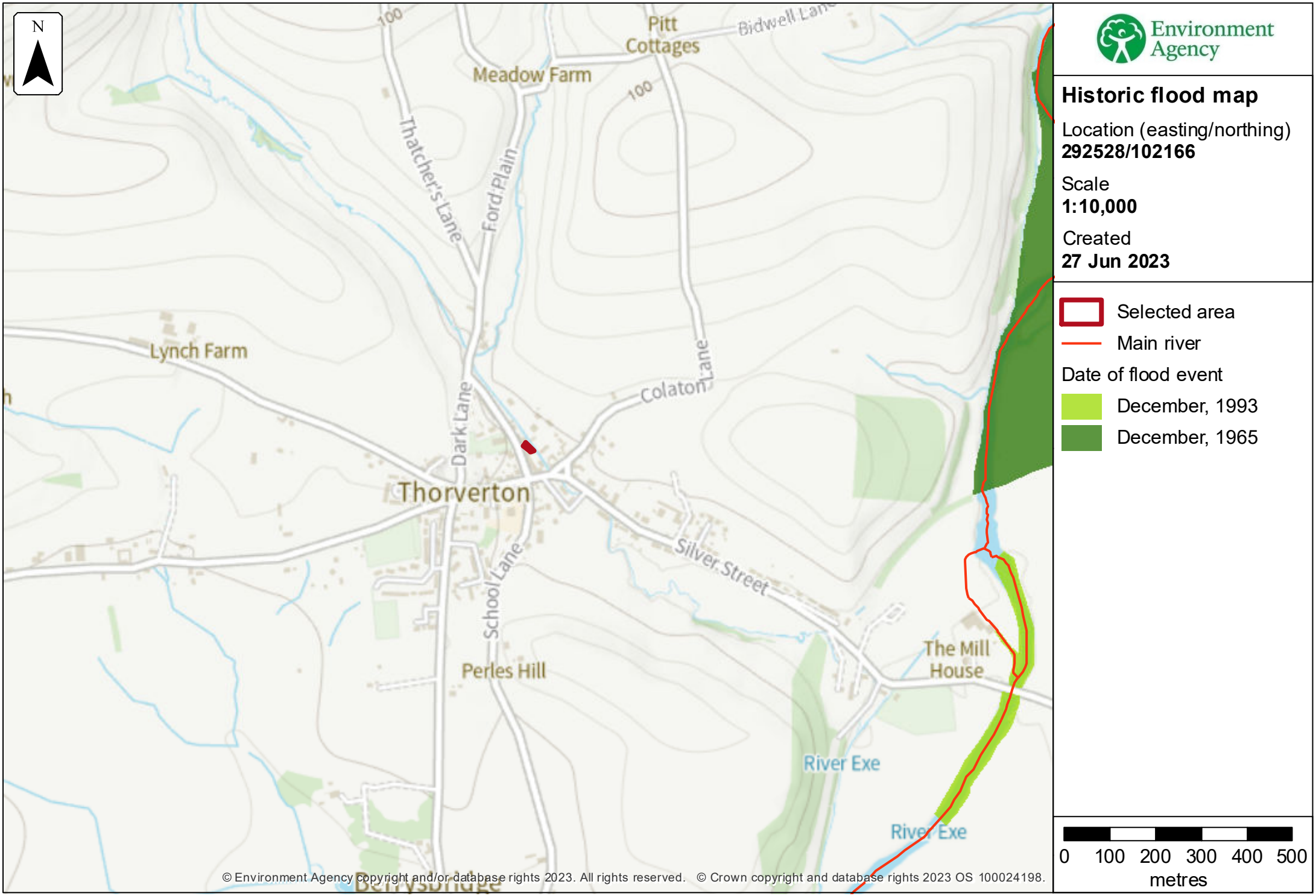
In addition to the Historic Flood Map we also hold historic flood information locally.

We have records of this area flooding in: January 1809 and May 1931

Please see attached maps/photographs if available.

Remember that: other flooding may have occurred that we do not have records for.

Please note that our records are not comprehensive. Therefore, we advise that you make further enquiries locally with specific reference to flooding at this location. You should consider contacting the relevant Local Planning Authority and/or water/sewerage provider for the area.



Environment Agency

Historic flood map

Location (easting/northing)
292528/102166

Scale
1:10,000

Created
27 Jun 2023

Selected area

Main river

Date of flood event

December, 1993

December, 1965

0 100 200 300 400 500
metres

Modelled data

About the models used

Model name: JFLOW

Date: 2007

Model name: Devon Hydrology Strategy

Date: 2012

This model contains the most relevant data for your area of interest.

You will need to consider the latest flood risk assessment climate change allowances and factor in the new allowances to demonstrate the development will be safe from flooding.

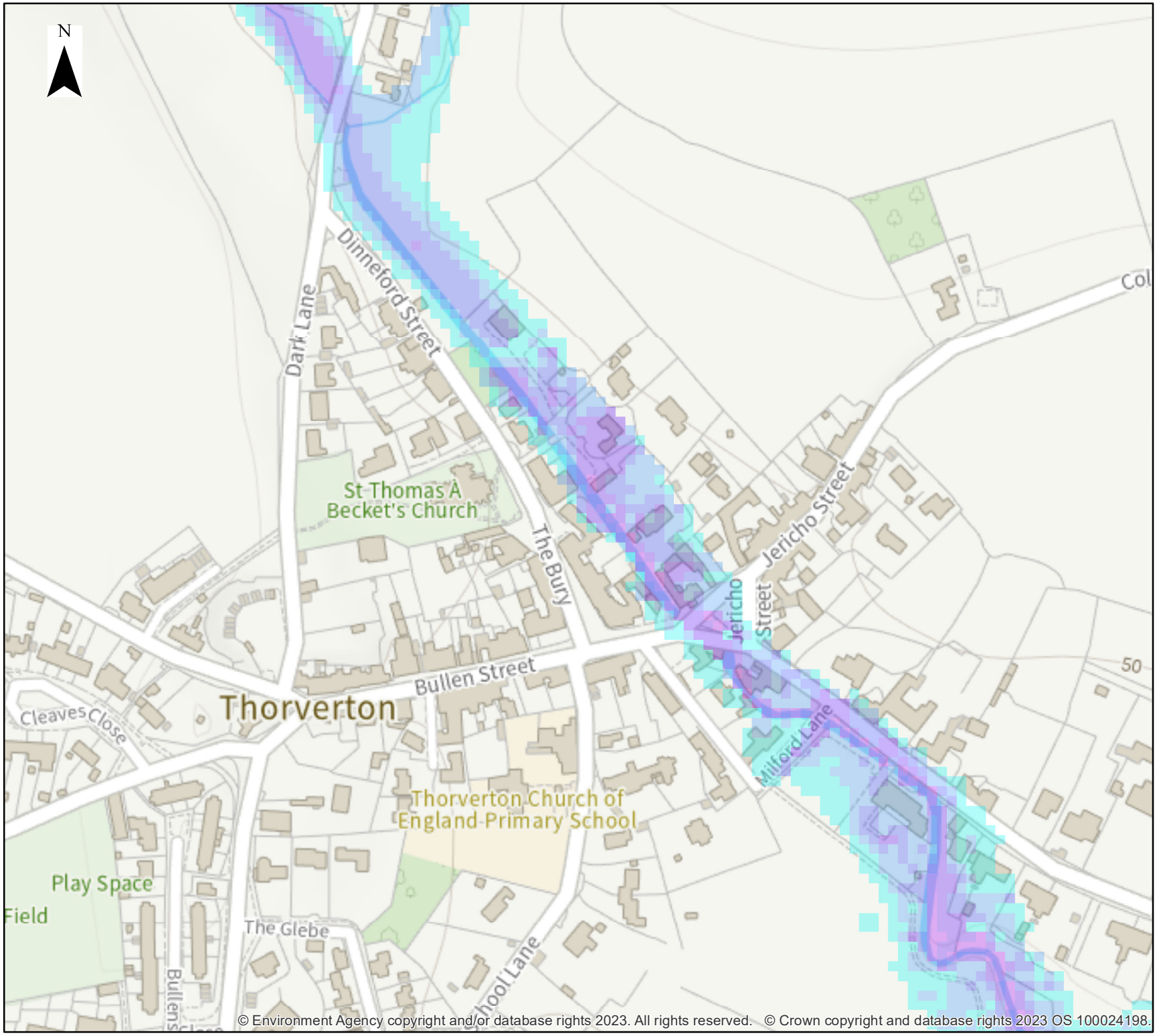
Terminology used

Annual exceedance probability (AEP)

This refers to the probability of a flood event occurring in any year. The probability is expressed as a percentage. For example, a large flood which is calculated to have a 1%chance of occuring in any one year, is described as 1% AEP.

Metres above ordnance datum (mAOD)

All flood levels are given in metres above ordnance datum which is defined as the mean sea level at Newlyn, Cornwall.



Environment Agency

Undefended Modelled Fluvial Depth Map

Location (easting/northing)
292528/102166

Scale
1:2,600

Created
28 Jun 2023

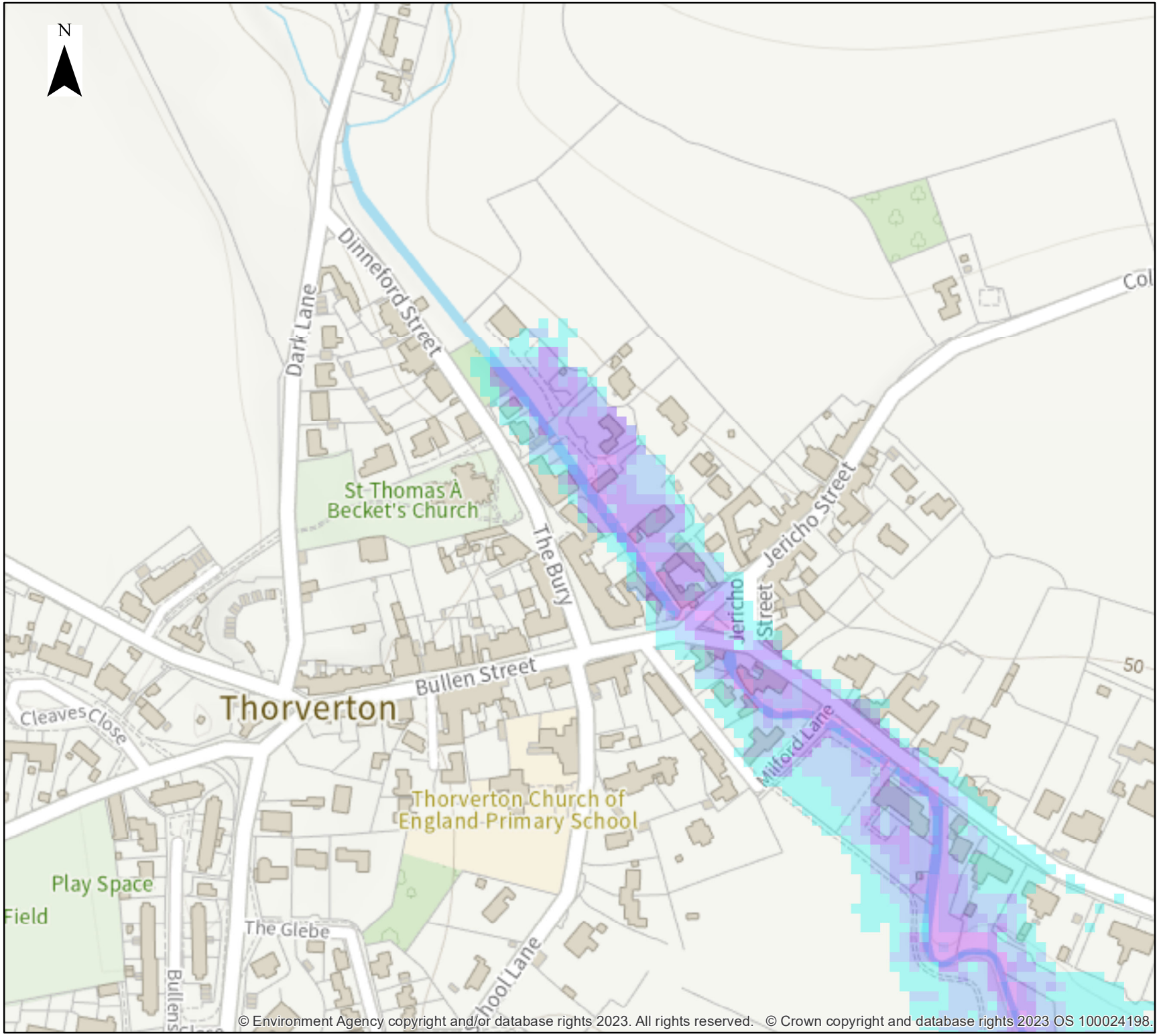
Model name
JFLOW 2007

Legend

Exe Undefended Q100 Depths

Meters

- 0 - 0.3
- 0.3 - 0.6
- 0.6 - 0.8
- 0.8 - 1.5
- 1.5 - 2.5
- 2.5 +



Environment Agency

Undefended Modelled Fluvial Depth Map

Location (easting/northing)
292528/102166

Scale
1:2,600

Created
28 Jun 2023

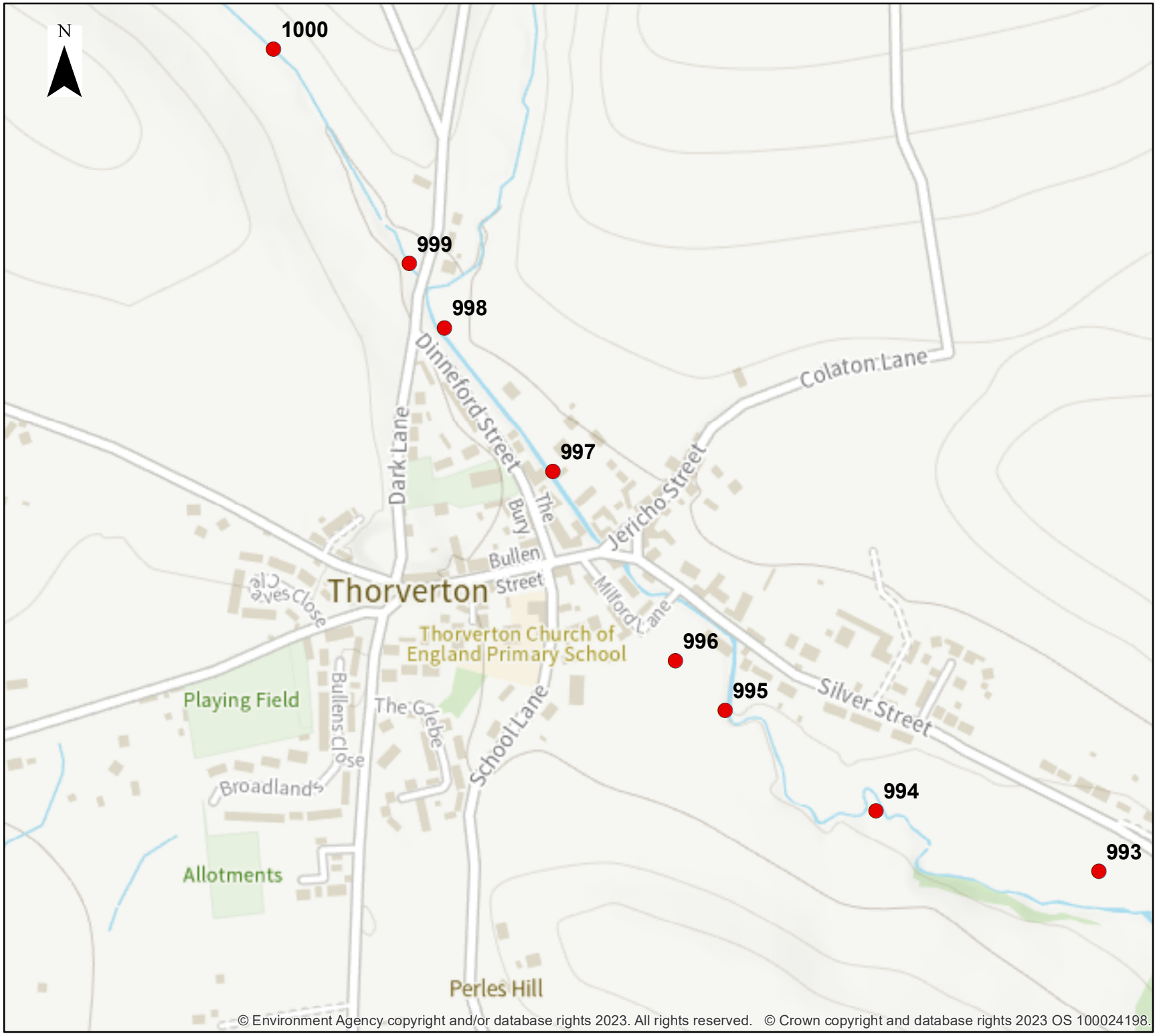
Model name
JFLOW 2007

Legend

Exe Undefended Q1000 Depths

Meters

- 0 - 0.3
- 0.3 - 0.6
- 0.6 - 0.8
- 0.8 - 1.5
- 1.5 - 2.5
- 2.5 +



Environment Agency

Flow Node Map

Location (easting/northing)
292528/102166

Scale
1:5,000

Created
28 Jun 2023

Model name
Devon Hydrology Strategy 2012

Legend

- Devon Hydrology Strategy Nodes

Modelled Flood Flows

Node Reference	Easting	Northing	Area (km^2)	Modelled Flood Flows, in m3/s (undefended model run)							Source	Confidence
				QMED	10yr	25yr	50yr	100yr	250yr	1000yr		
993	293072	101795	7.72	7.54	11.69	14.18	16.31	18.70	22.37	29.27	TrendAnalysisRegion_I2	Medium_Trend
994	292852	101855	7.61	7.47	11.58	14.04	16.15	18.51	22.15	28.97	TrendAnalysisRegion_I2	Medium_Trend
995	292703	101954	7.34	7.28	11.29	13.69	15.74	18.05	21.60	28.25	TrendAnalysisRegion_I2	Medium_Trend
996	292654	102003	7.26	7.23	11.20	13.58	15.62	17.91	21.43	28.03	TrendAnalysisRegion_I2	Medium_Trend
997	292533	102190	7.12	7.13	11.05	13.40	15.41	17.67	21.14	27.65	TrendAnalysisRegion_I2	Medium_Trend
998	292426	102332	7.04	7.07	10.96	13.29	15.29	17.53	20.97	27.44	TrendAnalysisRegion_I2	Medium_Trend
999	292391	102395	4.84	5.44	8.43	10.22	11.76	13.48	16.13	21.10	TrendAnalysisRegion_I2	Medium_Trend
1000	292257	102607	4.68	5.31	8.23	9.98	11.48	13.17	15.75	20.61	TrendAnalysisRegion_I2	Medium_Trend

Data in this table comes from the Devon Hydrology Strategy 2012

created 28/06/2023

Strategic flood risk assessments

We recommend that you check the relevant local authority's strategic flood risk assessment (SFRA) as part of your work to prepare a site specific flood risk assessment.

This should give you information about:

- the potential impacts of climate change in this catchment
- areas defined as functional floodplain
- flooding from other sources, such as surface water, ground water and reservoirs

About this data

This data has been generated by strategic scale flood models and is not intended for use at the individual property scale. If you're intending to use this data as part of a flood risk assessment, please include an appropriate modelling tolerance as part of your assessment. The Environment Agency regularly updates its modelling. We recommend that you check the data provided is the most recent, before submitting your flood risk assessment.

Flood risk activity permits

Under the Environmental Permitting (England and Wales) Regulations 2016 some developments may require an environmental permit for flood risk activities from the Environment Agency. This includes any permanent or temporary works that are in, over, under, or nearby a designated main river or flood defence structure.

Find out more about flood risk activity permits

Help and advice

Contact the Devon Cornwall and the Isles of Scilly Environment Agency team at dcisenquiries@environment-agency.gov.uk for:

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

DCIS Climate Change Allowances – Strategic and Development Planning

FIRST

Please check the latest Climate Change allowance :-

Flood risk assessments: climate change allowances - GOV.UK (www.gov.uk)

We expect you to use the scenario values as shown on the adjacent table for the different types of development. You may provide different scenario (i.e. High Cen for SLR) as additional assessment but we will use these values/allowances for our assessments of FRA/Designs

*CFB = Coastal Flood Boundary – available at data.gov.uk

Valid May 2022 – FCRM

Development Vulnerability NPPG	Rainfall 1% Storms		River Less than 5km2		Fluvial	Sea Level Rise (SLR) Upper End
	Exe & East Devon	All others	Urban	Rural	Use 2080s values for all	Added to CFB* 2017 data
Commercial 60yr lifetime	30%	30%	30%	? - tbc	Central Allowance- See map next page	0.74m (2082 value)
Residential 100yr lifetime	45%	50%	50%	? - tbc	Central Allowance - see map next page	1.445m (2122 value)
Essential Infrastructure	45%	50%	50%	? - tbc	Higher Central - See map next page	Please confirm with EA office

SPDC@environment-agency.gov.uk or SW_Exeter-PSO@environment-agency.gov.uk

Environment Agency

FIRST

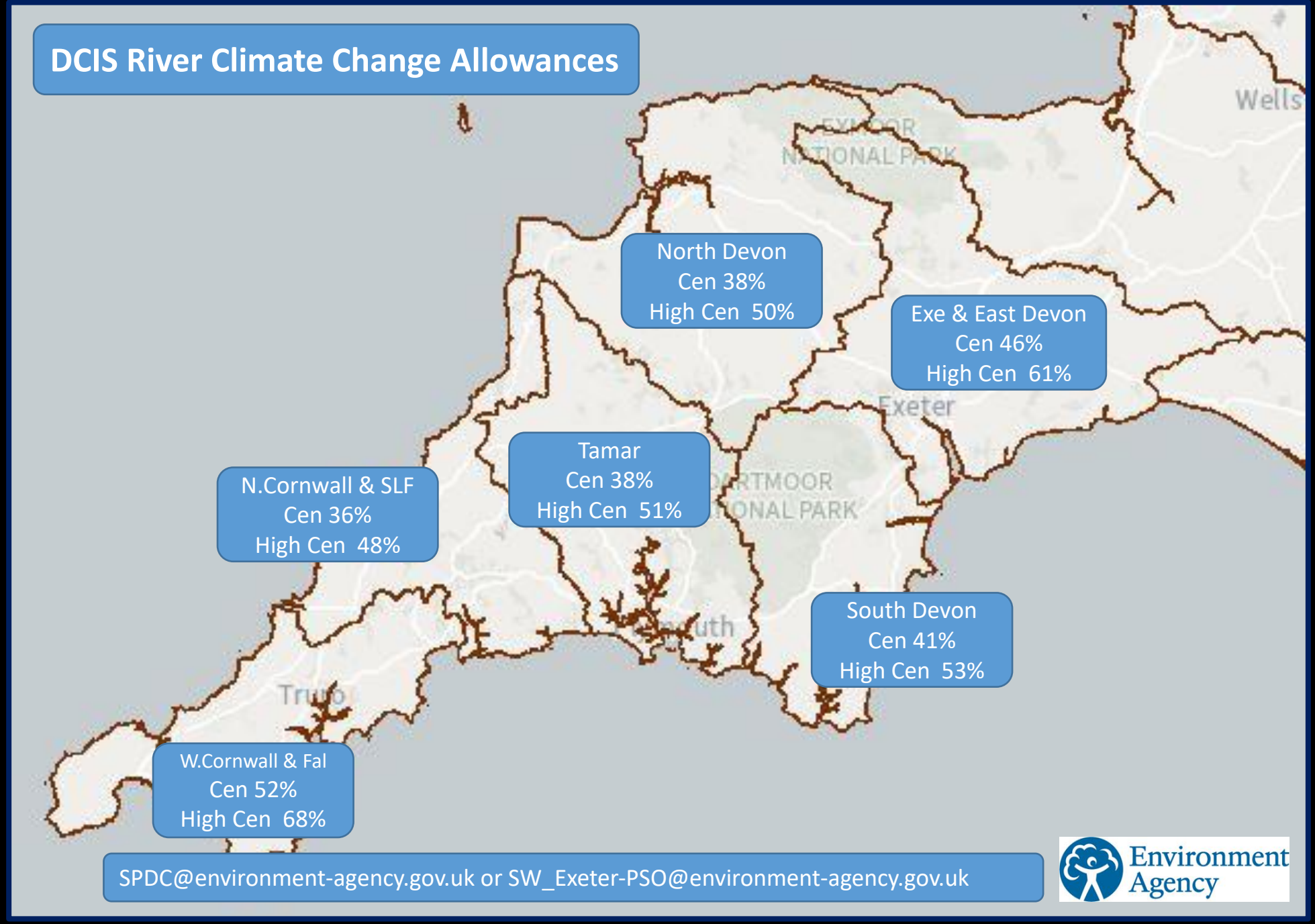
Please check the latest Climate Change allowance :-

[Flood risk assessments: climate change allowances - GOV.UK (www.gov.uk)]

- Wave Actions (Coastal & Estuary) will also have to be considered
- Freeboard will need to be added to set minimum floor or defence levels
- +40%CC Modelled scenarios, may still be used for some catchments (>5% diff from new values).

Valid May 2022 - FCRM

DCIS River Climate Change Allowances



SPDC@environment-agency.gov.uk or SW_Exeter-PSO@environment-agency.gov.uk

Environment Agency