



FLOOD RISK ASSESSMENT

Elliots Way – RG4 8BF
Report No. F2512-013

January 2026
Issue No 1



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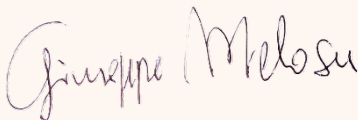
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Quality Assurance

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The Environment Agency Flood Risk Assessment Template and Guidance¹², released by the EA in August 2025, has been used to undertake this report. It advocates a proportionate approach to small-scale development.

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¹<https://www.planningportal.co.uk>

²<https://www.gov.uk/guidance/flood-risk-assessment-standing-advice>

EXECUTIVE SUMMARY*

Existing and Proposed Site use

The Site is a residential dwelling and garden curtilage. The proposed development comprises a garage conversion for the enjoyment of occupants of the existing dwelling.

Flood Risk Assessment Summary

Impact of Flood Risk on the Proposed Development

The proposed development is at **Low** risk of fluvial flooding, and **Very Low** risk of surface water flooding, including considering the effects of climate change, and using conservative approaches to assessing the design flood level.

Through implementation of the Control & Mitigation measures in line with EA Standing Advice, the risk to the proposed development from all sources is considered **Low and Acceptable**.

Impact of the Proposed Development on Flood Risk

The proposed development is a garage conversion which means there is no increase in footprint or impermeable area. As an integrated part of the existing building's ground floor, the garage has no footprint or roof of its own. No functional floodplain will be lost due to development up to and including the design flood event (1% plus 35% climate change). The proposed development will therefore not exacerbate risk to nearby receptors, and its impact on all sources of flooding is considered **Low and Acceptable**.

Control & Mitigation of Flood Risk:

Ground Floor Level

The design flood level can be the fluvial, tidal, or surface water flood level, and this assessment has determined that **the proposed development is unaffected by the unaffected by the 1% plus climate change fluvial design flood or surface water design flood.**

The measures in the following Section provide even further flood resistance and resilience to the property, by designing to meet a higher standard (the residual risk flood level of 38.55 mAOD).

- The proposed garage floor will be raised from existing ground level to match the FFL of the main dwelling (38.57 mAOD) which is above the residual flood level (38.55 mAOD).
- The existing garage door will be bricked in with a high window installed, removing a threshold through which water could enter and increasing resistance to flooding.

By introducing the above alterations, the proposal will significantly increase the property's overall resilience to flood risk.

It is considered that the proposed FFL meets the above Standing Advice, by raising the floors as much as possible, and making adequate provision for resistance & resilience measures set in accordance with the residual risk flood level in the following Section.

Extra Resistance and Resilience Measures

The design will incorporate the following measures as recommended by the EA Standing Advice. These are all set relative to the residual flood level:

- Raising all sensitive electrical equipment, wiring and sockets on the ground floor to at least 600mm above the estimated flood level (to at least 39.15 mAOD). This complies with Building Regs Document P which states: switches and sockets should be between 450mm to 1200mm above FFL.
- Using flood resistant materials that have low permeability to at least 600mm above the estimated flood level (to at least 39.15 mAOD). Exact products are to be specified at detailed design following granting of planning approval.

- Using flood resilient materials (for example lime plaster) to at least 600mm above the estimated flood level (to at least 39.15 mAOD). Exact products are to be specified at detailed design following granting of planning approval.

Management of Flood Risk:

Residual Risk

As the Site is unaffected by the design flood, the development has been designed to the residual risk flood level instead.

It is therefore considered that the residual risk event is well-managed in the design.

Risk to People, including Access and Escape

The proposed garage conversion does not place any vulnerable uses (such as bedrooms) on the ground floor. Safe refuge is available on an upper floor. This means that the proposed garage conversion presented in this planning application is entirely appropriate. As a minor alteration within an existing dwelling, the proposed development will also not result in an increased number of people placed in an area of flood risk. **It is therefore considered that the risk to people is appropriately managed.**

The Site benefits from Flood Alerts (early warning of possible flooding) and Flood Warnings (act now - flooding expected or danger to life).

The applicant will manage residual risk by utilising Flood Alerts to indicate the risk of severe flooding.

The applicant will sign up to Flood Alerts and use these to inform any need to prepare or evacuate the property: <https://www.gov.uk/get-flood-warnings>

Recommendation to the Local Planning Authority

The Environment Agency's Standing Advice to Local Planning Authorities requires the development to raise floor levels as far as possible to meet the recommended level, and where this is not possible, to include the additional approved methods to prioritise excluding flood water where possible, and speed recovery of the building in case water gets in. This has been achieved through implementation of the Flood Risk Assessment recommendations.

It is recommended to the Local Planning Authority that this proposal meets the principles of the Environment Agency Standing Advice and the Local SFRA and is therefore recommended for approval in accordance with the design presented.

**This is intended as a summary only. Further detail and limitations of the assessment is provided within the main body of the Report.*

1 INTRODUCTION

1.1 Appointment

Flood For Planning Limited ("Flood For Planning") was instructed by Laura Whitehouse the "Client" to undertake a Flood Risk Assessment (FRA) at 28 Elliot's Way, RG4 8BF (the Site), to inform a planning application for a garden studio.

1.2 Project Understanding

The aim of this report is to assess the flood risk at the Site, determine what if any mitigation measures are needed to protect the development from flood risk and ensure that the proposed development will not increase the flood risk off site.

1.3 Scope of Works

The scope of works undertaken for this FRA was:

- Assess flood risk from all sources using best available information, including review of EA data and mapping, topography and historical records;
- Assess previous relevant available third-party studies, local authority plans or strategies;
- Advise on flood mitigation measures;
- Assess residual risks;
- Assess access and egress routes;
- Advise on availability of flood warnings;
- Prepare FRA; and

This report takes into account the following national and local policies:

- National Planning Policy Framework (NPPF)³
- National Planning Practice Guidance (NPPG)⁴ including The Environment Agency's National Flood Risk Standing Advice for Local Planning Authorities
- CIRIA Guidance: The SuDS Manual (C753) (2017);
- The Reading Borough Council Level 1 SFRA (2017)⁵; and
- The Reading Local Plan⁶.

1.4 Sources of Information

The following sources of information have been reviewed and assessed for the purpose of this FRA:

- Environment Agency online flood maps⁷;
- Detailed Environment Agency modelling data obtained under Product 4;
- British Geological Society (BGS) Interactive Map⁸; and
- The Reading Borough Council Level 1 SFRA (2017)

1.5 Project Limitations

Flood For Planning limitations are contained within Appendix A.

³ <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

⁴ <https://www.gov.uk/guidance/flood-risk-and-coastal-change>

⁵ <https://www.reading.gov.uk/planning-and-building-control/planning-policy/>

⁶ <https://www.reading.gov.uk/planning-and-building-control/planning-policy/>

⁷ <https://flood-map-for-planning.service.gov.uk>

⁸ <https://geologyviewer.bgs.ac.uk>

2 SITE DESCRIPTION

The aim of this section of the report is to outline key environmental information associated with the baseline environment.

Site Layout Plan



Figure 1: Aerial photography
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Address:	28 Elliotts Way, RG4 8BF		
Co-ordinates	Centred approximately at National Grid Reference:		Elevation
	Easting	Northing	Approx. 38.50 mAOD
			Site Area
	471619	174506	Approx. 201 Sq meters
Existing land use and topography	The Site is a residential dwelling and garden curtilage. The topography of the Site is relatively flat with elevation ranging from 38.36 m to 38.45 mAOD, identified by a LIDAR interrogation.		
Proposed Development	The proposed development comprises a garage conversion for the enjoyment of occupants of the existing dwelling.		
Hydrology	The nearest Main River is approximately 70m south of the Site, flowing in a west to east direction and located to the north of the River Thames. The Site is not within the EA main river consultation zone for Planning Applications.		
Geology	British Geological Survey (BGS) online mapping (1:50,000 scale) [accessed January 2026] indicates that the bedrock geology of the Site comprises the Seaford Chalk Formation And Newhaven Chalk Formation (Undifferentiated)-Chalk. These sedimentary rocks are shallow-marine in origin. They are biogenic and detrital, generally comprising carbonate material (coccoliths), forming distinctive beds of chalk.		

	The superficial geology consists of Langley Silt Member-Clay and silt. These sedimentary deposits are aeolian in origin. They are detrital, comprising medium- to fine- grained materials, forming lenses, beds (and locally) dunes.
Hydrogeology	The MAGIC Interactive Map suggests the superficial geology and the bedrock geology beneath the Site are classified as Principal Aquifer. The superficial deposits are classified as unproductive. The MAGIC Interactive Map indicates that the Site is not in a designated groundwater Source Protection Zone (SPZ).

A layout plan of the Site is provided in Appendix B.

3 RELEVANT PLANNING POLICY AND GUIDANCE

3.1 Introduction

The aim of this section of the report is to discuss the main aspects of the local and national planning policies that are relevant to any proposed development on the site and relevant guidance and legislation.

3.2 National Planning Policy Framework

The Environment Agency's **National Flood Risk Standing Advice for Local Planning Authorities** should be used to assess this proposal.

The proposed development is classified as 'minor development' defined under the Standing Advice, defined as "development of an existing dwellinghouse" and "alterations to an existing building which do not increase the size of the building".

As the Site is located in Flood Zone 2 and 'More Vulnerable', the design should use the **Standing Advice** as a basis for the design:

- Aim to raise floors 600mm above the estimated flood level (or 300mm where there is high certainty of flood level)
- Where this is not possible, aim to raise floors as much as possible, and
- Include extra resistance/resilience measures.

Vulnerability Classification

In accordance with the NPPF (Tables 2 & 3), the vulnerability to flooding of new developments is assessed against the risk of flooding to which they are exposed. The proposed development will be 'dwelling house' as defined under the '**More Vulnerable**' category and as such the proposal is appropriate and compatible with its Flood Zone:

TABLE 1 : FLOOD RISK VULNERABILITY CLASSIFICATION (FROM TABLE 3 OF ONLINE PLANNING PRACTICE GUIDANCE)

Flood Zones	Flood Risk Vulnerability Classification				
	Essential Infrastructure	Highly Vulnerable	More Vulnerable	Less Vulnerable	Water-Compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test required	✓	✓	✓
Zone 3a	Exception Test required	X	✓ Exception Test (not required)	✓	✓
Zone 3b	Exception Test required	X	X	X	✓

3.3 Best Practice flood risk assessment guidance

The Environment Agency Flood Risk Assessment Template and Guidance⁹, released by the EA in August 2025, has been used to undertake this report. It advocates a proportionate approach to small-scale development.

3.4 Lifetime of development

In line with EA standards, the use of the proposed development warrants a considered lifetime of 100 years.

3.5 Local Policy and SFRA recommendations

The Reading Borough Council Level 1 SFRA (2017) and the Reading Local Plan contain risk assessment data and recommended assessment methodologies used to inform this report.

⁹<https://www.planningportal.co.uk/permission/commercial-developments/understanding-and-assessing-flood-risk/your-flood-risk-assessment>

4 ASSESSMENT OF FLOOD RISK TO THE PROPOSED DEVELOPMENT

4.1 Introduction

In accordance with the NPPF flood risk from all potential sources will be assessed to determine if the site is at risk from flooding. This involves the assessment of:

- the flood risk to the proposed development site; and
- the potential impact of the proposed development on flood risk elsewhere.

This section presents the assessment of all potential sources of flood risk to the proposed development.

4.2 Fluvial Flood Risk and Tidal Flood Risk

Main Rivers

The nearest Main River is approximately 70m south of the Site, flowing in a west to east direction. The Site is not within the EA main river consultation zone for Planning Applications.

Ordinary Watercourses

No ordinary watercourses are indicated onsite in the Reading Level 1 SFRA (2017).

Historic Flooding

The EA Recorded Flood Outlines dataset shows that the Site was affected by fluvial flooding in 1947, with the cause 'channel capacity exceeded (no raised defences)'. The SFRA also indicates historic fluvial flooding at the Site in 1977.

Flood Zone for Planning

The EA Flood Map for Planning (see Figure 2) indicates that the Site is in Flood Zone 2. This means that the area has an annual probability of flooding of between 0.1% (<1 in 1000) to 1% (1 in 100) or greater. This risk mapping does **not** consider the benefits of any defences.

Flood Zone 3b

The Reading Borough Council Level 1 SFRA (2017) indicates that the Site is unaffected by Flood Zone 3b (Figure 3).



Figure 2: EA's Flood Map for Planning showing present day Flood Zones

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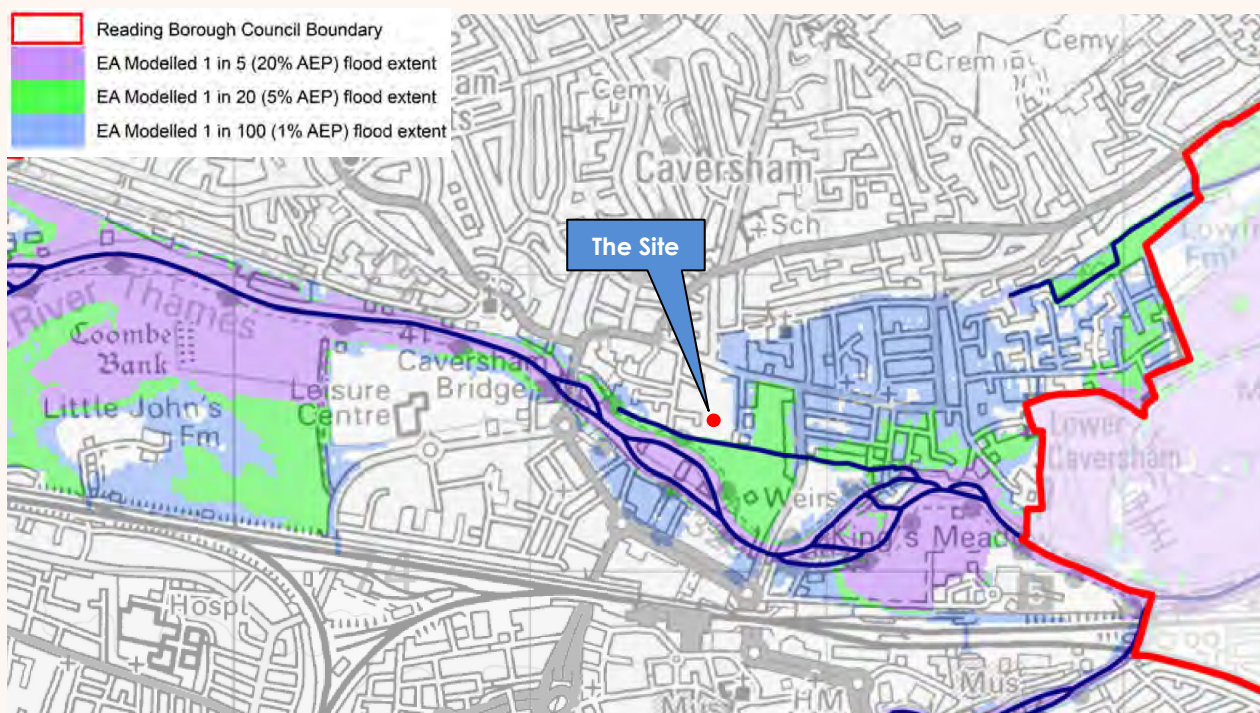


Figure 3: Reading Borough Council Level 1 SFRA (2017) – Flood Zones

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4.2.1 Present Day Fluvial Flood Risk

Assessment Methodology

The following datasets have been obtained and assessed:

- Product 4 data from the Environment Agency (Appendix C).
- The national flood risk mapping datasets (defended and undefended) produced by the Environment Agency.

National Modelling - Defended

The present day defended scenario extents from national modelling are shown in Figure 4.

The defended products take into account the presence of flood defences and assume that they operate in the way they were intended (or designed) to function.

The risk to the Site is reduced in the defended scenario, when compared to the national undefended modelling (Figure 2). It is at 0.1% AEP risk to <0.1% risk.

Therefore, present day fluvial risk to the Site in the defended scenario is considered Low to Very Low.

National Modelling - Undefended

The present day undefended scenario extents from national modelling are shown in Figure 2 (Flood Map for Planning).

The Site is affected by the undefended flood extent for 0.1% AEP.

Therefore, present day fluvial risk to the Site in the undefended scenario is considered Low.



Figure 4: EA's national modelling showing present-day defended fluvial risk to the Site

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Nearby Defences

A review of the EA National Spatial Flood Defence database indicates that Site benefits from defences designed to prevent flooding from the nearest main river. The nearest defences are described as 'natural high ground' designed to provide a 1 in 2 year (50% AEP) Standard of Protection (SoP) against flooding associated with the main river. Based on the reduced flooding expected in the defended scenario, it is anticipated that the Site benefits from more substantial SoP defences in the wider catchment. The defences shown in the EA database are presented in Figure 5.

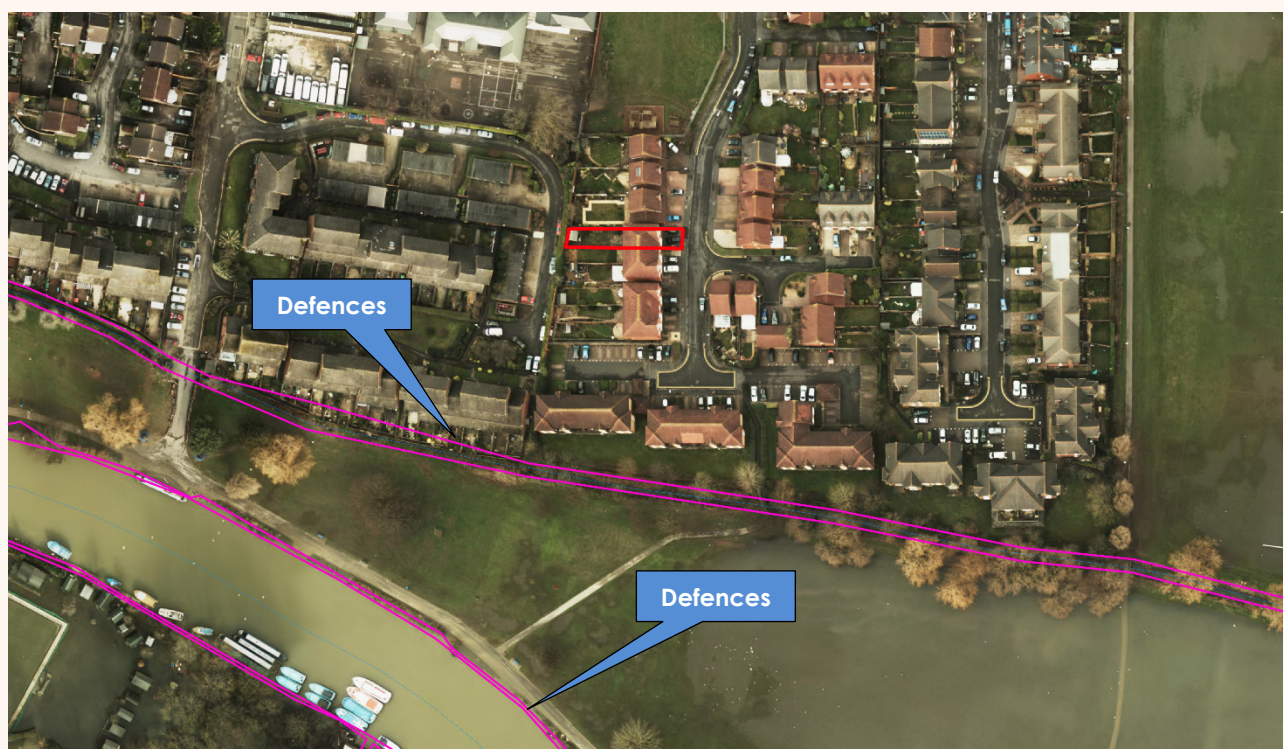


Figure 5: Nearest defences in EA AIMS database

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4.2.2 Design Fluvial Flood Event

Climate Change Allowance

New developments must consider the latest EA Climate Change guidance to assess flood risk. The Site is in the Thames and South Chilterns Management Catchment and the appropriate allowance is 31% (Central allowance 2080s epoch). In this instance, the proposed development must be designed to the 1 in 100 (1% AEP) event plus **31%** climate change for peak river flow.

Assessment Methodology

The following datasets have been obtained and assessed:

- Product 4 data from the Environment Agency (Appendix C).

The Product 4 data contains undefended climate change scenarios from the Thames (Pangbourne Sonning) 2019 model.

This includes a 1% AEP + **35%** climate change event, which is an appropriate design flood for the development. Tabulated values from the 2D grid sample points are shown in Figure 6. The 1 AEP + 35% CC extent was not provided as a figure, so the 0.1% AEP is displayed to show the 2D grid sample point locations.

The proposed development is unaffected by the design flood event, and therefore **fluvial risk in the design flood event including climate change is considered Very Low**.

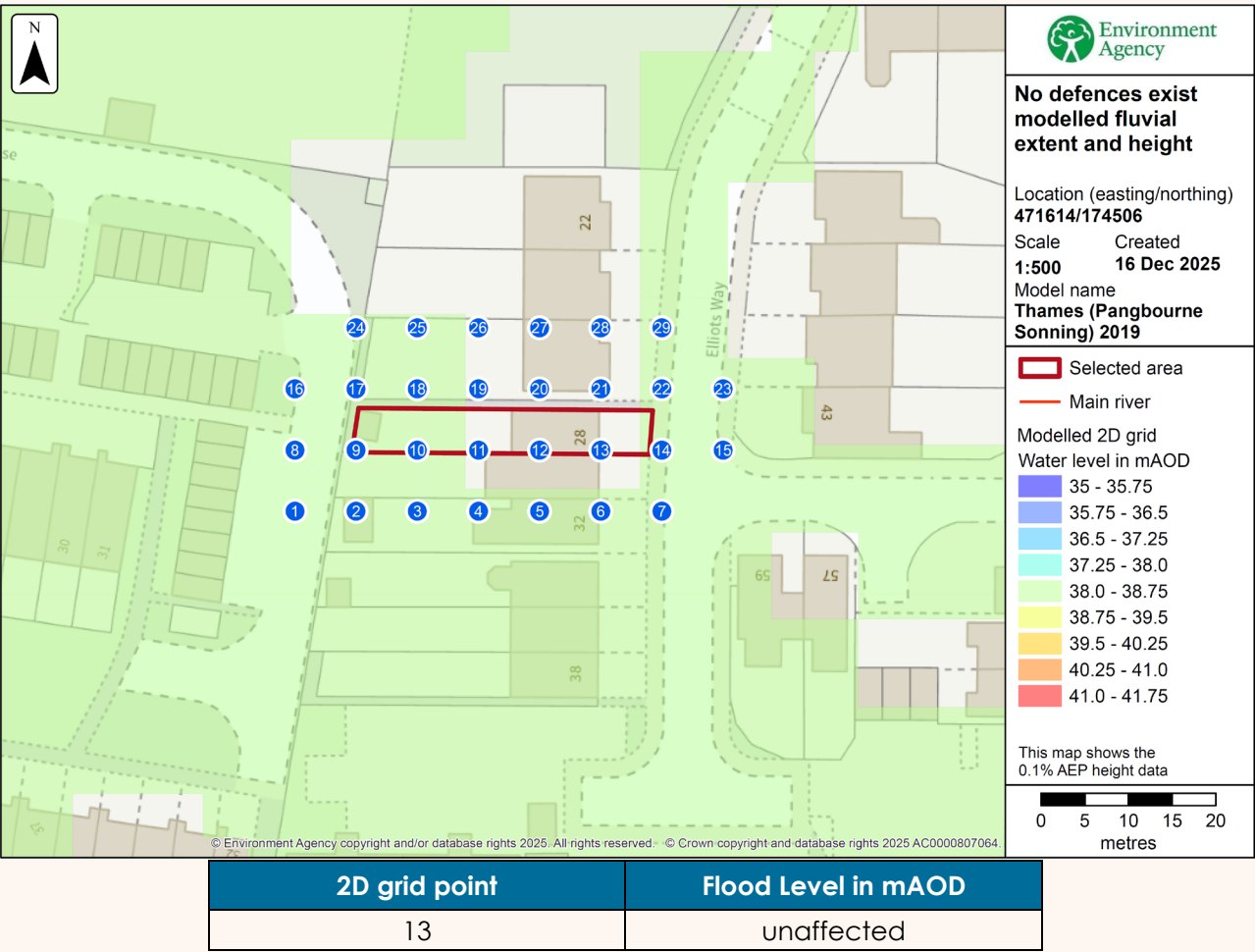


Figure 6: EA's Thames (Pangbourne Sonning) 2019 model. Extent displayed is 0.1% AEP. Tabulated values are for design flood (1% AEP + 35% Climate Change).

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4.2.3 Residual Risk Fluvial Flood Event

The Residual fluvial risk event to be considered under EA guidance is the 0.1% AEP+ CC event. The following datasets have been obtained and assessed:

- Product 4 data from the Environment Agency (Appendix C).

No 0.1% AEP plus climate change scenario was provided. Therefore, the following scenarios have been identified and assessed as suitable proxies. This is considered reasonable and proportionate for a development of this scale.

- 0.1% AEP undefended (Thames (Pangbourne Sonning) 2019 model.)
- 1% AEP + 70% climate change (Thames (Pangbourne Sonning) 2019 model.)

Tabulated values from the 2D grid sample points are shown in Figure 6. The highest value is the 1% + 70% CC value (**38.55 mAOD**) and this has therefore been taken as the **residual risk** flood level.

The proposed development is **affected** by the residual risk flood event, and therefore **fluvial risk in the residual risk event including climate change is considered Medium**.

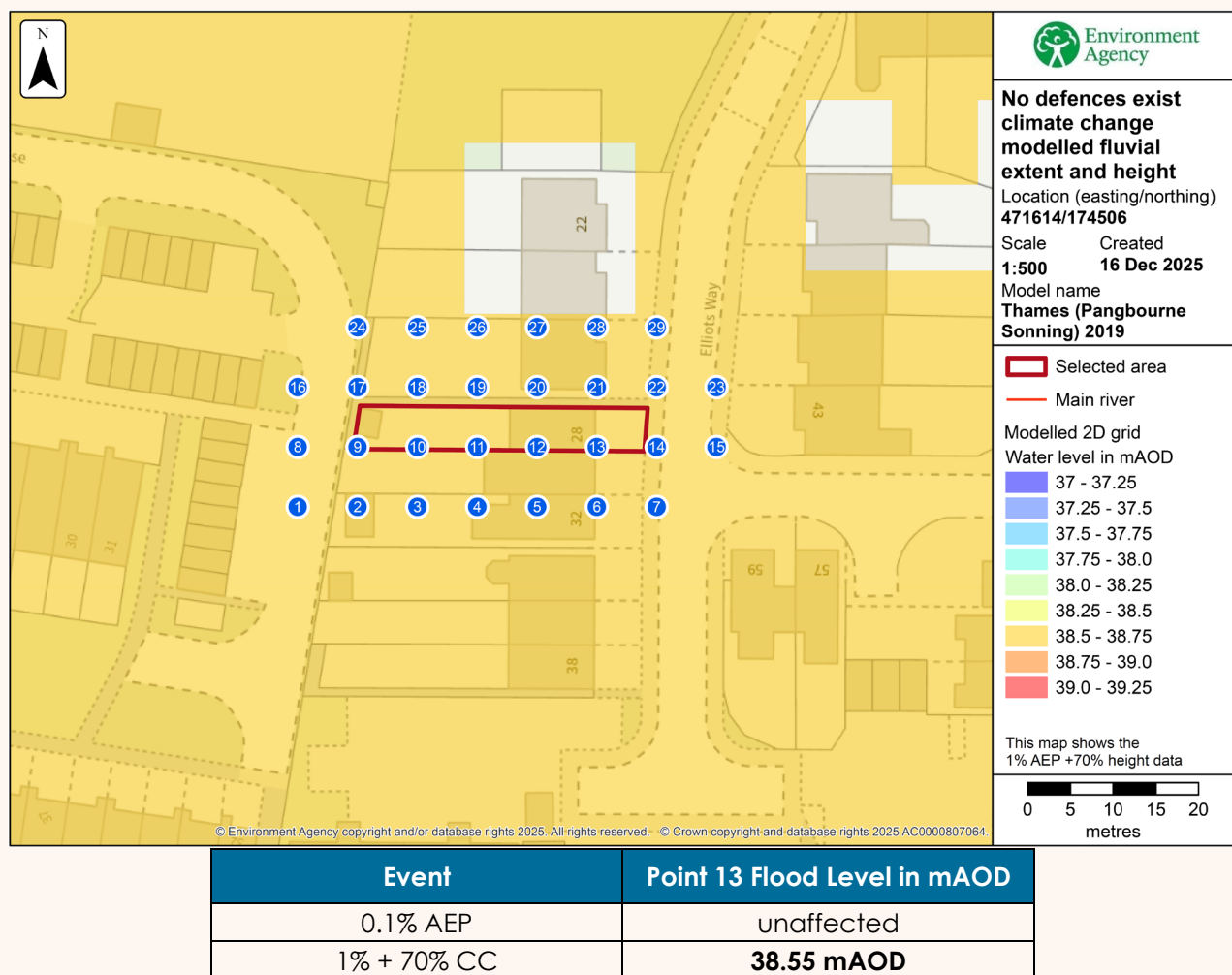


Figure 7: EA's Thames (Pangbourne Sonning) 2019 model. Extent displayed is 1% AEP + 70% Climate Change. Tabulated values are for residual risk flood levels.

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Impact of Development

It has been confirmed by analysis in Section 4.2 that:

- The Site is not located within the Functional Floodplain 3b.
- The proposal will not occupy any 1%+CC flood extent up to and including the design flood event of 1% + 35CC, and there is no change in existing building footprint (therefore not displacing any water in this event).

Therefore, it will not exacerbate risk to nearby receptors. **The impact of the development on fluvial flooding is considered Low and Acceptable.**

4.3 Surface Water Flood Risk

Present Day Surface Water Flood Risk

The SFRA (2017) has been checked to confirm if locally-derived flood risk data is available for assessment. No local modelling is available and the SFRA instead signposts to the national Risk of Flooding from Surface Water (RoFSW) dataset, which has therefore been assessed in this section.

The RoFSW dataset indicates that the Site is at **Very Low (<0.1% AEP) risk**. This is shown in Figure 11.

The SFRA (2017) has not provided any indication of historic surface water flooding on the Site.

Therefore, present day risk to the Site from surface water flooding is considered Very Low.



Figure 8: EA's Risk of Flooding from Surface Water (RoFSW) mapping

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4.3.1 Design Surface Water Flood Event

Climate Change Allowance

New developments must consider the latest EA Climate Change guidance to assess flood risk. The Site is in the Thames and South Chilterns Management Catchment and the appropriate allowance is 40%. In this instance, the proposed development must be designed to the 1 in 100 (1% AEP) event plus 40% climate change for peak rainfall intensity.

Assessment Methodology

The Flood Map for Planning RoFSW plus Climate Change is the only available dataset. It considers the 'Central' allowance epoch for the 2050s. No 2070s epoch or upper end allowance data is available. The data is considered an acceptable proxy for a development of this type and scale.

RoFSW plus Climate Change dataset

The RoFSW plus Climate Change dataset indicates that the Site remains at **Very Low (<0.1% AEP)** risk in the future climate change scenario. This is shown in Figure 12.

The proposed development is **unaffected** by the design flood event, and therefore **surface water risk in the design flood event including climate change is considered Very Low**.



Figure 9: EA's Risk of Flooding from Surface Water (RoFSW) with climate change allowance.

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4.3.2 Residual Surface Water Risk

The Residual surface water risk event to be considered under EA guidance is the 0.1% AEP+ CC event.

The available data is again as-listed in Section 4.3.1 and displayed in Figure 9.

The proposed development is **unaffected** by the residual risk surface water flood event, and therefore **surface water risk in the residual risk flood event including climate change is considered Very Low**.

4.3.3 Impact of Development – including Drainage Strategy

The proposed development is a minor development within an existing dwelling and its garden curtilage and in line with national guidance, a proportionate approach is advocated.

The proposed development is a garage conversion which means there is no increase in footprint or impermeable area. As an integrated part of the existing building's ground floor, the garage has no footprint or roof of its own.

As an integral part of the existing house, it is considered reasonable and proportionate that the property will continue draining into the existing private drainage serving the Site. The property owner will maintain and manage this system to ensure it manages surface water without defect.

By implementing this surface water management, **there will therefore be no increase in surface water runoff and therefore no increase in risk** to the Site and neighbouring properties. **The impact of the development on surface water flooding considered Low and Acceptable.**

4.4 Groundwater Flood Risk

Baseline Risk to the Site

The SFRA has been checked to assess risk of flooding from groundwater. It has not provided any evidence of elevated risk, or documentation of historic groundwater flooding at the Site.

British geological Society (BGS) borehole data has been examined for records considered representative of the Site's groundwater conditions. No representative borehole records are available.

Impact of Development

Considering the above evidence and the above-ground nature of the proposal (no basement), it is unlikely that groundwater will pose a risk to the development.

The impact of the development on groundwater flooding during construction and operation may be considered **Low and Acceptable**.

4.5 Artificial Sources Flood Risk

Baseline Risk to the Site

The SFRA has been checked to assess risk of flooding from Artificial Sources. No evidence has been identified that the Site is at elevated risk of artificial flooding, including risk from sewers, canals or reservoirs. The Check your Long Term Flood Risk mapping service indicates that while there is a risk of reservoir flooding in the area, it is "extremely unlikely".

With this in mind, the risk of flooding from artificial sources is considered **Low and Acceptable**.

Impact of Development

The proposed development is not deemed to impact flood risk from artificial sources as it is a minor garage conversion. The proposed development will not exacerbate pressure on the sewer network as outlined in Section 4.3.3. Therefore, the impact of the development on artificial sources may be considered **Low and Acceptable**.

4.6 Summary of Flood Risks

TABLE 2 : ESTIMATED FLOOD LEVEL SUMMARY

Sources of flooding that apply	Estimated flood level in the design flood	Estimated flood level in the residual risk event
Fluvial	unaffected	38.55 mAOD
Surface water	unaffected	unaffected

4.7 Design Flood level according to all the sources identified

The design flood level should be taken as 'unaffected'.

5 AVOID THE FLOOD RISK

5.1 Evidence of the Sequential Test

National Planning Policy Guidance¹⁰ and the Standing Advice for Local Planning Authorities¹¹ state:

- "A development is exempt from the sequential test if it is... a householder development like residential extensions, conservatories or loft conversions"

This proposed development is exempt from the Sequential Test on the basis of meeting the above criteria, namely:

- Being a householder development (garage conversion).

5.2 Evidence of the Exception Test

This proposed development is exempt from the Exception Test. As per the Standing Advice for Local Planning Authorities and National Planning Policy Guidance, the Exception Test should only be applied (where required) following application of the Sequential Test. This Site is exempt from the Sequential Test and therefore the Exception Test should not be applied.

¹⁰ <https://www.gov.uk/guidance/flood-risk-and-coastal-change#the-sequential-approach-to-the-location-of-development>

¹¹ <https://www.gov.uk/guidance/flood-risk-assessment-local-planning-authorities#the-sequential-and-exception-tests>

6 CONTROL OF FLOOD RISK

6.1 Proposed Site Levels

As explained in Section 3.2, the design should apply the Standing Advice:

- Aim to raise floors 600mm above the design flood level (or 300mm where there is high certainty of flood level)
- Where this is not possible, aim to raise floors as much as possible, and
- Include extra resistance/resilience measures.

The design flood level can be the fluvial, tidal, or surface water flood level, and this assessment has determined that **the proposed development is unaffected by the fluvial design flood or the surface water design flood.**

The measures in the following Section provide even further flood resistance and resilience to the property, by designing to meet a higher standard (the residual risk flood level of 38.55 mAOD).

Ground Floor

"Finished Floor Level" (FFL) and layout information has been provided by the Client.

The Floor levels communicated by the client have been verified using Lidar and on-site measurements (Figure 10).

A feasibility assessment has been undertaken into the possibility of raising the proposed FFL above the residual risk flood level.

- The proposed garage floor will be raised from existing ground level to match the FFL of the main dwelling (**38.57 mAOD**). This FFL is above the residual flood level (38.55 mAOD).
- The existing garage door will be bricked in with a high window installed, removing a threshold through which water could enter and increasing resistance to flooding.

By introducing the above alterations, the proposal will significantly increase the property's overall resilience to flood risk.

It is considered that the proposed FFL meets the above Standing Advice, by raising the floors as much as possible, and making adequate provision for resistance & resilience measures set in accordance with the residual risk flood level in the following Section.



Figure 10: Cross-sectional analysis using Lidar to validate Floor Levels information.

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DTM: SU77sw – 2019 – 1 m resolution - Defra survey database¹²

DSM: SU77sw – 2019 – 1 m resolution - Defra survey database

¹² <https://environment.data.gov.uk/survey>

7 MITIGATE FLOOD RISK

7.1 Introduction

This section discusses the further mitigation measures proposed to address the residual risk fluvial flood level.

7.2 Risk to property/building

The building design should:

- prioritise excluding flood water where possible
- speed recovery in case water gets in

Mitigation Measures

The design will incorporate the following measures as-recommended by the EA Standing Advice. These are all set relative to the residual flood level:

- Raising all sensitive electrical equipment, wiring and sockets on the ground floor to at least 600mm above the estimated flood level (to at least 39.15 mAOD). This complies with Building Regs Document P which states: switches and sockets should be between 450mm to 1200mm above FFL.
- Using flood resistant materials that have low permeability to at least 600mm above the estimated flood level (to at least 39.15 mAOD). Exact products are to be specified at detailed design following granting of planning approval.
- Using flood resilient materials (for example lime plaster) to at least 600mm above the estimated flood level (to at least 39.15 mAOD). Exact products are to be specified at detailed design following granting of planning approval.

7.3 Risk to people

The proposed garage conversion does not place any vulnerable uses (such as bedrooms) on the ground floor. Safe refuge is available on an upper floor, and the garage conversion will have full connectivity to the rest of the house, enabling access the internal staircase. This means that the proposed garage conversion presented in this planning application is entirely appropriate. As a minor alteration within an existing dwelling, the proposed development will also not result in an increased number of people placed in an area of flood risk. **It is therefore considered that the risk to people is appropriately managed.**

7.4 Floodplain storage and conveyance compensation

Detailed analysis in Section 4.2.2 has confirmed that the Site is not located within the Functional Floodplain 3b, and the proposal will not occupy any 1%+CC flood extent up to and including the design flood event of 1% + 35CC. There is no change in existing building footprint (therefore not displacing any water in this event). **Therefore, no loss of functional floodplain will result from this development, and storage compensation is not required.**

8 MANAGE FLOOD RISK

8.1 Residual flood risk

As the Site is unaffected by the design flood, the development has been designed to the residual risk flood level instead.

It is therefore considered that the residual risk event is well-managed in the design.

8.2 Safe access and escape

The Standing Advice does not require an Evacuation Plan to be submitted with the Flood Risk Assessment for this minor garage conversion, as it would be disproportionate to the scale and nature of the proposal. Notwithstanding this, a search has been done for Flood Warnings and Flood Alerts that the applicant can sign up to.

The Site benefits from Flood Alerts (early warning of possible flooding) and Flood Warnings (act now - flooding expected or danger to life).

The applicant will manage residual risk by utilising Flood Alerts to indicate the risk of severe flooding.

As a single, privately-owned residential dwelling, the applicant and any future users will be responsible for evacuation of the property should it be required.

The applicant will sign up to Flood Alerts and use these to inform any need to prepare or evacuate the property: <https://www.gov.uk/get-flood-warnings>

9 SUMMARY OF MEASURES

Impact of Flood Risk on the Proposed Development

The proposed development is at **Low** risk of fluvial flooding, and **Very Low** risk of surface water flooding, including considering the effects of climate change, and using conservative approaches to assessing the design flood level.

Through implementation of the Control & Mitigation measures in line with EA Standing Advice, the risk to the proposed development from all sources is considered **Low and Acceptable**.

Impact of the Proposed Development on Flood Risk

The proposed development is a garage conversion which means there is no increase in footprint or impermeable area. As an integrated part of the existing building's ground floor, the garage has no footprint or roof of its own. No functional floodplain will be lost due to development up to and including the design flood event (1% plus 35% climate change). The proposed development will therefore not exacerbate risk to nearby receptors, and its impact on all sources of flooding is considered **Low and Acceptable**.

9.1 Control & Mitigation of Flood Risk

Ground Floor Level

The design flood level can be the fluvial, tidal, or surface water flood level, and this assessment has determined that **the proposed development is unaffected by the unaffected by the 1% plus climate change fluvial design flood or surface water design flood.**

The measures in the following Section provide even further flood resistance and resilience to the property, by designing to meet a higher standard (the residual risk flood level of 38.55 mAOD).

- The proposed garage floor will be raised from existing ground level to match the FFL of the main dwelling (38.57 mAOD) which is above the residual flood level (38.55 mAOD).
- The existing garage door will be bricked in with a high window installed, removing a threshold through which water could enter and increasing resistance to flooding.

By introducing the above alterations, the proposal will significantly increase the property's overall resilience to flood risk.

It is considered that the proposed FFL meets the above Standing Advice, by raising the floors as much as possible, and making adequate provision for resistance & resilience measures set in accordance with the residual risk flood level in the following Section.

Extra Resistance and Resilience Measures

The design will incorporate the following measures as-recommended by the EA Standing Advice. These are all set relative to the residual flood level:

- Raising all sensitive electrical equipment, wiring and sockets on the ground floor to at least 600mm above the estimated flood level (to at least 39.15 mAOD). This complies with Building Regs Document P which states: switches and sockets should be between 450mm to 1200mm above FFL.
- Using flood resistant materials that have low permeability to at least 600mm above the estimated flood level (to at least 39.15 mAOD). Exact products are to be specified at detailed design following granting of planning approval.
- Using flood resilient materials (for example lime plaster) to at least 600mm above the estimated flood level (to at least 39.15 mAOD). Exact products are to be specified at detailed design following granting of planning approval.

9.2 Management of Flood Risk

Residual Risk

As the Site is unaffected by the design flood, the development has been designed to the residual risk flood level instead.

It is therefore considered that the residual risk event is well-managed in the design.

Risk to People, including Access and Escape

The proposed garage conversion does not place any vulnerable uses (such as bedrooms) on the ground floor. Safe refuge is available on an upper floor. This means that the proposed garage conversion presented in this planning application is entirely appropriate. As a minor alteration within an existing dwelling, the proposed development will also not result in an increased number of people placed in an area of flood risk. **It is therefore considered that the risk to people is appropriately managed.**

The Site benefits from Flood Alerts (early warning of possible flooding) and Flood Warnings (act now - flooding expected or danger to life).

The applicant will manage residual risk by utilising Flood Alerts to indicate the risk of severe flooding.

The applicant will sign up to Flood Alerts and use these to inform any need to prepare or evacuate the property: <https://www.gov.uk/get-flood-warnings>

APPENDIX A LIMITATIONS

The recommendations presented in this Report constitute the professional judgment of Flood For Planning, formulated in accordance with the information referenced herein and applying the standard of care expected of a qualified Environmental Consultant. Flood For Planning makes no representation or warranty, express or implied, regarding the absence of hazardous or potentially hazardous substances or conditions at the Site.

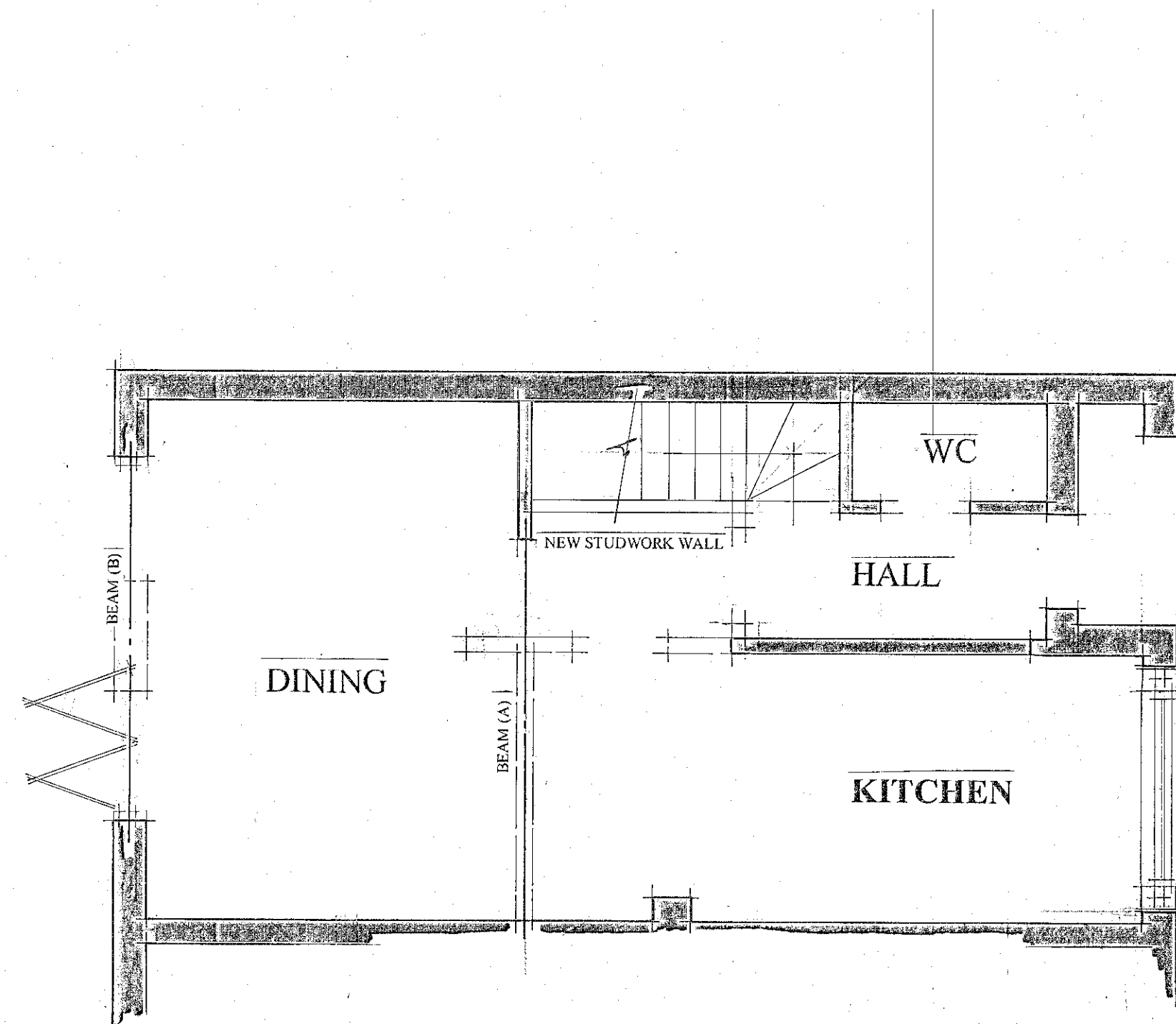
In preparing this Report, Flood For Planning has acquired, reviewed, and assessed information provided by the Client and third parties. The conclusions, opinions, and recommendations contained herein are based solely on the information made available to Flood For Planning at the time of assessment. Flood For Planning does not warrant the completeness or accuracy of such information and disclaims any liability for conclusions or opinions which it has reached in reliance upon information which is subsequently proven to be inaccurate or incomplete.

This Report has been prepared exclusively for the Client and for the specific scope of work for which Flood For Planning was engaged. No portion of this Report shall be interpreted as conferring rights or benefits to any party other than the Client and Flood For Planning. All obligations and responsibilities undertaken by Flood For Planning are for the sole benefit of the Client and shall not extend to any third party.

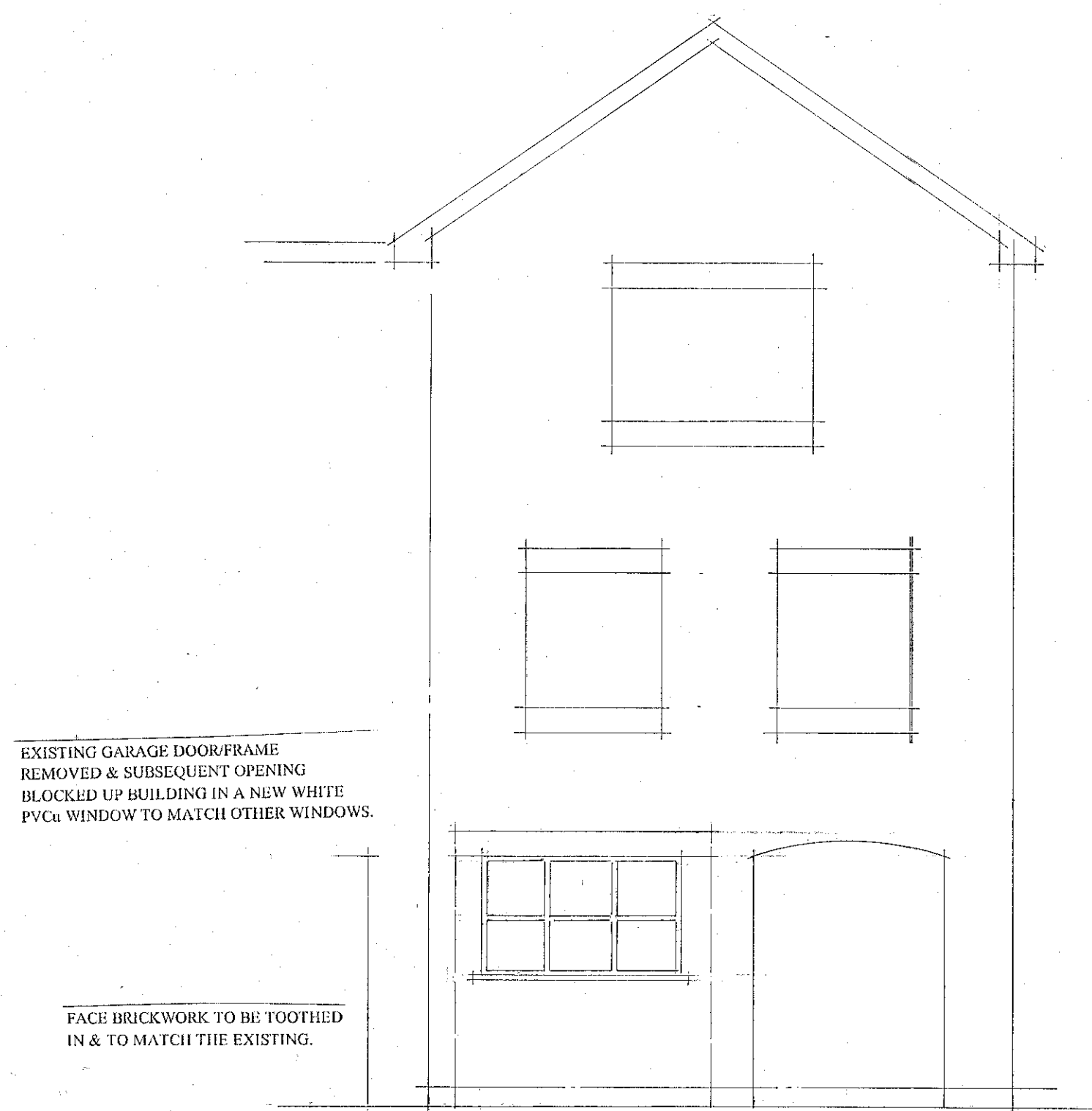
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APPENDIX B SITE LAYOUT PLAN

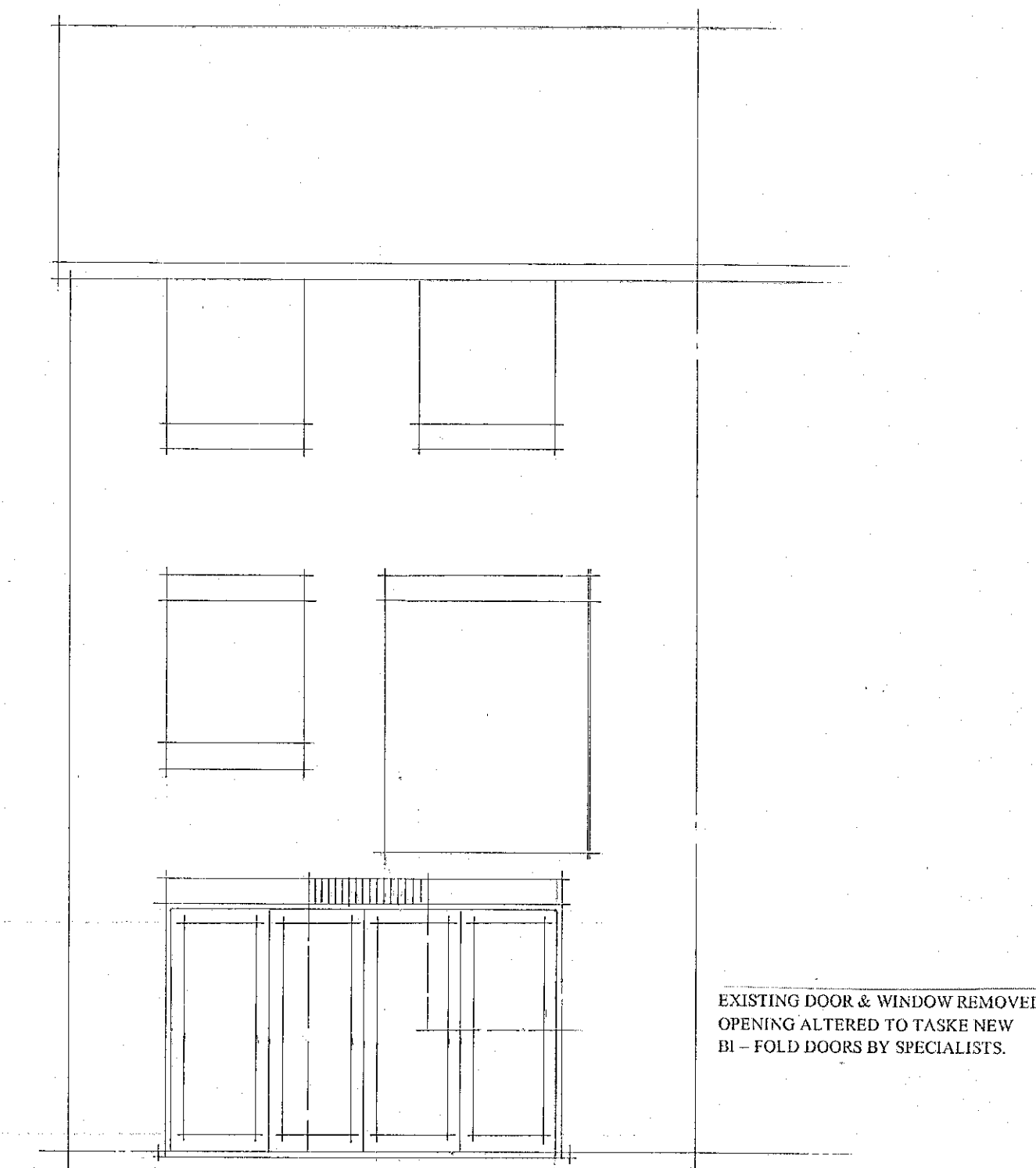
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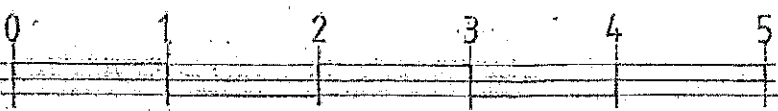
PROPOSED FLOOR PLAN



PROPOSED FRONT ELEVATION



PROPOSED REAR ELEVATION



NOTES:
All dimensions must be checked on site and not scaled from this drawing.

A		Date	Revisions
© copyright			

Client

Job Title
**28,ELLIOTS WAY,
CAVERSHAM,
READING.
BERKS
RG4 8BF**

Drawing Title
**PROPOSED CHANGE
OF USE OF GARAGE
TO A HABITABLE ROOM.**

SCALE 1/50

Date
NOVEMBER 2025

Drg. No.
TL/001/25

Rev.

APPENDIX C EA CORRESPONDENCE

Flood risk assessment data



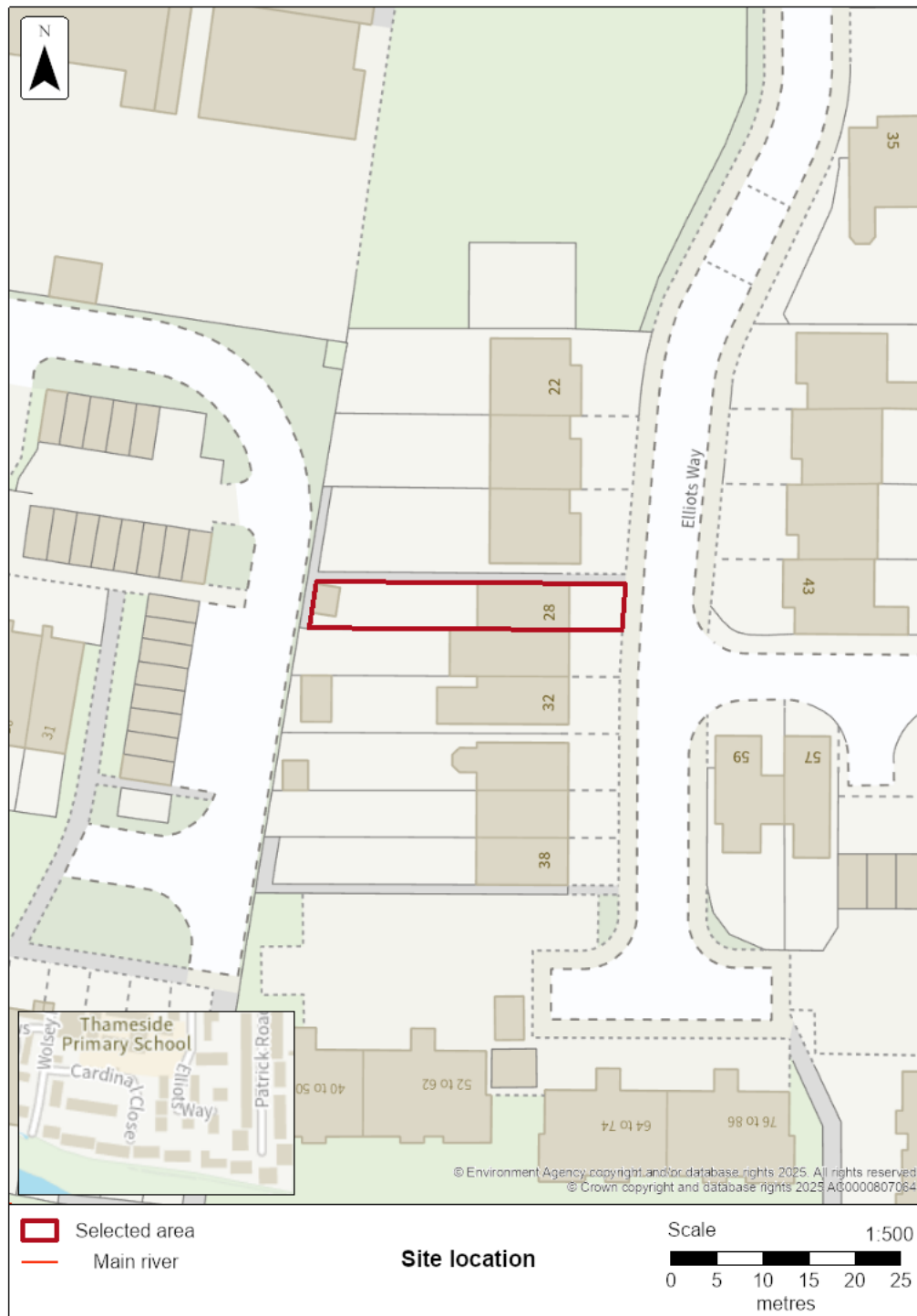
Location of site: 471614 / 174506 (shown as easting and northing coordinates)

Document created on: 16 December 2025

This information was previously known as a product 4.

Customer reference number: 99N2V8X8YVE4

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



How to use this information

You can use this information as part of a flood risk assessment for a planning application. To do this, you should include it in the appendix of your flood risk assessment.

We recommend that you work with a flood risk consultant to get your flood risk assessment.

Included in this document

In this document you'll find:

- how to find information about surface water and other sources of flooding
- information on the models used
- definitions for the terminology used throughout
- flood map for planning (rivers and the sea)
- past floods
- modelled data
- information about strategic flood risk assessments
- information about this data
- information about flood risk activity permits
- help and advice

Information that's unavailable

This document **does not** contain:

- flood defences and attributes

We aren't able to display flood defence locations and attributes as there are no formal flood defences in the area of interest.

Surface water and other sources of flooding

When using the surface water map on the [check your long term flood risk service](#) the following considerations apply:

- surface water extents are suitable for use in planning
- surface water climate change scenarios may help to inform risk assessments, but the available data fall short of what is required to assess planned development
- surface water depth information should not be used for planning purposes

To find out about other factors that might affect the flood risk of this location, you should also check:

- [reservoir flood risk](#)
- groundwater flood risk - you could use the [British Geological Survey groundwater flooding data](#), [groundwater: current status and flood risk](#) and the guide on [mining and groundwater constraints for development](#) - further information may be available from the lead local flood authority (LLFA)
- your local planning authority's SFRA, which includes future flood risk

Your Lead Local Flood Authority is Reading.

For information about sewer flooding, contact the relevant water company for the area.

About the models used

Model name: Kennet (Tyle Mill to Thames Confluence) 2018
Scenario(s): Defended fluvial, defended climate change fluvial
Date: 12 July 2018

Model name: Thames (Pangbourne to Sonning) 2019
Scenario(s): No defences exist fluvial, no defences exist climate change fluvial
Date: 1 January 2020

These models contain the most relevant data for your area of interest.

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 occurring 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.

Flood map for planning (rivers and the sea)

Your selected location is in flood zone 2.

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



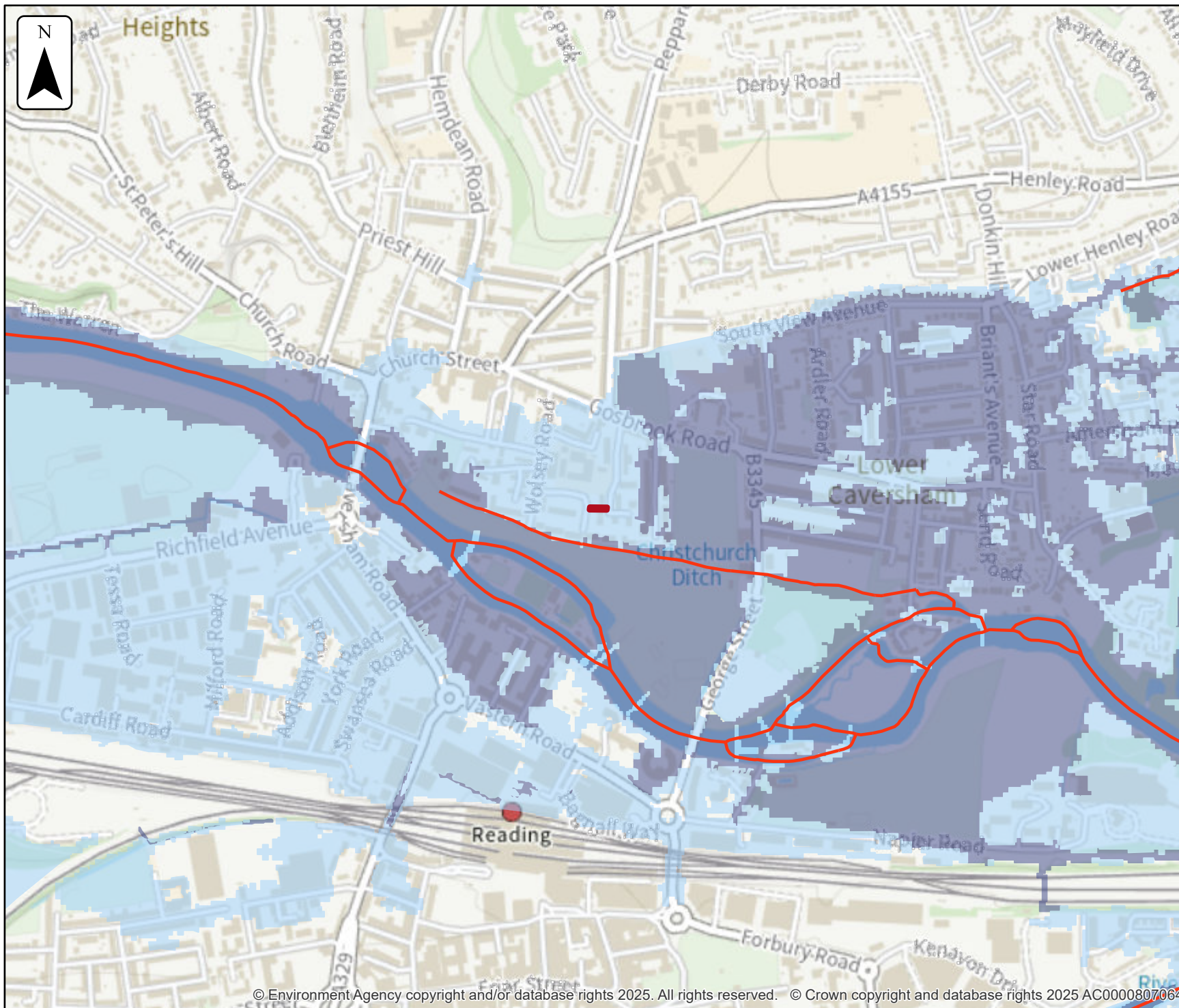
Flood map for planning

Location (easting/northing)
471614/174506

Scale
1:10,000

Created
16 Dec 2025

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



Past floods

Past flood events included in this document

The recorded flood outlines included in this document are for areas of land local to your site location that have been flooded by any of these sources:

- ephemeral water
- main rivers
- ordinary watercourses
- the sea
- unknown

Data limitations

The outlines do not include flooding from:

- drainage where rainfall has led to surface water ponding or overland runoff
- artificial, water-bearing sewer, water supply and wastewater treatment pipelines

Changes to flood defences

The defences (also known as assets) that were in place may also have changed. For example, assets may have been built more recently than the last recorded flood outline.

What the recorded flood outlines dataset is

The recorded flood outlines are a geographical information system (GIS) data layer that show our verified records of areas that have flooded in the past from:

- rivers
- the sea
- groundwater
- surface water

[Download the complete recorded flood outlines dataset](#), which includes data quality flags for outlines recorded after April 2020. This indicates the confidence we have in an outline.

Get flood information from other organisations

Contact Reading Lead Local Flood Authority (LLFA) and your drainage board to get information about past flooding caused by surface water or drainage systems.

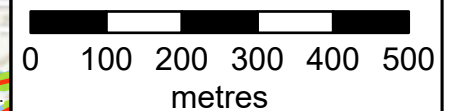


Past floods

Location (easting/northing)
471614/174506

Scale
1:10,000
Created
16 Dec 2025

-  Selected area
-  Main river
- Date of flood event
 -  November, 2013
 -  July, 2007
 -  December, 2002
 -  2000
 -  1977
 -  1974
 -  1947



Data on past flood events

Start date	End date	Source of flood	Cause of flood	Affects location
23 November 2013	28 February 2014	main river	channel capacity exceeded (no raised defences)	No
19 July 2007	29 July 2007	main river	channel capacity exceeded (no raised defences)	No
23 December 2002	12 January 2003	main river	channel capacity exceeded (no raised defences)	No
2000	2000	main river	channel capacity exceeded (no raised defences)	No
1977	1977	main river	channel capacity exceeded (no raised defences)	No
1974	1974	main river	channel capacity exceeded (no raised defences)	No
1947	1947	main river	channel capacity exceeded (no raised defences)	Yes

Modelled data

This section provides details of different scenarios we have modelled and includes the following (where available):

- outline maps showing the area at risk from flooding in different modelled scenarios
- modelled node point map(s) showing the points used to get the data to model the scenarios and table(s) providing details of the flood risk for different return periods
- map(s) showing the approximate water levels for the return period with the largest flood extent for a scenario and table(s) of sample points providing details of the flood risk for different return periods

Climate change

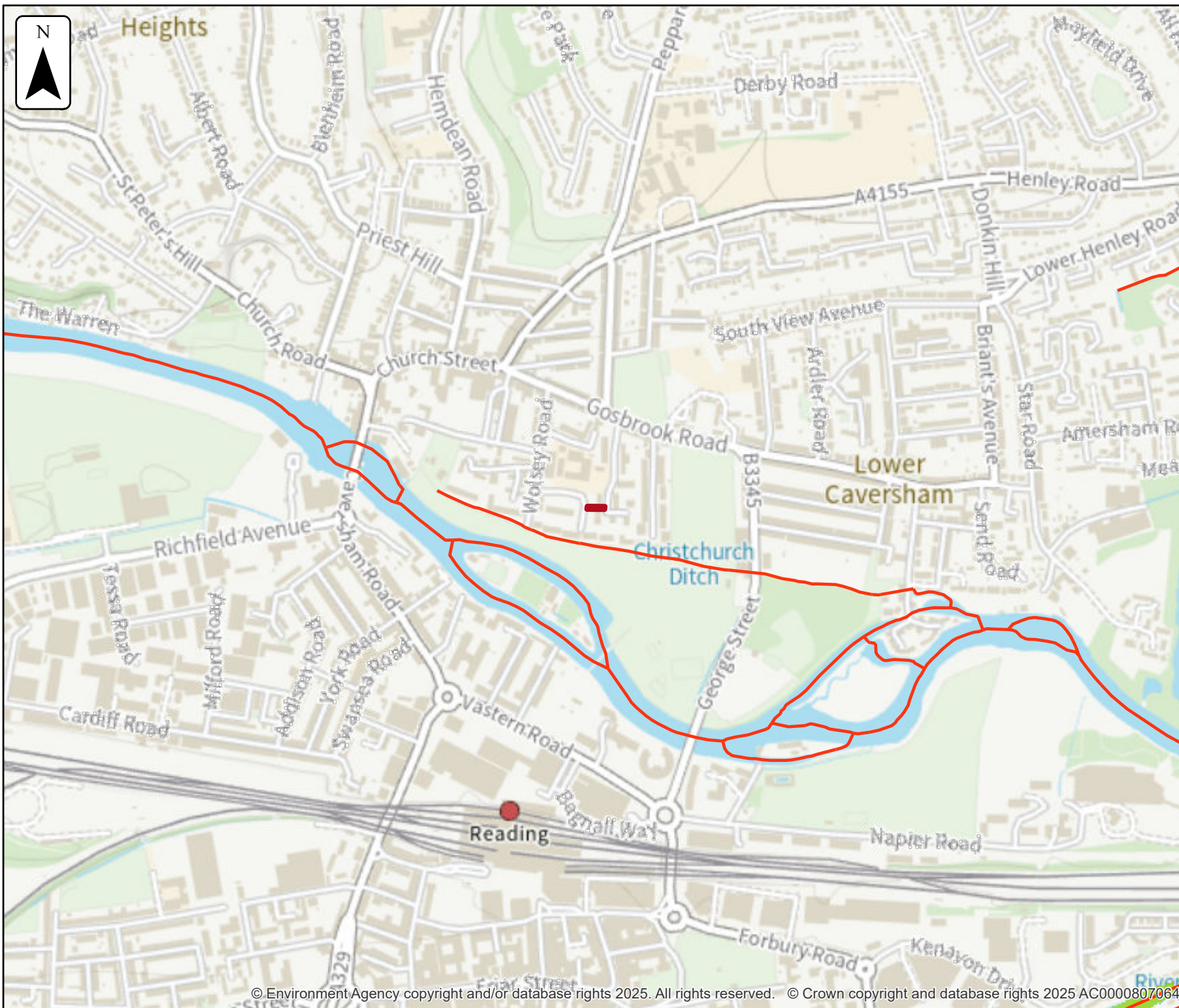
The climate change data included in the models may not include the latest [flood risk assessment climate change allowances](#). Where the new allowances are not available you will need to consider this data and factor in the new allowances to demonstrate the development will be safe from flooding.

The Environment Agency will incorporate the new allowances into future modelling studies. For now, it's your responsibility to demonstrate that new developments will be safe in flood risk terms for their lifetime.

Modelled scenarios

The following scenarios are included:

- Defended modelled fluvial: risk of flooding from rivers where there are flood defences
- No defences exist modelled fluvial: risk of flooding from rivers where there are no flood defences
- Defended climate change modelled fluvial: risk of flooding from rivers where there are flood defences, including estimated impact of climate change
- No defences exist climate change modelled fluvial: risk of flooding from rivers where there are no flood defences, including estimated impact of climate change



Defended climate change modelled fluvial extent

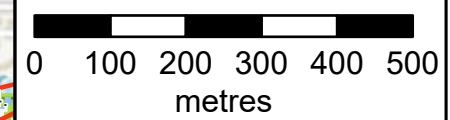
Location (easting/northing)
471614/174506

Scale Created
1:10,000 16 Dec 2025

Model name
**Kennet (Tyle Mill to
Thames Confluence)**

- Selected area
- Main river
- Modelled flood extent
 - 1% AEP (+15%)
 - 1% AEP (+25%)
 - 1% AEP (+35%)
 - 1% AEP (+70%)

Flood extents may not be
visible where they overlap
other return periods





Defended modelled fluvial extent

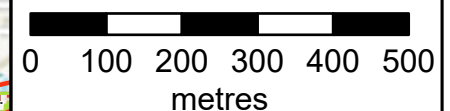
Location (easting/northing)
471614/174506

Scale Created
1:10,000 16 Dec 2025

Model name
**Kennet (Tyle Mill to
Thames Confluence)**

-  Selected area
-  Main river
- Modelled flood extent**
 -  5% AEP
 -  1.33% AEP
 -  1% AEP
 -  0.1% AEP

Flood extents may not be
visible where they overlap
other return periods





**No defences exist
climate change
modelled fluvial extent**

Location (easting/northing)
471614/174506

Scale Created
1:10,000 16 Dec 2025

Model name
**Thames (Pangbourne
Sonning) 2019**

 Selected area

 Main river

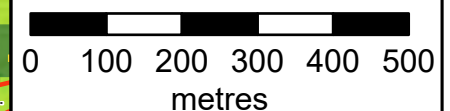
Modelled flood extent

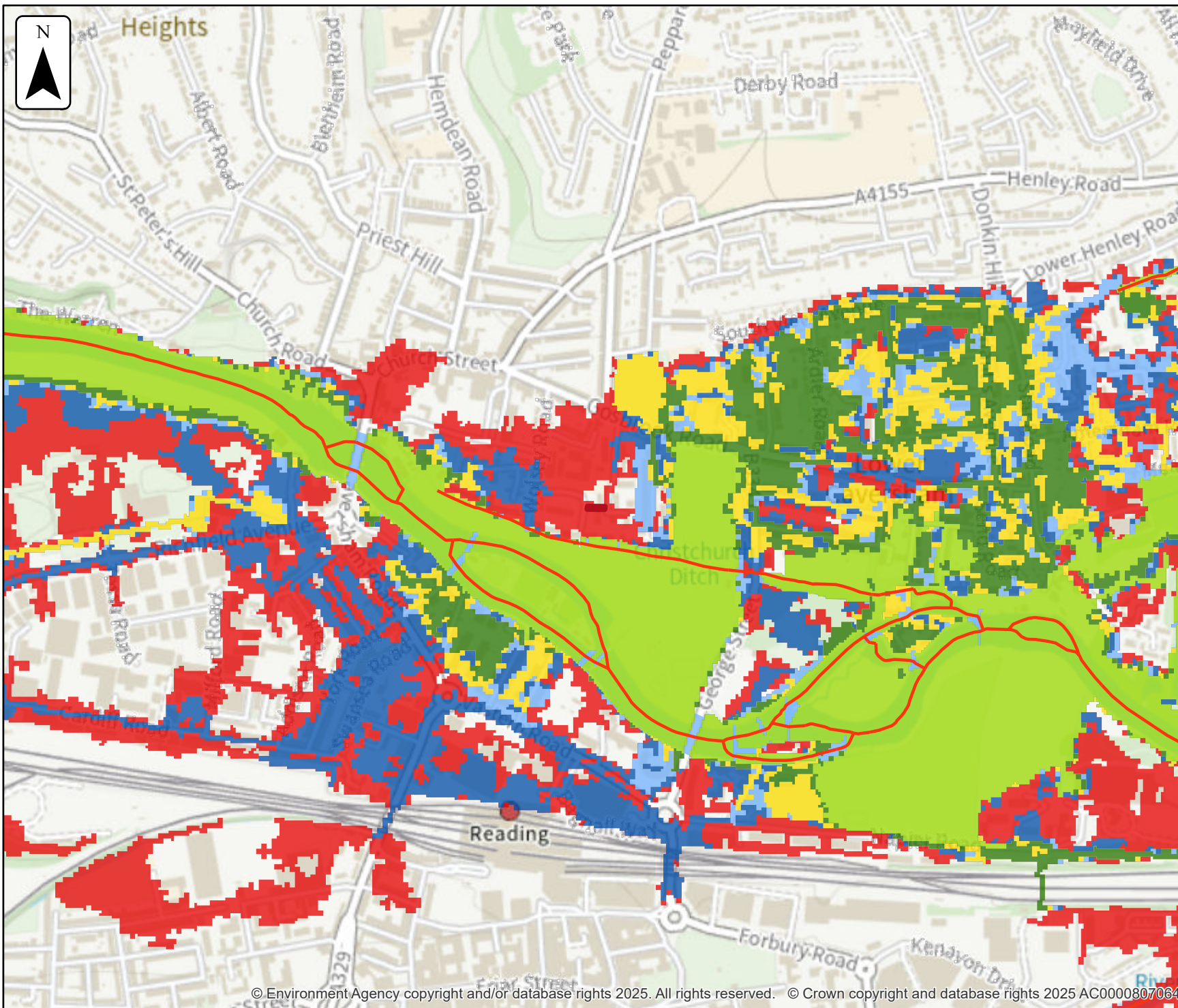
 1% AEP (+25%)

 1% AEP (+35%)

 1% AEP (+70%)

Flood extents may not be
visible where they overlap
other return periods





No defences exist modelled fluvial extent

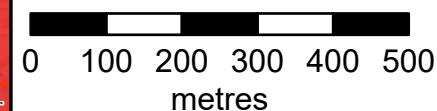
Location (easting/northing)
471614/174506

Scale Created
1:10,000 16 Dec 2025

Model name
**Thames (Pangbourne
Sonning) 2019**

-  Selected area
-  Main river
- Modelled flood extent**
-  5% AEP
-  2% AEP
-  1.33% AEP
-  1% AEP
-  0.5% AEP
-  0.1% AEP

Flood extents may not be
visible where they overlap
other return periods





Defended modelled fluvial node locations

Location (easting/northing)
471614/174506

Scale Created
1:10,000 16 Dec 2025

Model name
**Kennet (Tyle Mill to
Thames Confluence)**

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

Defended

Label	Modelled location ID	Easting	Northing	50% AEP	20% AEP	5% AEP	3.33% AEP	1.33% AEP	1% AEP	0.1% AEP
				Level	Level	Level	Level	Level	Level	Level
1	1350498	472739	173573	36.35	36.37	36.40	36.42	36.44	36.45	36.56
2	1350288	472752	173540	36.35	36.37	36.41	36.42	36.44	36.45	36.55

Data in this table comes from the Kennet (Tyle Mill to Thames Confluence) 2018 model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.

Defended

Label	Modelled location ID	Easting	Northing	50% AEP	20% AEP	5% AEP	3.33% AEP	1.33% AEP	1% AEP	0.1% AEP
				Flow	Flow	Flow	Flow	Flow	Flow	Flow
1	1350498	472739	173573	23.90	30.62	41.43	44.54	51.95	53.26	79.91
2	1350288	472752	173540	20.14	23.57	27.49	28.34	30.20	30.50	35.75

Data in this table comes from the Kennet (Tyle Mill to Thames Confluence) 2018 model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.



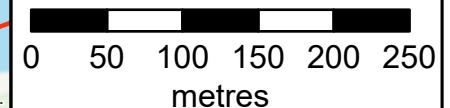
No defences exist modelled fluvial node locations

Location (easting/northing)
471614/174506

Scale Created
1:5,000 16 Dec 2025

Model name
**Thames (Pangbourne
Sonning) 2019**

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

No defences exist

Label	Modelled location ID	Easting	Northing	20% AEP	10% AEP	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Level	Level	Level	Level	Level	Level	Level	Level	Level
1	1400418	471350	174393	37.24	37.43	37.62	37.72	37.84	37.93	37.99	38.13	38.40
2	1400314	471357	174421	37.24	37.43	37.62	37.72	37.84	37.93	37.99	38.13	38.40
3	1400355	471378	174441	37.24	37.43	37.62	37.72	37.84	37.93	37.99	38.13	38.40
4	1400348	471415	174332	37.19	37.38	37.58	37.69	37.82	37.91	37.97	38.12	38.38
5	1400316	471463	174421	37.23	37.42	37.61	37.71	37.83	37.92	37.98	38.13	38.39
6	1400470	471496	174291	37.15	37.34	37.55	37.66	37.78	37.88	37.93	38.08	38.34
7	1400411	471540	174378	37.21	37.39	37.58	37.68	37.80	37.89	37.94	38.08	38.34
8	1400471	471593	174219	37.13	37.31	37.52	37.63	37.76	37.85	37.91	38.06	38.32
9	1400365	471623	174211	37.12	37.30	37.51	37.63	37.75	37.85	37.90	38.05	38.31
10	1400297	471625	174242	37.13	37.31	37.52	37.63	37.76	37.85	37.91	38.06	38.32

Data in this table comes from the Thames (Pangbourne to Sonning) 2019 model.
 Level values are shown in mAOD, and flow values are shown in cubic metres per second.
 Any blank cells show where a particular scenario has not been modelled for this location.

No defences exist

Label	Modelled location ID	Easting	Northing	20% AEP	10% AEP	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
				Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
1	1400418	471350	174393	127.13	134.42	134.45	134.44	134.42	134.43	134.43	134.51	167.06
2	1400314	471357	174421	222.84	255.72	288.45	308.08	334.44	357.34	373.77	415.95	518.79
3	1400355	471378	174441	95.71	121.77	165.19	189.96	219.25	242.74	256.77	291.87	352.06
4	1400348	471415	174332	127.12	135.10	135.14	135.14	135.11	135.12	135.12	135.19	159.18
5	1400316	471463	174421	95.70	120.63	162.15	186.04	214.26	236.93	250.70	284.81	344.56
6	1400470	471496	174291	127.12	135.56	135.63	135.64	135.61	135.60	135.61	135.63	171.41
7	1400411	471540	174378	95.72	119.84	157.55	179.57	206.04	227.48	240.83	274.26	335.70
8	1400471	471593	174219	127.33	137.64	138.03	138.03	138.01	138.01	138.01	139.90	175.06
9	1400365	471623	174211	222.84	250.25	269.16	280.92	298.40	314.21	326.20	356.49	439.36
10	1400297	471625	174242	95.51	112.61	134.83	148.85	167.13	182.57	192.40	217.55	266.07

Data in this table comes from the Thames (Pangbourne to Sonning) 2019 model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.



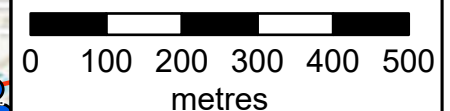
Defended climate change modelled fluvial node locations

Location (easting/northing)
471614/174506

Scale Created
1:10,000 16 Dec 2025

Model name
**Kennet (Tyle Mill to
Thames Confluence)**

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

Defended climate change

Label	Modelled location ID	Easting	Northing	1% AEP (+15%)	1% AEP (+25%)	1% AEP (+35%)	1% AEP (+70%)
				Level	Level	Level	Level
1	1350498	472739	173573	36.49	36.52	36.54	36.64
2	1350288	472752	173540	36.49	36.52	36.54	36.64

Data in this table comes from the Kennet (Tyle Mill to Thames Confluence) 2018 model.
Level values are shown in mAOD, and flow values are shown in cubic metres per second.
Any blank cells show where a particular scenario has not been modelled for this location.

Defended climate change

Label	Modelled location ID	Easting	Northing	1% AEP (+15%)	1% AEP (+25%)	1% AEP (+35%)	1% AEP (+70%)
				Flow	Flow	Flow	Flow
1	1350498	472739	173573	64.37	71.56	76.54	98.53
2	1350288	472752	173540	32.88	34.26	35.16	38.79

Data in this table comes from the Kennet (Tyle Mill to Thames Confluence) 2018 model.
 Level values are shown in mAOD, and flow values are shown in cubic metres per second.
 Any blank cells show where a particular scenario has not been modelled for this location.



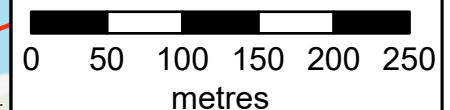
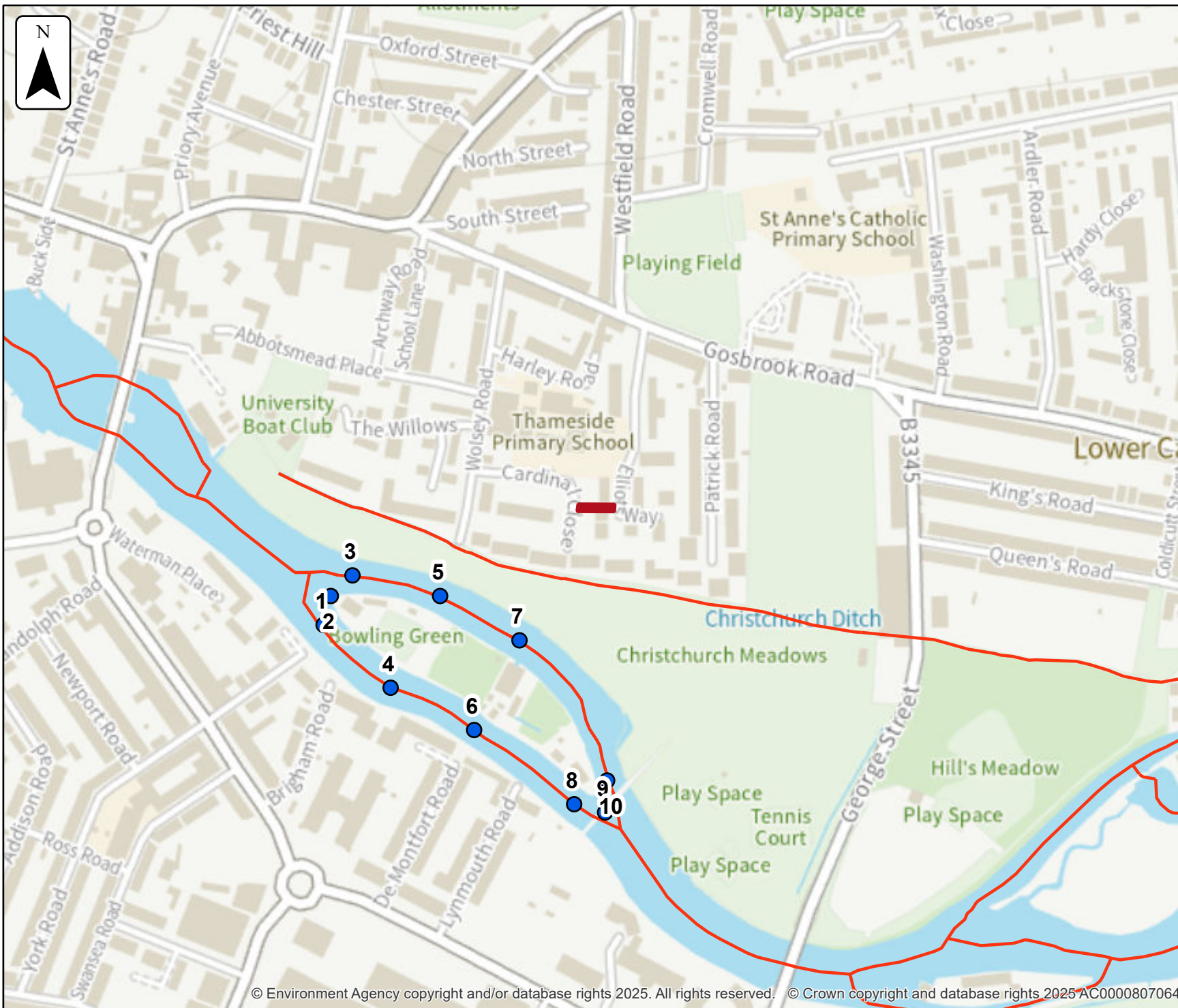
**No defences exist
climate change
modelled fluvial
node locations**

Location (easting/northing)
471614/174506

Scale Created
1:5,000 16 Dec 2025

Model name
**Thames (Pangbourne
Sonning) 2019**

-  Selected area
-  Modelled location
-  Main river



Modelled node locations data

No defences exist climate change

Label	Modelled location ID	Easting	Northing	1% AEP (+25%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+25%)	1% AEP (+35%)	1% AEP (+70%)
				Level	Level	Level	Flow	Flow	Flow
1	1400418	471350	174393	38.25	38.33	38.61	141.56	156.97	189.48
2	1400314	471357	174421	38.25	38.33	38.61	460.79	492.98	597.22
3	1400355	471378	174441	38.25	38.33	38.61	319.23	336.01	409.40
4	1400348	471415	174332	38.23	38.31	38.59	138.18	151.06	180.33
5	1400316	471463	174421	38.24	38.32	38.59	312.03	328.85	402.27
6	1400470	471496	174291	38.19	38.27	38.54	150.30	163.53	194.10
7	1400411	471540	174378	38.19	38.27	38.53	302.07	320.01	391.26
8	1400471	471593	174219	38.17	38.25	38.53	154.58	167.22	198.72
9	1400365	471623	174211	38.16	38.24	38.52	392.60	419.29	515.84
10	1400297	471625	174242	38.17	38.25	38.53	239.23	253.46	313.08

Data in this table comes from the Thames (Pangbourne to Sonning) 2019 model.
 Level values are shown in mAOD, and flow values are shown in cubic metres per second.
 Any blank cells show where a particular scenario has not been modelled for this location.



No defences exist modelled fluvial extent and height

Location (easting/northing)
471614/174506

Scale Created
1:500 16 Dec 2025

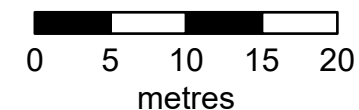
Model name
**Thames (Pangbourne
Sonning) 2019**

-  Selected area
-  Main river

Modelled 2D grid
Water level in mAOD

-  35 - 35.75
-  35.75 - 36.5
-  36.5 - 37.25
-  37.25 - 38.0
-  38.0 - 38.75
-  38.75 - 39.5
-  39.5 - 40.25
-  40.25 - 41.0
-  41.0 - 41.75

This map shows the
0.1% AEP height data



Sample point data

No defences exist

[illegible]

[illegible]

Label	Easting	Northing	20% AEP	10% AEP	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Height	Height	Height	Height	Height	Height	Height	Height	Height
25	471604	174518	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	38.42
26	471611	174518	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
27	471618	174518	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
28	471625	174518	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
29	471632	174518	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	38.37
Max value in selected area:			NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	38.42

Data in this table comes from the Thames (Pangbourne to Sonning) 2019 model. Height values are shown in mAOD, and depth values are shown in metres.

Any blank cells show where a particular scenario has not been modelled for this location.

Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.

'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

No defences exist

[illegible]

[illegible]

Label	Easting	Northing	20% AEP	10% AEP	5% AEP	3.33% AEP	2% AEP	1.33% AEP	1% AEP	0.5% AEP	0.1% AEP
			Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth	Depth
25	471604	174518	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.04
26	471611	174518	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
27	471618	174518	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
28	471625	174518	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData
29	471632	174518	NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.04
Max value in selected area:			NoData	NoData	NoData	NoData	NoData	NoData	NoData	NoData	0.10

Data in this table comes from the Thames (Pangbourne to Sonning) 2019 model. Height values are shown in mAOD, and depth values are shown in metres.

Any blank cells show where a particular scenario has not been modelled for this location.

Cells which contain text 'NoData' for a scenario show that return period has been modelled but there is no flood risk for that return period for that location.

'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.



**No defences exist
climate change
modelled fluvial
extent and height**

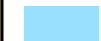
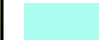
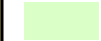
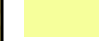
Location (easting/northing)
471614/174506

Scale Created
1:500 16 Dec 2025

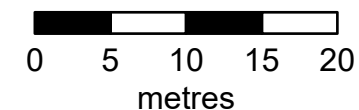
Model name
**Thames (Pangbourne
Sonning) 2019**

-  Selected area
-  Main river

Modelled 2D grid
Water level in mAOD

-  37 - 37.25
-  37.25 - 37.5
-  37.5 - 37.75
-  37.75 - 38.0
-  38.0 - 38.25
-  38.25 - 38.5
-  38.5 - 38.75
-  38.75 - 39.0
-  39.0 - 39.25

This map shows the
1% AEP +70% height data



Sample point data

No defences exist climate change

Label	Easting	Northing	1% AEP (+25%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+25%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
1	471590	174497	38.30	38.37	38.58	0.13	0.20	0.42
2	471597	174497	38.29	38.37	38.58	0.06	0.14	0.35
3	471604	174497	38.30	38.37	38.58	0.07	0.14	0.35
4	471611	174497	NoData	38.37	38.57	NoData	0.02	0.22
5	471618	174497	NoData	38.36	38.56	NoData	0	0.15
6	471625	174497	NoData	NoData	38.55	NoData	NoData	0.25
7	471632	174497	38.23	38.32	38.55	0.06	0.12	0.35
8	471590	174504	38.30	38.37	38.58	0.12	0.19	0.40
9	471597	174504	38.30	38.37	38.58	0.06	0.13	0.35
10	471604	174504	NoData	38.37	38.58	NoData	0.09	0.31
11	471611	174504	NoData	NoData	38.57	NoData	NoData	0.17
12	471618	174504	NoData	NoData	38.56	NoData	NoData	0.14

Label	Easting	Northing	1% AEP (+25%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+25%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
13	471625	174504	NoData	NoData	38.55	NoData	NoData	0.20
14	471632	174504	38.23	38.32	38.55	0.07	0.14	0.37
15	471639	174504	38.23	38.32	38.55	0.09	0.17	0.40
16	471590	174511	38.30	38.37	38.59	0.02	0.08	0.29
17	471597	174511	38.30	38.37	38.58	0.00	0.05	0.26
18	471604	174511	NoData	NoData	38.58	NoData	NoData	0.21
19	471611	174511	NoData	NoData	38.58	NoData	NoData	0.08
20	471618	174511	NoData	NoData	38.57	NoData	NoData	0.11
21	471625	174511	NoData	NoData	38.55	NoData	NoData	0.14
22	471632	174511	38.23	38.32	38.55	0.03	0.09	0.28
23	471639	174511	38.23	38.32	38.54	0.03	0.11	0.34
24	471597	174518	38.30	38.37	38.59	0.00	0.04	0.25

Label	Easting	Northing	1% AEP (+25%)	1% AEP (+35%)	1% AEP (+70%)	1% AEP (+25%)	1% AEP (+35%)	1% AEP (+70%)
			Height	Height	Height	Depth	Depth	Depth
25	471604	174518	NoData	NoData	38.58	NoData	NoData	0.20
26	471611	174518	NoData	NoData	38.58	NoData	NoData	0.03
27	471618	174518	NoData	NoData	38.57	NoData	NoData	0.15
28	471625	174518	NoData	NoData	38.56	NoData	NoData	0.13
29	471632	174518	38.23	38.32	38.55	0.00	0.03	0.17
Max value in selected area:			NoData	38.37	38.58	NoData	0.05	0.26

Data in this table comes from the Thames (Pangbourne to Sonning) 2019 model. Height values are shown in mAOD, and depth values are shown in metres.

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'Max value in selected area' is the deepest depth or highest height at any location within your drawn boundary.

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

Your Lead Local Flood Authority is Reading.

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 Thames Environment Agency team at enquiries_thm@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