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Friday 28 March 2025

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S19 Flood Investigation Report

Committee considering report:	Individual Executive Member Decisions
Date of Committee:	28 March 2025
Portfolio Member:	Councillor Stuart Gourley
Report Author:	Paul Bacchus
Forward Plan Ref:	ID4640

1 Purpose of the Report

1.1 Approve the S19 report and recommended actions produced by WSP and commissioned by WBC in the wake of the January 2024 flood events in accordance with the Flood and Water Management Act (FWMA) 2010. Implementation of works associated with actions from the section 19 report to be carried out according to the prioritisation table in appendix A.

2 Recommendations

2.1 Approve and publish the S19 report.

2.2 Approve the outputs and recommended actions summarised in the prioritisation table in appendix A.

3 Implications and Impact Assessment

Implication	Commentary
Financial:	Additional capital expenditure may be required to fund all recommendations. Additional resource may be required to assist with delivery of the recommended actions (salary burden – revenue costs). Some costs can be absorbed into capital budgets approved for the 2025/26 financial year. This is because there is considerable overlap between the justifications for the additional funding and recommendations in the S19 report.
Human Resource:	Additional burden on existing project staff currently dealing with highway drainage enquiries. Expanding their workload to

	incorporate section 19 actions may put additional pressure on staff and will need to be monitored carefully. The additional burden has not been discussed with HR but will be raised if/when necessary. Regular 1 to 1's with impacted staff will be arranged and staff have been encouraged to flag up any concerns they have with their workload. Additional resource may be required to assist with the delivery of recommended actions.
Legal:	Precedent for the S19 is set out in the Flood and Water Management Act (FWMA) 2010 section 19. Legal involvement is unlikely to be required except where: • We have been advised to notify landowners of riparian responsibilities under the Land Drainage Act 1991 and FWMA 2010 and residents ignore notices. • Breakdown in collaborative efforts to resolve flood risk issues between RMA's. • Additional land take is required to facilitate development of flood mitigation under the Land Drainage Act 1991 and FWMA 2010. Items above are subject to further on-site investigations/studies. Legal will be notified ahead of time if they are required.
Risk Management:	Actions from the S19 are subject to independent risk assessment provided prior to execution. Scope and proposed date of completion of S19 deliverables is subject to creep due to various risks. S19 itself is complete and therefore not subject to further risks. H&S risks will be managed by contractors on site. If any works require design elements executable by WBC designers risk assessments will be carried out.
Property:	S19 report is intended to determine actions that help to mitigate against risk to properties.

	In excess of 50 properties flooded during the January 24 flood event the report specifies actions that may reduce the likelihood of repeat events.			
Policy:	Flood and Water Management Act Section 19 (legal requirement).			
	Positive	**Neutral**	**Negative**	**Commentary**
Equalities Impact:				
A Are there any aspects of the proposed decision, including how it is delivered or accessed, that could impact on inequality?		X		No.
B Will the proposed decision have an impact upon the lives of people with protected characteristics, including employees and service users?	X			Directly – no. Indirectly: Flooding disproportionately impacts residents reliant on care and/or transportation. The recommended actions from the report seek to mitigate flood risk and can be judged to have a positive impact on quality of life of said residents. Potential benefits where flooding issues are resolved: • Reduced road closures due to flooding where highway drainage and widespread flood risk is mitigated. Facilitating essential transport links. • Reduced risk during emergency access/egress procedures. Benefitting emergency procedures.

Environmental Impact:	X			Efforts will be made to mitigate the impact of any works resulting from S19 actions on the environment. Works in the flood risk and drainage environment typically have the following impacts: • Working often near hedgerows or vegetated areas so need to avoid bird nesting season. • Working near ecologically sensitive areas (great crested newt). • Working in or around SSI's. • Working in or around chalk streams. • Waste management from drainage features. • Mobilisation of silt and sediment during construction or maintenance activities. • Management of highway pollutants entering the drainage network. Some actions from the S19 report may result in jetting and cleansing of highway networks which will include pollutant removal therefore having a positive impact.
Health Impact:	X			Reduced flood risk has net positive impact on wellbeing. Potentially reduces risk of injury or death.
ICT Impact:		X		Digital services will be engaged to help upload information onto the website.
Digital Services Impact:		X		Upload/publish S19 report.

Council Strategy Priorities:	X			Service 1: Service we are proud of This would be considered delivery of essential services in accordance with statutory requirements. Delivery of works demonstrates that we are following through with actions to protect residents. Priority Area: 3. Tackling the climate and ecological emergency. Flooding is widely acknowledged as being a direct result of the climate emergency. Taking actions to improve WBC's flood resilience can be considered tackling the emergency. Moreover, if new drainage features are required, we will encourage the implementation of SuDS where possible which will contribute to biodiversity and water quality benefits. Priority Area: 4. A prosperous and resilient West Berkshire Flooding causes mass disruption of transportation and can impact businesses directly. Carrying out actions to tackle flood risk will reduce the impact of flooding on businesses and protect key infrastructure and public transport.
Core Business:	X			We had already provided the business case for many of the actions that were recommended in the section 19 report and have secured funding for these activities. Fortunately, we are therefore in a much better position than had we waited for the outcomes of the S19 to build the business case. The actions and outcomes will improve the highway drainage network and reduce the likelihood of flooding/disruption which is a

				core requirement under the Highways Act 1980.
Data Impact:		X		We are not publishing the location of properties or details of residents impacted by flooding to ensure we are not impacting their rights. General areas have instead been shown in appendices.
Consultation and Engagement:	Stuart Gourley (portfolio holder), Jon Winstanley (service director), Peter Walker (service lead highways and transport innovation), Andrew Reynolds (asset manager highways and transport), Emergency Planning team. S19: Widespread community engagement and direct contact with residents impacted by flooding, local flood forums, local flood wardens, Environment Agency, Thames Water, canal and River Trust, council members, media, Network Rrail, parish councils, town councils. This was reported to the Council's Scrutiny commission in October 2024.			

4 Executive Summary

4.1 Section 19 flood investigation reporting is a legislative requirement for Lead Local Flood Authorities such as WBC. Flood investigations form an important evidence base, documenting where and when flooding has occurred from all sources (in accordance with legal definition of flooding which excludes sewer flooding). The report has been requested to be brought forward as the outputs and recommendations from the S19 reporting will impact the ability of the council to deliver flood risk and highway drainage functions.

4.2 The section 19 report developed by WSP on behalf of the council contains the results of investigations into flooding and recommended actions for different risk management authorities in the following locations:

- Burghfield Bridge
- Burghfield – Pingewood
- Burghfield - Sheffield Bottom
- Eastbury
- Great Shefford
- Lambourn
- Newbury (North)
- Newbury (South)

- Pangbourne
- Purley on Thames
- Streatley
- Winterbourne

4.3 A prioritisation list with existing highway project commitments has been compiled and can be viewed in appendix A. The first 10 items in the list have been provided below, however please note that they are subject to change and the end dates of each project may vary subject to the associated complexity irrespective of their positioning in the prioritisation list:

1. **WBC Highways**: Membury Industrial Estate/Ramsbury Road highway drainage upgrades. Entire surface water highway drainage network upgrade required due to serious failure of existing system and flooding of several businesses over recent years.
2. **WBC Highways:** Paices Hill highway drainage upgrades. Entire section of surface water highway drainage network required due to serious failure of existing system and flooding on highway presenting risk to public and impacting adjacent business.
3. **S19 output:** WBC to review ownership and enforce the maintenance of ditches within Pingewood.
4. **S19 output:** WBC to review the ownership and maintenance requirements associated with culvert under Station Road in Pingewood.
5. **S19 output:** WBC to carry out investigation into the feasibility of clearing the northern railway culvert adjacent to Green Park.
6. **S19 output:** WBC to carry out investigation into the road drainage along Kirtons Farm Road to determine the potential requirement for additional road drainage.
7. **S19 output & WBC:** WBC to investigate the condition and status of the trash screen in the Spout Ditch to determine ownership and maintenance frequency. Assess breach in the unnamed watercourse north of the River Lambourn and south of Dene Way. Determine whether the breach can be repaired (if financially viable).
8. **WBC Highways:** The Street in Mortimer highway drainage upgrades. Entire section of surface water highway drainage network required due to serious failure of existing system and flooding on highway presenting risk to public
9. **WBC Highways:** Long Lane adjacent to Mousefield Farm highway drainage issues. The highway drainage network serving Long Lane is overwhelmed by adjacent surface water runoff, debris from adjacent land and possible capacity issues. Legal input required and identification of long-term highway drainage solutions.
10. **S19 output:** WBC to review the status of gullies along Northcroft Lane ensuring inspections are carried out at an appropriate frequency and determine whether any assets should be added to the flood risk asset register.

4.4 The S19 report, and recommended actions should be supported as they are a legislative requirement. We must demonstrate that we are taking action to tackle known risks where possible.

5 Introduction/Background

Introduction

5.1 Approve the S19 report and recommended actions produced by WSP and commissioned by WBC in the wake of the January 2024 flood events in accordance with the Flood and Water Management Act (FWMA) 2010.

Background

5.2 The West Berkshire 2024 flood event covers the period from early January to late March, during which West Berkshire was affected by flooding as a result of Storms Henk, Isha, and Jocelyn.

5.3 WSP was commissioned by West Berkshire Council, as the LLFA, to conduct a Section 19 Flood Investigation as a result of flooding across the region. The areas that experienced the most severe flooding, and are therefore investigated within this report, include Burghfield Bridge, Pingewood, Sheffield Bottom, Eastbury, Great Shefford, Lambourn, Newbury, Pangbourne, Purley on Thames, Streatley, and Winterbourne. Other areas that were noted to have experienced flooding, at a less significant scale, include Bucklebury, Coley, East Garston, East Ilsley, Hampstead Norreys, Shefford Woodlands, Sulhamstead, Thatcham, Theale, Upper Lambourn, and West Ilsley.

5.4 The section 19 report produced by WSP contains actions/recommendations for different flood risk management authorities including WBC. These actions should be carried out to reduce flood risk where possible.

Proposals

5.5 To approve and publish the S19 report produced by WSP.

5.6 To support the recommended actions from the S19 report.

6 Supporting Information

6.1 Please see appendix A for a prioritisation list of recommended actions for WBC.

6.2 Please see appendix B for a list of all recommended actions for all risk management authorities.

6.3 The final S19 report has been attached separately due to its file size.

7 Options for consideration

7.1 Doing nothing will result in failure to adhere to legislation and expose the council to legal action.

7.2 The report should not be redrafted or edited at this stage. Consultation with multiple stakeholders including residents of the public and thorough investigations have taken months to compile. We recommend publishing the S19 report.

8 Proposals

8.1 This has been outlined already in the section proposals as the structure of this report dictated.

9 Conclusion

9.1 Approving and publishing the S19 report and recommended actions produced by WSP will ensure we are compliant with the Flood and Water Management Act 2010.

Subject to Call-In:

Yes: ☐ No: ☒

The item is due to be referred to Council for final approval	☐
Delays in implementation could have serious financial implications for the Council	☐
Delays in implementation could compromise the Council's position	☐
Considered or reviewed by Scrutiny Commission or associated Committees or Task Groups within preceding six months	☒
Item is Urgent Key Decision	☐
Report is to note only	☐

Wards affected: All

Officer details:

Name: Paul Bacchus
Job Title: Principal Engineer (Flood Risk and Drainage)
Tel No: 07867 177 552
E-mail: paul.bacchus1@westberks.gov.uk

Appendix A

Table of priority showing S19 actions and highway drainage projects.

Priority

Dependent on:

Severity

Complexity

Cost

Date started - legacy issues will sometimes take priority

Severity (S)	Impact of the issue
1	Property Internal flooding - water enters the property or Property external flooding - water building up around the outside of the property
2	Highway (principal road) or high speed; Highway (secondary road)
3	Garden areas/driveways, Fields/open spaces
4	Water quality issues or Maintenance and operation issues (no flooding)

Difficulty (D)	Examples
1	Desktop study, site visit, or communication only
2	Ordering of standard works under the term contract
3	Design works and bespoke solutions
4	Complex design works and/or construction - require consultants

Cost (C)	Estimated Threshold (£)
1	0-999
2	1,000-4,999
3	5,000-9,999
4	10,000+

Priority	Source	ID (S19 or HW)	Project	Description	Address	Comment	S	D	C	Status	WBC Action
1	Highways /WBC	4	Membury	Long time, ongoing highway flooding issue caused by failed soakaway/outfall. Issues with wider land usage and illegal development have exacerbated flooding issues associated with the highway drainage. Further optioneering and detailed design required.	Membury Airfield Industrial Estate Lambourn Woodlands Hungerford RG17 7TJ	Commission optioneering and detailed design. Construction expected FY 25/26 if possible.	1	4	4	Ongoing	Finish scope/technical note for submission to WSP for detailed design and optioneering
2	Highways /WBC	2	Paices Hill	Long time/on-going highway flooding issue caused by broken outfall which the was damaged. Location of pipe network under a traveller's site which has been deemed inaccessible. New route of outfall must be identified through Sascron Ltd land and network brough up to scratch.	Sascron Ltd The Smallholding Paices Hill Aldermaston Reading RG7 4PG	Commission detailed design. Construction expected FY 25/26 if possible.	2	4	4	Ongoing	Finish scope/technical note for submission to WSP for detailed design. Liaise with Sascron Ltd about works.
3	S19/WBC	6.6.4	Pingewood 4	West Berkshire review and enforce the maintenance of ditches within Pingewood, specifically Cottage Lane ditch. During WSP's site visit to Pingewood, it was noted that there may not be a clear understanding of who is responsible for maintaining Cottage Lane ditch and its culverts. WBC could seek to confirm these details and ensure that regular maintenance of the ditch is carried out.	Pingewood	WBC to map and identify responsibility for the ditch systems in Pingewood.	1	1	1	Not started	WBC to map and identify maintenance responsibilities for ditches in Pingewood.
4	S19/WBC	7.6.6	Sheffield Bottom 6	As the LLFA, WBC could review the maintenance schedule for the culvert that takes DOBS under Station Road. During WSP's site visit, residents expressed concerns that the culvert often has fallen trees and vegetation blocking the channel and	Sheffield Bottom	Need to establish ownership of culvert and add to flood risk register.	1	1	1	Not started	WBC to establish ownership of culvert and add to critical drainage infrastructure register.

				therefore a more routine clearing of debris is recommended.							
5	S19/WBC	6.6.5	Pingewood 5	An investigation could be undertaken into the feasibility of clearing the northern railway culvert adjacent to Green Park. During WSP's site visit to Pingewood, it was reported by the angling club manager that this culvert has been blocked for a significant period (possibly 20 years) and that the ditch downstream of the culvert has likely silted up. An assessment could be carried out to determine the effect of opening the culvert up with regards to the ability of the downstream ditch to accommodate flows and to understand the effect on flood dynamics upstream and downstream of the culvert.	Pingewood	This culvert is in the ownership of Network Rail.	1	1	1	Not started	WBC to contact NR with regards their maintenance and inspection regime and to see what the current condition of the culverts are.
6	S19/WBC	6.6.3	Pingewood 3	WBC should carry out an investigation into the road drainage along Kirtons Farm Road to determine the potential requirement for additional road drainage, for example in the form of gullies and grips.	Kirtons Farm Pingewood Reading RG30 3UW	Drainage investigation to be undertaken on Kirtons Farm Road with potential improvements costed and prioritised. Existing surface water drainage has been investigated as of 07/24. Further works to be investigated.	2	1	2	Ongoing	Drainage investigation to be carried out
7a	S19/WBC	12.6.5	Newbury North 5	A blocked trash screen along Spout Ditch is obstructing flow from moving downstream. It is recommended that WBC remove this blockage in stages during times of lower flows to ensure that the backed-up flows to not suddenly inundate further downstream and cause flooding. A maintenance schedule and flow monitor could	Newbury North	WBC already operate a trash screen programme. Clarify whether the trash screen is a WBC owned trash screen or not.	1	1	1	Investigating	WBC to identify the trash screen owner and ensure maintenance is undertaken.

				then be put in place to ensure blockages are easily identified and regularly cleared in Spout Ditch.							
7b	Highways /WBC	Unlisted	Newbury North	Residents are concerned that a breach in the bank of an unnamed watercourse south of the properties along Dene Way, north of the River Lambourn is exacerbating flood risk to their gardens which are in the functional floodplain and will flood regardless.	Dene Way Donnington Newbury RG14 2JL	Carried out preliminary drawings subject to review. Quotes will be obtained from contractors. Implementation only viable if scheme is affordable.	4	2	4	Ongoing	Finalise review and obtain contractors quotes. Scheme is not expected to deliver any major benefits, but pressure from members and residents has placed it higher on the list due to WBC riparian ownership responsibilities.
8	Highways /WBC	3	The Street Mortimer	Large section of failed drainage system and outfall that is considered beyond economic repair. The system has several facets that need to be understood as each have an impact on different possible solutions. There are budget, road safety and political implications.	The Street Mortimer Reading RG7 3PB	Commission optioneering and detailed design.	2	4	4	Ongoing	Finish scope/technical note for submission to WSP for detailed design and optioneering
9	Highways /WBC	6	Mousefield Farm	Long lane subject to extensive flooding. Issues with the highway drainage network and suitability of the soakaway along the road. Major concerns about the debris coming from adjacent Mousefield Farm land, lack of land drainage and failure to obtain OWC when filling in watercourses and ponds.	Mousefield Farm Long Lane Shaw Newbury RG14 2TG	Liaise with legal to serve notice on landowner. Determine whether land drainage act 1991 and highways act 1980 can be used. Identify a suitable solution for resolving flood risk issues along Long Lane.	2	3	4	Ongoing	Touch base with WBC legal team.

10	S19/WBC	11.6.5	Newbury South 5	WBC could review the current highway drainage maintenance schedule across Northcroft, and, where appropriate, increase the frequency of inspections, specifically along Northcroft Lane. Alternatively, these assets could be marked as a priority, and arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain.	Newbury South	Highway drainage maintenance is asset dependent. General schedule reviews noted and to be taken into consideration during review. "Arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain" is not viable for all assets however, critical assets may be added to the flood risk register and we can work with emergency planning colleagues to ensure that these are checked prior to major events.	2	2	2	Ongoing	All gully assets cleansing frequency have been reviewed as part of WBC gully cleansing programme as of 03/25. Flood asset register still under review.
11	S19/WBC	13.6.6	Pangbourne 6	WBC should review their current highway drainage maintenance schedule and, where appropriate, increase the frequency of inspections in areas at risk of flooding.	Pangbourne	Highway drainage maintenance is asset dependent. General schedule reviews noted and to be taken into consideration during review. "Arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain" is not viable for all assets however, critical assets may be added to the flood risk register and we can work with emergency planning colleagues to ensure that these are checked prior to major events.	2	2	2	Ongoing	All gully assets cleansing frequency have been reviewed as part of WBC gully cleansing programme as of 03/25. Flood asset register still under review.

12	S19/WBC	5.7.5	Burghfield Bridge 3	WBC to review the current highway drainage maintenance schedule and, where appropriate, increase the frequency of inspections. Alternatively, these assets could be marked as a priority, and arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain.	Burghfield Bridge Reading RG30	Highway drainage maintenance is asset dependent. General schedule reviews noted and to be taken into consideration during review. "Arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain" is not viable for all assets however, critical assets may be added to the flood risk register and we can work with emergency planning colleagues to ensure that these are checked prior to major events.	2	2	2	Ongoing	All gully assets cleansing frequency have been reviewed as part of WBC gully cleansing programme as of 03/25. Flood asset register still under review.
13	S19/WBC	8.6.4	Eastbury 4	WBC could review the current highway drainage maintenance schedule and, where appropriate, increase the frequency of inspections, specifically in Eastbury Newtown. Alternatively, these assets could be marked as a priority, and arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain.	Eastbury	Highway drainage maintenance is asset dependent. General schedule reviews noted and to be taken into consideration during review. "Arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain" is not viable for all assets however, critical assets may be added to the flood risk register and we can work with emergency planning colleagues to ensure that these are checked prior to major events.	2	2	2	Ongoing	All gully assets cleansing frequency have been reviewed as part of WBC gully cleansing programme as of 03/25. Flood asset register still under review.

14	S19/WBC	7.6.5	Sheffield Bottom 5	WBC could review the current highway drainage inspection and maintenance schedule and, where appropriate, increase the frequency. Alternatively, critical assets could be marked as a priority, and arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain.	Sheffield Bottom	Highway drainage maintenance is asset dependent. General schedule reviews noted and to be taken into consideration during review. "Arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain" is not viable for all assets however, critical assets may be added to the flood risk register and we can work with emergency planning colleagues to ensure that these are checked prior to major events.	2	2	2	Ongoing	All gully assets cleansing frequency have been reviewed as part of WBC gully cleansing programme as of 03/25. Flood asset register still under review.
15	S19/WBC		Crookham Hill 1	Investigate the cause and mitigation of flooding across the highway	Crookham Hill	Commission an investigation into the cause and potential mitigation for the highway flooding on Crookham Hill. Works ongoing as of 01/25	2	2	2	Ongoing	Initial investigations undertaken. To be monitored to assess whether the issues have been resolved.
16	Highways /WBC	19	Northbrook stream	Residents concerned about pollution and volume of water entering the Northbrook Stream from Thames Water systems. The residents are upset about their gardens being flooded and pollution impacting planting/damaging water quality as stream flows towards Lambourn/Kennet.	Industrial Estate Ampere Road Newbury RG14 2DQ	WBC to review whether a study of the catchment could identify opportunities to reduce pollution/retain water further upstream. Study commissioned in 2020 proposed some alleviation options.	4	4	4	Ongoing	To investigate whether funding could be obtained for study via EA/TRFCC grants/levy
17	Highways /WBC	11	Spring Close/Upper Basildon	Property flooding issues. Road system drains into soakaways which are constantly full due to perched water table due to clay. No near option for a positive system to be installed. Property is below road level and was developed without appropriate consideration for wider flood risk.	Fairview Newtown Upper Basildon Reading RG8 8JG	WBC funded homeowners' property level protection. Further works required to assess a suitable option and commission detailed design.	1	4	4	Ongoing	Further works required to assess a suitable option and commission detailed design. Given extensive funding to impacted resident this is not considered to take priority over other historic projects.

18	Highways /WBC	16	Enborne Spring Gardens	Issues with water flowing from the north of the residential development, via a pathway south to the road where it gets flooded.	Spring Gardens Newbury RG20 0PR	Attended meeting with maintenance operator for area, Tony Vickers, and residents in the area. WBC to investigate ditch during drier weather and restore it to original capacity. WBC to investigate follow on works to alleviate flood risk	4	2	2	Ongoing	Investigate ditch during dry weather.
19	S19/WBC	15.6.4	Streatley 4	It is noted that the highway gullies in Streatley are regularly cleansed, however they become blocked frequently after a flood event. Therefore, WBC could investigate the potential to add mesh gates to collect debris before it enters the drainage network. A maintenance schedule could then be put in place to ensure the regular clearance of any debris, specifically along known high risk roads, such as High Street and Streatley Hill. Furthermore, a schedule could be put in place for the maintenance of the ditches across Streatley. If this is already in place, then the schedule could be updated with ditches in Cleeve Court highlighted as a priority location for inspection on receipt of forecasts of heavy rain.	Streatley	To be investigated and costed. Grip and ditch programmes started in 24	2	3	2	Ongoing	Proposed measures to be investigated.
20	S19/WBC	13.6.8	Pangbourne 8	Recommendation for consideration of whether there is sufficient road drainage along Mill Lane, because during WSP's site visit it was noted that there appears to be a lack of drainage features.	Pangbourne	Mill Lane under investigation. Further determination of suitability of drainage features to be considered.	2	2	3	Investigating	Further measures to be assessed.
21	S19/WBC	5.7.4	Burghfield Bridge 2	CCTV survey should be undertaken to confirm the condition of the existing highway drainage assets along Pingewood Road. Remedial works could then be identified and prioritised in consideration of their impact on local flood risks.	Pingewood Rd Burghfield Bridge Reading RG30 3XT	Drainage investigation in Pingewood Rd North started/nearly complete. Burghfield: 29th January: Cyclic Cleanse of gullies on Reading	2	3	4	Ongoing	Capital bid submitted and work to be programmed following confirmation of assessment of condition of pipes.

						Road, Burghfield & part of Pingewood Road North, north of Green Lane 25th March: New gully installed & upstand raised in front of Burghfield Bridge Close on Reading Road, to prevent surface water from highway entering Burghfield Bridge Close. New gully connection installed on existing gully which had previously been severed. 17th April: Cyclic Cleanse of gullies on Reading Road, Burghfield & part of Pingewood Road North, north of Green Lane 1st July: Cyclic Cleanse of gullies on Pingewood Road North, south of entrance to Green Lane. 1st October: Cyclic Cleanse of gullies on Reading Road, Burghfield & part of Pingewood Road North, north of Green Lane 14th October: Full Cleanse & CCTV investigation of Pingewood Road North. Investigation report to be produced to inform future civils works.					
22	S19/WBC	8.6.6	Eastbury 6	Furthermore, improved communication is required between the Eastbury flood wardens and WBC, specifically regarding decisions on road closures and safety, to allow the flood wardens to communicate these decisions to the rest of the local community and reduce confusion.	Eastbury	Ongoing discussion regarding how we can streamline communication between flood wardens and emergency planning	4	1	1	Ongoing	Discussion with emergency planning and digital services to develop ideas for flood warden communication

23	S19/WBC	12.6.7	Newbury North 7	WBC could aid residents along River Side Lane and work with the agreed riparian owner(s) to implement flood mitigation measures. These measures could include the use of Nature Based Solutions (NBS) in the form of bank stabilisation.	Newbury North	WBC to identify land/riparian owners along Riverside Lane. Bank stabilisation isn't a nature-based solution to flood mitigation.	1	4	3	Ongoing	WBC to identify land/riparian owners along Riverside Lane. Some owners identified.
24	S19/WBC	15.6.6	Streatley 6	WBC could engage with the electricity provider regarding adequate flood protection for the electricity substation located in Cleeve Court.	Streatley	WBC to report to SSE for comment.	4	1	1	Not started	WBC to report to SSE for comment.
25	S19/WBC	16.6.7	Winterbourne 7	WBC could review the Winterbourne Flood Alleviation Scheme design to see if it is functioning as designed and if so, if other measures are necessary to improve the flood defence standard.	Winterbourne	Consultants to be commissioned to investigate whether the FAS could be fitted with a penstock and control device to hold back water in conditions similar to those seen in 2024. Cost estimate for study under review as of 03/25	1	4	3	Investigating	WBC to cost and prioritise a study into altering the existing FAS.
26	S19/WBC	16.6.6	Winterbourne 6	A community schedule could be put in place with the aid of riparian owners and WBC to ensure the regular clearance of Winterbourne Stream of vegetation and debris. This schedule should encourage more frequent maintenance upon receipt of forecasts of heavy rain.	Winterbourne	To be reviewed.	4	1	1	Not started	Assess whether a community schedule is implementable
27	Highways /WBC	27	A339 Brakenhurst Road	Water emerging from Vodafone duct has highlighted lack of adequate information and condition assessment along the A339 south of Newbury.	A339 Newbury RG20 4HQ	Multiple ongoing investigations from 2023. Root cutting, CCTV, etc. continues.	2	2	4	Ongoing	Further investigations and conditions assessment to be commissioned.
28	Highways /WBC	14	The Howe, Aldworth	Property owner's driveway flooding - blaming the highway ditches. Note the property is located in a "valley" and their driveway is below the road level. The roads follow the low point of the valley.	The Howe Aldworth Reading RG8 9RY	WBC carried out extensive highway drainage works in the area in 24. May need to work with multiple stakeholders or provide substantial upgrades to the highway drainage	4	4	4	Ongoing	Carry out further investigations and begin corresponding with landowners in region impacting highway flood risk.

						network to resolve system capacity issues.					
29	S19/WBC	12.6.4	Newbury North 4	The area is complexly hydraulically connected and is at risk from flooding from a variety of sources. Therefore, it is recommended that WBC could commission a flood study to identify these sources and gain an understanding of the interaction between them.	Newbury North	Significant study would be needed to identify a potential flood storage area. Unlikely that a flood storage area can be provided here.	1	4	4	Not started	WBC to get cost estimates to identify potential flood alleviation options for this area.
30	S19/WBC	5.7.6	Burghfield Bridge 4	The area may benefit from a local level flood mitigation scheme including the retrofit of drainage facilities to improve conveyance capacity and reduce the risk of blockage. There may be the potential to divert flow from the Kennet and Avon Canal into fields to the north as a form of temporary storage and controlled release. Further data would need to be collected to ascertain the potential benefits and options for the provision of practicable solutions.	Burghfield Bridge Reading RG30 3RB	Study would be needed in order to understand hydrology of the area and potential mitigation. Given the ground, surface and fluvial flood risk in this area, a complex model would be needed in order to assess the flood risk. This should potentially be an EA action or discussion with the EA necessary	1	4	4	Not started	To be prioritised amongst other works and studies.
31	S19/WBC	10.6.7	Lambourn 7	WBC could consider the addition of flap valves to highway drainage outfalls to watercourses, to prevent river water from backing up into the road drainage system during high flows.	Lambourn	Noted. Not likely to help but will review.	2	3	3	Not started	To review.
32	S19/WBC	10.6.5	Lambourn 5	WBC could review the current highway drainage maintenance schedule across Lambourn, and consider a CCTV survey of the sewerage network, specifically along Mill Lane and Oxford Street. It is acknowledged that the design standard of existing highway drainage is likely to be lower than	Lambourn	Multiple investigations carried out in 2024 in the wake of flooding. Some remedial works carried out. Multiple collapsed pipes identified Further works required.	2	2	4	Ongoing	Investigation work (not already undertaken) to be costed and prioritised.

				the rainfall event recorded and that it will also not be designed to cope with groundwater. However, the condition of the highway drainage network could be assessed, and the cause of the blocked gullies explored. Remedial works should then be prioritised in areas at higher risk of flooding to prevent the gullies from becoming blocked.							
33	S19/WBC	11.6.4	Newbury South 4	It is acknowledged that the design standard of existing highway drainage is likely to be lower than the rainfall event recorded and that it will also not be designed to cope with groundwater. However, it is recommended that WBC could conduct a CCTV survey along Northcroft Lane to access the condition of the highway drainage network. Any required remedial works could then be considered to prevent the gullies from becoming blocked and reduce flood risk.	Newbury South	Completed prior to October 24: Northcroft lane: multiple gullies in this area cleansed and mapped to better understand the flow directions . Further works may be carried out.	2	3	3	Ongoing	Assess whether further investigations required
34	S19/WBC	15.6.5	Streatley 5	WBC could collaborate with the EA and local residents to investigate the potential for a flood alleviation scheme to be implemented in Streatley. This could include the temporary storage of river water during high flows at sites such as Bishops Field to the north of Cleeve Court, or land to the west of Cleeve Lock. However this will require more detailed investigation outside of the remit of this report.	Streatley	Significant study would be needed to identify a potential flood storage area. Proposal is not likely to be viable due to cost/benefit ratio.	1	4	4	Not started	WBC to investigate feasibility of proposal.

35	S19/WBC	7.6.4	Sheffield Bottom 4	It is considered that there may be potential issues with the condition, and therefore the capacity of the existing highway drainage assets along Hose Hill and Jaques Lane. It is acknowledged that the design standard of existing highway drainage is likely to be lower than the rainfall event recorded and that it will also not be designed to cope with groundwater. However, it is recommended that a CCTV survey could be undertaken to confirm it's condition. Remedial works could then be undertaken, focussing on areas at highest risk of flooding, to ensure that flood risk is reduced.	Sheffield Bottom	Highway drainage investigation underway by DN. Sheffield Bottom: 19th June: Drainage CCTV investigations & cleansing of assets along Hose Hill. ~20m section of Ditch cleared. Found connection between ditch headwall, and main carrier drain severed by other utility. Found 380mm carrier pipe blocked which travelled across garden of Hose Hill Farm, previously not any WBC records. 2nd September: 1 week of civils work & 1 additional day of drainage cleansing/investigation. Connection between ditch & main carrier repaired. Inspection chamber along main carrier found buried over 1m beneath earth, chamber lid raised. Found blockage in garden of Hosehill Farm, repaired with new pipe. Found section of 380mm pipe reduced to 150mm in parking area of Larch House. Other minor drainage improvements carried out. 9th October: Sandbags placed along length of vehicle restraint system on Hose Hill to temporarily prevent water overtopping onto Hosehill Farm land, threatening properties and bank stability of road. 9th October: Civils works	2	3	4	Ongoing	Further improvement works to be costed.

						6to replace section of 150mm pipe on main carrier with 380 mm. new access chamber to be installed on Hosehill Farm land to allow for access and future maintenance of drainage pipe.					
36	S19/WBC	16.6.5	Winterbourne 5	It was noted that water from Winterbourne Stream was backing up road drainage and flooding the road. It is acknowledged that the design standard of existing highway drainage is likely to be lower than the rainfall event recorded. However, it is recommended that WBC could conduct a CCTV survey to assess the condition of the highway drainage network and then carry out any necessary remedial works.	Winterbourne	Drainage system has been investigated with remedial works	2	3	3	Ongoing	
37	S19/WBC	10.6.6	Lambourn 6	An investigation into road drainage along Oxford Street and Wantage Road. Hydraulic modelling could be undertaken to understand the hydraulic dynamics of surface water flowing along the road. Surface water runoff from Sheepdrove Road should also be considered, as it was noted that this can flow into Wantage Road if it cannot enter the culvert on Sheepdrove Road. The results of this modelling could then determine the requirement for more road drainage, for example in the form of gullies, or SuDS measures, such as rain gardens, at a local and/or catchment scale.	Lambourn	Noted. To investigate.	2	3	4	Not started	Investigation work to be costed and prioritised.
38	Highways /WBC	42	Stanford Dingley & Hampstead Norreys	Ongoing historic issues in the region with flood risk have prompted attempts by WBC to review whether FAS are viable. WBC to look into whether new schemes would be implementable	Hampstead Norreys & Stanford Dingley	Early discussions with consultants collapsed in 2023 due to excessive consultancy costs.	1	4	4	Backburner	Restart projects with detailed review of work to date.

						Review of possible FAS to be revived in FY 25/26					
39	Highways /WBC	28	WWTW	WBC to investigate possible handover of WWTW to Thames Water	Various	Investigate options for handing over WWTW to Thames Water under the Water Industry Act 1991	4	3	3	Not started	Liaise with Thames Water
N/A	S19/WBC	5.7.8	Burghfield Bridge 5	Where there is sufficient evidence that land use change or land raising has taken place without the appropriate permissions, West Berkshire Council as planning authority and LLFA may choose to use enforcement powers to ensure any works deemed to have increased flood risk is rectified.	Green Lane Burghfield Bridge Reading RG30 3XN	Issues raised by the residents to be reported to West Berkshire Council Planning Enforcement. Issues near the junction of Pingewood Road North and Burghfield Road have been investigated	1	1	1	Complete	To be passed to WBC planning enforcement for investigation. Complete as of Jan/Feb 25
N/A	S19/WBC	9.6.3	Great Shefford 3	WBC should continue the work with and support the EA to complete the installation of the new flood alleviation scheme as soon as weather and ground conditions allow.	Great Shefford	Noted	1	1	1	Complete	FAS complete
N/A	S19/WBC	13.6.5	Pangbourne 5	WBC should investigate the road gully located at the entrance to The Swan Pub. It was noted during WSP's visit that the road gully was blocked, thereby increasing the risk of road runoff flowing directly into the pub carpark. Remedial works should be carried out to prevent the gully from becoming blocked / damaged again and reduce flood risk.	Pangbourne	Last inspected 09/24 and cleansed. Reported operational on leaving.	2	1	1	Complete	

N/A	S19/WBC	8.6.3	Eastbury 3	An immediate recommendation of this report is for WBC to unblock the road gully in Eastbury Newtown to allow floodwaters to subside more efficiently. A CCTV survey could then be conducted to access the condition of the highway drainage network, especially in Eastbury Newtown, and explore the cause of the blocked gully. Remedial works should then be investigated to determine if it is possible to prevent the gully from becoming blocked again and reduce flood risk.	Eastbury	Investigation into the highway drainage to be undertaken.	2	2	2	Complete	Complete
N/A	S19/WBC	8.6.5	Eastbury 5	A schedule should be put in place for the maintenance of the grips along the River Lambourn. If this is already in place, then the schedule should be updated, with Eastbury highlighted as a priority location for inspection on receipt of forecasts of heavy rain.	Eastbury	WBC to add grips to drainage asset register. Grip programme started in 24 - continuous work.	2	2	2	Complete	WBC now operates a grip programme where new grips are continuously added to the system
N/A	S19/WBC	12.6.8	Newbury North 8	It has been reported that the drains in Glebefields car park appear to be unmaintained. It is not known who is responsible for the maintenance of this drainage so WBC could work with residents to discover ownership and ensure a maintenance schedule is implemented.	Newbury North	They're local authority owned and on a 4 yearly cycle according to database. Inspections in 2023 reported them operational.	4	1	1	Complete	
N/A	S19/WBC	13.6.7	Pangbourne 7	A schedule should be put in place for the maintenance of drainage grips across Pangbourne. If this is already in place, the schedule should be reviewed, with grips along Mill Lane and the River Pang highlighted as priority locations for inspection.	Pangbourne	WBC to add grips to drainage asset register. Grip programme started in 24 - continuous work.	2	2	2	Complete	WBC now operates a grip programme where new grips are continuously added to the system
N/A	S19/WBC	16.6.4	Winterbourne 4	A schedule could be put in place for the maintenance of grips through Winterbourne. If this is already in place, then the schedule could be updated, with grips along Winterbourne Lane highlighted as priority locations for inspection on receipt of forecasts of heavy rain.	Winterbourne	Extensive works carried out to dig out grips in 24 Grip programme started in 24 - continuous work.	2	2	2	Complete	WBC now operates a grip programme where new grips are continuously added to the system

N/A	S19/WBC	12.6.6	Newbury North 6	WBC also could consider the implementation of a raised footpath through Shaw Park, for use by members of the public, including school children, to ensure safe passage when the floodplain is inundated. However, this should be appropriately modelled and investigated prior to installation to ensure there is no loss of floodplain storage or impact on existing flow rates.	Newbury North	This would need hydraulic modelling, and any improvement would require planning permission and EA consent. Raising without providing compensatory land elsewhere is unlikely to gain EA approval. We will not be carrying this forward.	3	4	4	Complete	We will not be carrying this forward.

Appendix B

Table summarising the outputs from the S19 report from all Risk management authorities (RMA's).

Key	
WBC	West Berkshire Council
EA	Environment Agency
TW	Thames Water
NR	Network Rail
PC	Parish Council
TC	Town Council
LR	Local Residents

Location	RMA	Recommendation	No.	Comment	WBC Action
Burghfield Bridge	LR	Riparian owners should ensure that ditches are well maintained and allow the free passage of water during flood events.	5.6.3	WBC officers to inspect ditches in the vicinity of Burghfield Bridge.	
	WBC	CCTV survey should be undertaken to confirm the condition of the existing highway drainage assets along Pingewood Road. Remedial works could then be identified and prioritised in consideration of their impact on local flood risks.	5.6.4	Drainage investigation in Pingewood Rd North complete. Works identified and costed and to be prioritised with other proposals.	Capital bid submitted and work to be programmed.
	WBC	WBC to review the current highway drainage maintenance schedule and, where appropriate, increase the frequency of inspections. Alternatively, these assets could be marked as a priority, and arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain.	5.6.5	Standard response needed to this comment for each area.	
	WBC	The area may benefit from a local level flood mitigation scheme including the retrofit of drainage facilities to improve conveyance capacity and reduce the risk of blockage. There may be the potential to divert flow from the Kennet and Avon Canal into fields to the north as a form of temporary storage and controlled release. Further data would need to be collected to ascertain the potential benefits and options for the provision of practicable solutions.	5.6.6	Study would be needed in order to understand hydrology of the area and potential mitigation. Given the ground, surface and fluvial flood risk in this area, a complex model would be needed in order to assess the flood risk.	To be prioritised amongst other works and studies.
	WBC	Where there is sufficient evidence that land use change or land raising has taken place without the appropriate permissions, West Berkshire Council as planning authority and LLFA may choose to use enforcement powers to ensure any works deemed to have increased flood risk is rectified.	5.6.8	Issues raised by the residents to be reported to West Berkshire Council Planning Enforcement.	To be passed to WBC planning enforcement for investigation.
	EA	Potential issues have indicated that there may be potential issues with the capacity or condition of the River Kennet with frequent overtopping occurring during the flood event. The EA should review how flow is being managed upstream of Burghfield Bridge to determine whether peak volumes can be reduced at Burghfield Bridge during times of flood.	5.6.9	EA to be approached for comment on this action.	WBC to contact the EA for comment.
	EA	Opportunities to improve capacity should be identified such as clearing channels of debris or vegetation. Recommended that the EA	5.6.10	EA to be approached for action/comment.	Write to EA for comment.

		review the necessity and frequency of any maintenance programme if one is in place for the area.			
	PC	Parish Council to continue to support local flood wardens in Burghfield Bridge and provide education and communication to local residents on the following: How to monitor river levels and flows; How to sign up to the EA flood alerts and warnings; How to report concerns to the relevant flood risk management authorities; Guidance on effective property flood resilience; What to do and when, in preparation for a flood. Where to find support following a flood event	5.6.12	Noted.	WBC continue to support parish councils and flood wardens.
	CRT	The investigation has highlighted unstable banks along the Kennet and Avon Canal, potentially the result of erosion from mooring boats. It is recommended that the CRT investigate the condition of the canal banks and carry out the necessary remedial works, specifically to the south bank. Restoration works could be completed using Nature Based Solutions (NBS) to help raise and strengthen the canal banks to increase the capacity of the canal and prevent further overtopping.	5.6.13		
Pingewood	LR	Residents and business owners should report any ditch maintenance and / or culvert issues to WBC and Network Rail as soon as they become apparent.	6.6.1	Noted	
	LR	Residents and business owners affected by flooding may benefit from property flood resilience (PFR) measures, such as flood doors, waterproof airbricks, and placing electrical sockets above floor levels, to provide resilience to their premises during storm events.	6.6.2	All residents affected have been contacted and invited to apply for property resilience grant funding.	WBC to continue to promote flood recovery and resilience grants where available.
	WBC	WBC should carry out an investigation into the road drainage along Kirtons Farm Road to determine the potential requirement for additional road drainage, for example in the form of gullies and grips.	6.6.3	Drainage investigation to be undertaken on Kirtons Farm Road with potential improvements costed and prioritised.	Drainage investigation to be costed and prioritised.
	WBC	West Berkshire review and enforce the maintenance of ditches within Pingewood, specifically Cottage Lane ditch. During WSP's site visit to Pingewood, it was noted that there may not be a clear understanding of who is responsible for maintaining Cottage Lane ditch and its culverts. WBC could seek to confirm these details and ensure that regular maintenance of the ditch is carried out.	6.6.4	WBC to map and identify responsibility for the ditch systems in Pingewood.	WBC to map and identify maintenance responsibilities for ditches in Pingewood.
	WBC	An investigation could be undertaken into the feasibility of clearing the northern railway culvert. During WSP's site visit to Pingewood, it was reported by the angling club manager that this culvert has been blocked for a significant period (possibly 20 years) and that the ditch	6.6.5	This culvert is in the ownership of Network Rail.	WBC to contact NR with regards their maintenance and inspection regime and to

		downstream of the culvert has likely silted up. An assessment could be carried out to determine the effect of opening the culvert up with regards to the ability of the downstream ditch to accommodate flows and to understand the effect on flood dynamics upstream and downstream of the culvert.			see what the current condition of the culverts are.
	PC	Parish Council to continue to support local flood warden in Pingewood and provide education and communication to local residents on the following: How to monitor river levels and flows; How to sign up to the EA flood alerts and warnings; How to report concerns to the relevant flood risk management authorities; Guidance on effective property flood resilience; What to do and when, in preparation for a flood. Where to find support following a flood event	6.6.6		
	PC	It was noted that the area currently only has one flood warden. If possible, an additional flood warden should be sought to strengthen communication and co-operation between the local community and WBC.	6.6.7	WBC to work with the Parish Council and local residents to identify additional flood wardens.	WBC to work with the Parish Council and local residents to identify additional flood wardens.
	NR	Network Rail as a riparian owner have the responsibility under the Land Drainage Act 1991 to ensure that all culverts that run under their railways are clear and free of blockages that could cause an obstruction to flow and influence flood risk. It is recommended that Network Rail work with WBC to assess the condition of the two culverts below the Reading-Basingstoke railway line, north of Reading Green Park Station, and determine what measures are required to improve their capacity (e.g. by increasing the frequency of maintenance and / or clearing the blocked culvert) and reduce the risk of flooding upstream in Pingewood whilst not increasing risk to properties and land downstream.	6.6.8	Network rail to be contacted for maintenance record of the culverts under the railline.	WBC to contact NR with regards their maintenance and inspection regime and to see what the current condition of the culverts are.
Sheffield Bottom	LR	Residents should report any highway drainage issues to WBC and any foul or surface water sewer drainage issues to Thames Water as soon as they become apparent.	7.6.1	Noted	
	LR	Residents and business owners affected by fluvial flooding may benefit from property flood resilience measures, such a flood doors, waterproof airbricks, and placing electrical sockets at raised levels. Residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring, non-return valves, and sump pumps to protect and / or make their premises more resilient from flooding during times of high groundwater.	7.6.2	WBC to inspect watercourses and serve notice where necessary.	WBC to inspect watercourses and serve notice where necessary. To be undertaken in next 12 months.

	LR	Riparian owners across Sheffield Bottom should ensure that watercourses within their ownership are clear of obstructions, such as vegetation, and enable the free passage of water. Furthermore, landowners should ensure that regular maintenance of the ditches are carried out.	7.6.3	WBC to inspect watercourses and serve notice where necessary.	WBC to inspect watercourses and serve notice where necessary. To be undertaken in next 12 months.
	WBC	It is considered that there may be potential issues with the condition, and therefore the capacity of the existing highway drainage assets along Hose Hill and Jaques Lane. It is acknowledged that the design standard of existing highway drainage is likely to be lower than the rainfall event recorded and that it will also not be designed to cope with groundwater. However, it is recommended that a CCTV survey could be undertaken to confirm it's condition. Remedial works could then be undertaken, focussing on areas at highest risk of flooding, to ensure that flood risk is reduced.	7.6.4	Highway drainage investigation needed.	Drainage investigation of this area to be costed and programmed.
	WBC	WBC could review the current highway drainage inspection and maintenance schedule and, where appropriate, increase the frequency. Alternatively, critical assets could be marked as a priority, and arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain.	7.6.5		
	WBC	As the LLFA, WBC could review the maintenance schedule for the culvert that takes DOBS under Station Road. During WSP's site visit, residents expressed concerns that the culvert often has fallen trees and vegetation blocking the channel and therefore a more routine clearing of debris is recommended.	7.6.6	Need to establish ownership of culvert and add to critical drainage infrastructure register.	WBC to establish ownership of culvert and add to critical drainage infrastructure register.
	EA	It was reported that after the 2013/14 flood event, the EA dug a ditch behind the Fox and Hounds Pub. During WSP's site visit it was noted that this ditch was blocked and full of vegetation. The EA could consider clearing the ditch and creating a schedule to ensure regular maintenance of the ditch occurs to help decrease flood risk along Deans Copse Road.	7.6.7	Check records to see who dug this ditch. Unlikely to have been the EA and could have been WBC.	WBC to investigate ditch ownership and add to drainage infrastructure register.
	EA	As recommended in response to the 2013/14 flood event, controls could be installed at the weir and fish pass at the head of Draper's Osier Bed Stream. If the channel were to overtop in the future, the controls could be used to reduce the volume in the channel and prevent it continuing to flood out of the bank.	7.6.8	Check 2013/14 s19 report.	
	PC	Parish Council should continue to support local flood wardens in Sheffield Bottom and provide education and communication to local residents on the following: How to monitor river levels and flows; How to sign up to the EA flood alerts and warnings;	7.6.9		

		How to report concerns to the relevant flood risk management authorities; Guidance on effective property flood resilience; What to do and when, in preparation for a flood. Where to find support following a flood event			
	PC	During WSP's site visit to Sheffield Bottom, it was note that the area could benefit from increasing the number of flood wardens, specifically for the southern area of Sheffield Bottom. This would aid communication and advancements, with regards to flood risk, between the local community and WBC.	7.6.10	Parish Council to be approached for potential volunteer flood wardens.	Parish Council to be approached for potential volunteer flood wardens.
Eastbury	LR	Residents should report any highway drainage issues to WBC and any foul sewer drainage issues to Thames Water as soon as they become apparent.	8.6.1	Noted	
	LR	Residents and business owners affected by fluvial flooding may benefit from property flood resilience measures, such as flood doors, waterproof airbricks, and placing electrical sockets at raised levels, to further protect their premises during subsequent storm events. In contrast, residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring, non-return valves, and sump pumps to protect their premises from further flooding during times of high groundwater.	8.6.2	All residents affected have been contacted and invited to apply for property resilience grant funding.	WBC to continue to promote flood recovery and resilience grants where available.
	WBC	An immediate recommendation of this report is for WBC to unblock the road gully in Eastbury Newtown to allow floodwaters to subside more efficiently. A CCTV survey could then be conducted to access the condition of the highway drainage network, especially in Eastbury Newtown, and explore the cause of the blocked gully. Remedial works should then be investigated to determine if it is possible to prevent the gully from becoming blocked again and reduce flood risk.	8.6.3	Investigation into the highway drainage to be undertaken.	Complete
	WBC	WBC could review the current highway drainage maintenance schedule and, where appropriate, increase the frequency of inspections, specifically in Eastbury Newtown. Alternatively, these assets could be marked as a priority, and arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain.	8.6.4	Noted	
	WBC	A schedule should be put in place for the maintenance of the grips along the River Lambourn. If this is already in place, then the schedule should be updated, with Eastbury highlighted as a priority location for inspection on receipt of forecasts of heavy rain.	8.6.5	WBC to add grips to drainage asset register.	WBC to add grips to drainage asset register.

	WBC	Furthermore, improved communication is required between the Eastbury flood wardens and WBC, specifically regarding decisions on road closures and safety, to allow the flood wardens to communicate these decisions to the rest of the local community and reduce confusion.	8.6.6		
	EA	This flood investigation has highlighted the potential need for a trash screen to be added to the existing flood alleviation scheme located upstream at Eastbury. This would serve to prevent the build-up of large debris and improve the efficiency of the scheme. Subsequently, a maintenance schedule should be put in place to encourage regular inspection and clearance of the trash screen.	8.6.7	To be discussed with the EA.	WBC to contact the EA with regards this proposal.
	EA	In addition to this, during WSP's site visit to Eastbury, it was noted that the downstream river levels gauge on the flood alleviation scheme is reading incorrectly. Currently, it is reading levels from splashes of water as they flow through. The gauge should be moved slightly further downstream to ensure it reads precise river levels that can then accurately inform residents of Eastbury during high rainfall events.	8.6.8	To be reported to the EA.	WBC to report to the EA.
	EA	Additionally, the village may benefit from the installation of boreholes, used for groundwater monitoring, and preparation of a groundwater flood plan to help inform flood risk.	8.6.9	To be discussed with the EA.	WBC to contact the EA with regards this proposal.
	TW	It is understood that TW have previously lined the sewers and sealed manholes within the area to reduce flood risk. This flood investigation has highlighted that sewer flooding has still occurred despite these works. Therefore, it is recommended that TW could carry out a full CCTV survey to investigate the capacity and condition of the sewer network. Once it is understood what is causing the excessive inundation of the sewer system, RMAs should work in partnership to identify any feasible remedial works.	8.6.10	Thames Water to be contacted for response.	WBC to contact Thames Water for response.
	TW	Recognising the significant costs associated with upgrading sewerage assets, it is recommended that potential remedial works are identified and prioritised for maximum benefit. Potential works could include the relining of the sewer network using new technologies, or the installation of a new isolated sewer line to take foul water from Eastbury Newtown, directly to East Garston sewage works. Furthermore, TW could consider upgrading Bockhampton pumping station.	8.6.11	Thames Water to be contacted for response.	WBC to contact Thames Water for response.
	PC	Parish Council to continue to support local flood wardens in Eastbury and provide education and communication to local residents on the	8.6.12		

		following: How to monitor river levels and flows; How to sign up to the EA flood alerts and warnings; How to report concerns to the relevant flood risk management authorities; Guidance on effective property flood resilience; What to do and when, in preparation for a flood. Where to find support following a flood event			
Great Shefford	LR	Residents should report any foul and surface water sewer issues to TW as soon as they become apparent. In addition to this, residents affected by sewer issues may benefit from the installation of non-return valves to prevent future internal sewer flooding.	9.6.1		
	LR	The resident affected by groundwater flooding may benefit from the installation of property flood resilience measures such as hard flooring and sump pumps to help reduce the risk of flooding to their premises during time of high groundwater.	9.6.2	All residents affected have been contacted and invited to apply for property resilience grant funding.	WBC to continue to promote flood recovery and resilience grants where available.
	WBC	WBC should continue the work with and support the EA to complete the installation of the new flood alleviation scheme as soon as weather and ground conditions allow.	9.6.3	Noted	FAS almost complete.
	EA	During WSP's site visit, it was reported that the Great Shefford ground water monitoring gauge appeared to have intermittently stopped working during the early months of 2024. It would be beneficial for the EA to investigate the gauge and carry out necessary remedial works.	9.6.4	To be reported to the EA.	WBC to report to the EA.
	TW	It is recommended that TW could carry out a full CCTV survey to investigate the capacity and condition of the sewer network. Once it is understood what is causing the excessive inundation of the sewer system, RMAs should work in partnership to identify any feasible remedial works.	9.6.5	To be reported to Thames Water for comment.	WBC to report to Thames Water for comment.
	TW	Recognising the significant costs associated with upgrading sewerage assets it is recommended that potential remedial works are identified and prioritised for maximum benefit. Potential works could include the relining of the sewer network using new technologies, the sealing of manholes to prevent surcharging, and the addition of non-return valves.	9.6.6	To be reported to Thames Water for comment.	WBC to report to Thames Water for comment.
	PC	Parish Council should provide support to local flood wardens and aid the communication between residents in the area. This may include the distribution of information regarding the following: How to monitor river levels and flows; How to sign up to the	9.6.7		

		EA flood alerts and warnings; How to report concerns to the relevant flood risk management authorities; Guidance on effective property flood resilience; What to do and when, in preparation for a flood. Where to find support following a flood event			
Lambourn	LR	Residents and business owners affected by fluvial and surface water flooding may benefit from property flood resilience measures, such as flood doors / barriers, waterproof airbricks, and placing electrical sockets at raised levels, to provide resilience to their premises during storm events.	10.6.1	All residents affected have been contacted and invited to apply for property resilience grant funding.	WBC to continue to promote flood recovery and resilience grants where available.
	LR	In contrast, residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring and sump pumps or by tanking their property to provide resilience during times of high groundwater. It is noted that some properties in Lambourn already do have property flood resilience measures installed, such as flood doors.	10.6.2		
	LR	Residents should report any highway drainage issues to WBC and any surface and foul water sewer issues to TW as soon as they become apparent. In addition, those affected by sewer flooding may benefit from the installation of one-way valves to prevent sewage backing up into their properties.	10.6.3		
	LR	Confirmation should be sought around which Authority / landowners are responsible for the ditch located along the road by Northfields and North Farm Close and measures should be put in place to ensure the ditch is appropriately managed to reduce flood risk.	10.6.4	Ditch ownership to be investigated.	WBC to contact the landowner to make them aware of their maintenance responsibilities.
	WBC	WBC could review the current highway drainage maintenance schedule across Lambourn, and consider a CCTV survey of the sewerage network, specifically along Mill Lane and Oxford Street. It is acknowledged that the design standard of existing highway drainage is likely to be lower than the rainfall event recorded and that it will also not be designed to cope with groundwater. However, the condition of the highway drainage network could be assessed, and the cause of the blocked gullies explored. Remedial works should then be prioritised in areas at higher risk of flooding to prevent the gullies from becoming blocked.	10.6.5		Investigation work (not already undertaken) to be costed and prioritised.
	WBC	An investigation into road drainage along Oxford Street and Wantage Road. Hydraulic modelling could be undertaken to understand the hydraulic dynamics of surface water flowing along the road. Surface water runoff from Sheepdrove Road should also be considered, as it	10.6.6		Investigation work to be costed and prioritised.

		was noted that this can flow into Wantage Road if it cannot enter the culvert on Sheepdrove Road. The results of this modelling could then determine the requirement for more road drainage, for example in the form of gullies, or SuDS measures, such as rain gardens, at a local and / or catchment scale.			
	WBC	WBC could consider the addition of flap valves to highway drainage outfalls to watercourses, to prevent river water from backing up into the road drainage system during high flows.	10.6.7		
	EA	A feasibility study could be undertaken into the potential for a flood alleviation scheme to be implemented in Lambourn. This could include the temporary storage of river water during high flows, at sites such as Lynch Wood or Lambourn Playing Field. It is noted, however, that although a contributing factor, fluvial flooding was not considered as the main factor to the complex flooding experienced in Lambourn in early 2024.	10.6.8	Significant surface/ground water study would be needed to assess the potential benefit of such a scheme.	Study to be costed and prioritised.
	TW	TW could carry out a CCTV survey to investigate the capacity and condition of the sewer network in Lambourn. Once it is understood what is causing inundation of the sewer system, remedial works can be undertaken to prevent it. Potential works could include the relining of the sewer network using new technologies, the sealing of manholes to prevent surcharging, and the addition of non-return valves.	10.6.9	To be reported to Thames Water for comment.	WBC to report to Thames Water for comment.
	TW	It is understood that in some situations these measures may have limited effectiveness, and TW should prioritise the best possible outcome for the available budget.	10.6.10		
	TW	Investigation into the effectiveness of a flip pump located in Newbury Road should be carried out following reports of the system being inundated with groundwater and having to continuously pump it down the main sewer.	10.6.11	To be reported to Thames Water for comment.	WBC to report to Thames Water for comment.
	PC	Parish Council should provide support to local flood wardens in Lambourn and provide education and communication to local residents on the following: How to monitor river levels and flows; How to sign up to the EA flood alerts and warnings; How to report concerns to the relevant flood risk management authorities; Guidance on effective property flood resilience; What to do and when, in preparation for a flood. Where to find support following a flood event	10.6.12		

Newbury South	LR	Residents should report any highway drainage issues to WBC and any foul and surface water sewer issues to TW as soon as they become apparent. In addition, those affected by sewer flooding may also benefit from the installation of on-way valves to prevent sewage backing up into their properties.	11.6.1		
	LR	Residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring and sump pumps or tanking their properties to give resilience to their premises during times of high groundwater. Additionally, the area may benefit from the preparation of a groundwater flood plan to help inform flood risk. Owners of properties affected by surface water flooding may benefit by considering the installation of property flood resilience measures such as flood gates / barriers.	11.6.2	All residents affected have been contacted and invited to apply for property resilience grant funding.	WBC to continue to promote flood recovery and resilience grants where available.
	LR	During WSP's site visit to Northcroft it was noted that much of the residential area is designed and built with flood risk in mind. For example, Swan Court has non-return valves and a ramp up to the property from the car park. Despite this, it is recommended that the owners could carry out a feasibility study into whether additional drainage storage could be installed within the car park areas to reduce the risk of excess runoff entering Northcroft Lane.	11.6.3		
	WBC	It is acknowledged that the design standard of existing highway drainage is likely to be lower than the rainfall event recorded and that it will also not be designed to cope with groundwater. However, it is recommended that WBC could conduct a CCTV survey along Northcroft Lane to access the condition of the highway drainage network. Any required remedial works could then be considered to prevent the gullies from becoming blocked and reduce flood risk.	11.6.4		
	WBC	WBC could review the current highway drainage maintenance schedule across Northcroft, and, where appropriate, increase the frequency of inspections, specifically along Northcroft Lane. Alternatively, these assets could be marked as a priority, and arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain.	11.6.5		
	EA	A feasibility study could be undertaken by the EA into the potential for a flood alleviation scheme benefitting the island between the River Kennet and the Kennet and Avon Canal. This scheme could be similar to the flood wall that was implemented on the north bank of the River Kennet in 2014, however further investigation and modelling would	11.6.6	To be reported to the EA.	WBC to report to the EA for comment.

		be required to understand the suitability of this type of defence to ensure it does not increase flood risk downstream.			
	EA	The design of the 2013 flood defence wall, to the south of Northcroft Lane be reviewed to determine whether there is a potential pathway below the wall, allowing fluvial flooding to affect the rear of the properties in Northcroft Lane.	11.6.7	To be reported to the EA.	WBC to report to the EA for comment.
	TW	TW could carry out a CCTV survey to investigate the capacity and condition of the sewer network in Northcroft, prioritising areas known to be at risk of flooding. Once it is understood what is causing inundation of the sewer system, remedial works could be considered to prevent it. Potential works could include the reining of the sewer network using new technologies and the sealing of manholes to prevent surcharging.	11.6.8	To be reported to Thames Water for comment.	WBC to report to Thames Water for comment.
	TC	Town Council should continue to support local flood wardens in the south of Newbury and provide education and communication to local residents on the following: How to monitor river levels and flows; How to sign up to the EA flood alerts and warnings; How to report concerns to the relevant flood risk management authorities; Guidance on effective property flood resilience; What to do and when, in preparation for a flood. Where to find support following a flood event	11.6.9		
	TC	It was noted that the area currently only has one flood warden. If possible, it may prove beneficial to increase the number of flood wardens in the area to aid communication and advancements, with regards to flood risk, between the local community and WBC.	11.6.10	Parish Council to be approached for potential volunteer flood wardens.	Parish Council to be approached for potential volunteer flood wardens.
Newbury North	LR	Residents should report any highway drainage issues to WBC and any foul and surface water sewer issues to TW as soon as they become apparent. In addition, any issues with river maintenance, such as debris build up on the River Lambourn, should be communicated as soon as possible to the EA.	12.6.1		
	LR	Residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring and sump pumps or the tanking the property to improve their premises' resilience during times of high groundwater.	12.6.2	All residents affected have been contacted and invited to apply for property resilience grant funding.	WBC to continue to promote flood recovery and resilience grants where available.
	LR	Those affected by fluvial flooding may benefit from the installation of flood barriers or doors, if they are not already in use. Furthermore, general property level resilience and resistance measures should be	12.6.3	All residents affected have been contacted and invited to apply for property resilience grant funding.	WBC to continue to promote flood recovery and resilience grants where available.

		considered, such as raising plug sockets, and the use of air brick covers.			
	WBC	The area is complexly hydraulically connected and is at risk from flooding from a variety of sources. Therefore, it is recommended that WBC could commission a flood study to identify these sources and gain an understanding of the interaction between them.	12.6.4	Significant study would be needed to identify a potential flood storage area.	WBC to cost and prioritise a study to identify potential flood alleviation options for this area.
	WBC	A blocked trash screen along Spout Ditch is obstructing flow from moving downstream. It is recommended that WBC remove this blockage in stages during times of lower flows to ensure that the backed-up flows to not suddenly inundate further downstream and cause flooding. A maintenance schedule and flow monitor could then be put in place to ensure blockages are easily identified and regularly cleared in Spout Ditch.	12.6.5	WBC to investigate ownership.	WBC to identify the trash screen owner and ensure maintenance is undertaken.
	WBC	WBC also could consider the implementation of a raised footpath through Shaw Park, for use by members of the public, including school children, to ensure safe passage when the floodplain is inundated. However, this should be appropriately modelled and investigated prior to installation to ensure there is no loss of floodplain storage or impact on existing flow rates.	12.6.6	This would need hydraulic modelling, and any improvement would require planning permission and EA consent. Raising without providing compensatory land elsewhere is unlikely to gain EA approval.	Hydraulic modelling to be costed and prioritised.
	WBC	WBC could aid residents along River Side Lane and work with the agreed riparian owner(s) to implement flood mitigation measures. These measures could include the use of Nature Based Solutions (NBS) in the form of bank stabilisation.	12.6.7	WBC to identify land/riparian owners along Riverside Lane.	WBC to identify land/riparian owners along Riverside Lane.
	WBC	It has been reported that the drains in Glebefields car park appear to be unmaintained. It is not known who is responsible for the maintenance of this drainage so WBC could work with residents to discover ownership and ensure a maintenance schedule is implemented.	12.6.8	WBC to identify ownership of drains.	WBC to identify ownership of drains.
	EA	Affected residents reported that the EA's flood alerts and warnings were issued too late, however no information or verification has been provided by the EA in relation to this. Therefore the EA should review the levels at which alerts and warnings are issued to the Shaw area to ensure sufficient time is provided to residents to allow flood plans to be followed and preparations put in place.	12.6.9	Has been reported to the EA.	
	EA	The EA could consider the implementation of riverbank protection in the form of NBS along the River Lambourn. This could include taking the trees and natural debris out of the river and using it to line the river as a form of bank reinforcement. Specifically, bank	12.6.10	To be reported to the EA.	WBC to report to the EA for comment.

		reinforcement could be considered along River Side Lane to prevent high flows from undercutting the lane.			
	EA	Newbury may benefit from the installation of boreholes used for groundwater monitoring and the preparation of a groundwater flood plan to help inform flood risk, specifically in the area near Newport Road and the River Lambourn.	12.6.11		
	EA	It was noted that there is no official appointed individual who is responsible for the operation of sluice gates along the River Lambourn. It may prove beneficial for the EA to provide specific sluice gate operation guidance to riparian owners, who are already undertaking sluice gate operation along the River Lambourn, to ensure that gates are correctly operated, thereby reducing the risk of flooding.	12.6.12	To be reported to the EA.	WBC to report to the EA for comment.
	EA	The EA could consider determining the viability of a flood alleviation scheme upstream of the River Lambourn from Newbury. There may be the potential to divert flow from the River Lambourn into fields as a form of temporary storage and controlled release. However, further data needs to be collected to ascertain the potential benefits and options for the provision of practicable solutions in addition to its financial and technical feasibility.	12.6.13	Significant study would be needed to identify a potential flood storage area.	WBC to cost and prioritise a study to identify potential flood alleviation options for this area.
	TW	It is considered that TW could carry out a CCTV survey to investigate the capacity and condition of the sewer network, specifically along Newport Road and Pike Street. Once it is understood what is causing inundation of the sewer system, remedial works could be undertaken to prevent it. Potential works could include the relining of the sewer network using new technologies and the sealing of manholes within the area to reduce flood risk.	12.6.14	To be reported to Thames Water for comment.	WBC to report to Thames Water for comment.
	TW	Local residents expressed concerns that the pumping station in Shaw Park has not been upgraded despite significant housing developments at Donnington Heights. It is recommended that an assessment of its capacity should be undertaken, if not already done.	12.6.15	To be reported to Thames Water for comment.	WBC to report to Thames Water for comment.
	TC	Town Council should continue to support local flood wardens in Newbury and provide education and communication to local residents on the following: How to monitor river levels and flows; How to sign up to the EA flood alerts and warnings; How to report concerns to the relevant flood risk management authorities; Guidance on effective property flood resilience;	12.6.16		

		What to do and when, in preparation for a flood. Where to find support following a flood event			
Pangbourne	LR	Residents should report any highway drainage issues to WBC as soon as they become apparent. In addition, any issues with river maintenance, such as debris build up on the weir on the River Thames, should be communicated as soon as possible to the EA.	13.6.1		
	LR	Residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring and sump pumps or the tanking the property to increase the resilience of their premises, especially basements, during times of high groundwater.	13.6.2	All residents affected have been contacted and invited to apply for property resilience grant funding.	WBC to continue to promote flood recovery and resilience grants where available.
	LR	Those affected by fluvial flooding may benefit from the installation of flood barriers or doors. Furthermore, some properties that are located directly on the bank of the River Thames, may benefit from the installation of a flood wall to provide better flood protection during times of high flows. General property level resilience and resistance measures should be considered, such as raising plug sockets.	13.6.3	All residents affected have been contacted and invited to apply for property resilience grant funding.	WBC to continue to promote flood recovery and resilience grants where available.
	LR	Owners of properties with outfalls discharging into the River Thames should consider installing flap valves to prevent backing up of river water. Another option is the use of temporary caps that can be used to cover the outfalls during times of high river levels.	13.6.4	WBC to work with landowners to identify outfalls.	
	WBC	WBC should investigate the road gully located at the entrance to The Swan Pub. It was noted during WSP's visit that the road gully was blocked, thereby increasing the risk of road runoff flowing directly into the pub carpark. Remedial works should be carried out to prevent the gully from becoming blocked / damaged again and reduce flood risk.	13.6.5	Investigation to be undertaken.	To be added to capital maintenance programme.
	WBC	WBC should review their current highway drainage maintenance schedule and, where appropriate, increase the frequency of inspections in areas at risk of flooding.	13.6.6		
	WBC	A schedule should be put in place for the maintenance of drainage grips across Pangbourne. If this is already in place, the schedule should be reviewed, with grips along Mill Lane and the River Pang highlighted as priority locations for inspection.	13.6.7	Grips to be reviewed.	Grips to be reviewed.
	WBC	Recommendation for consideration of whether there is sufficient road drainage along Mill Lane, because during WSP's site visit it was noted that there appears to be a lack of drainage features.	13.6.8	Mill Road drainage to be investigated.	Investigation to be costed and prioritised.

	EA	A schedule should be put in place for the regular inspection and removal of debris, if necessary, from Whitchurch Weir to prevent flows backing up and flooding upstream. If this is already in place, then the schedule should be updated to allow for more frequent inspections, specifically upon receipt of forecasts of heavy rain.	13.6.9	To be reported to the EA.	WBC to report to the EA for comment.
	EA	Recommendation is for the employment of a new lock keeper, since WSP were made aware on their site visit that the role is currently vacant. The new lock keeper would be responsible for communication of river levels and flood risks to local residents.	13.6.10	To be reported to the EA.	WBC to report to the EA for comment.
	PC	The Parish Council should continue to support local flood wardens in Pangbourne and provide education and communication to local residents on the following: How to monitor river levels and flows; How to sign up to the EA flood alerts and warnings; How to report concerns to the relevant flood risk management authorities; Guidance on effective property flood resilience; What to do and when, in preparation for a flood. Where to find support following a flood event	13.6.11		
Purley on Thames	LR	Residents should report any highway drainage issues to WBC and any foul or surface water sewer issues to TW as soon as they become apparent.	14.6.1		
	LR	Residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring and sump pumps or tanking the property to give their properties increased resilience from flooding during times of high groundwater in addition to other property flood resilient measures.	14.6.2	All residents affected have been contacted and invited to apply for property resilience grant funding.	WBC to continue to promote flood recovery and resilience grants where available.
	LR	Those affected by fluvial flooding may benefit from the installation of flood barriers or doors, if not already in use. General property level resilience and resistance measures should be considered, such as raising plug sockets.	14.6.3	All residents affected have been contacted and invited to apply for property resilience grant funding.	WBC to continue to promote flood recovery and resilience grants where available.
	EA	Whilst it is recognised that the flood alleviation bund in Blount's Meadow protected properties in Wintringham Way, it is recommended that the EA consider reviewing and potentially enhancing the design of the bund, either by raising it and / or extending it to prevent it being overtopped and / or bypassed, thereby providing greater flood protection.	14.6.4	To be reported to the EA.	WBC to report to the EA for comment.
	TW	TW could carry out a CCTV survey to investigate the capacity and condition of the sewer network in Purley on Thames. Once it is	14.6.5	To be reported to Thames Water for comment.	WBC to report to Thames Water for comment.

		understood what is causing the excessive inundation of the sewer system, remedial works could be considered to mitigate it, with sewers in higher flood risk areas being prioritised. Potential works could include the relining of the sewer network using new technologies and the sealing of manholes to prevent surcharging.			
	PC	The Parish Council should continue to support local flood wardens in Purley on Thames and provide education and communication to local residents on the following: How to monitor river levels and flows; How to sign up to the EA flood alerts and warnings; How to report concerns to the relevant flood risk management authorities; Guidance on effective property flood resilience; What to do and when, in preparation for a flood. Where to find support following a flood event	14.6.6		
Streatley	LR	Residents should report any foul sewer issues to TW as soon as they become apparent. It is believed that the properties affected by internal sewer flooding already have non-return valves fitted. Therefore, affected residents should carry out an inspection to check the condition of these valves and carry out any necessary remedial works.	15.6.1		
	LR	Residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring and sump pumps or the tanking the property to protect their premises, especially basements from further flooding during times of high groundwater. Such measures have already been utilised and proven to be effective across properties in Cleeve Court.	15.6.2	All residents affected have been contacted and invited to apply for property resilience grant funding.	WBC to continue to promote flood recovery and resilience grants where available.
	LR	Those affected by fluvial flooding may benefit from the installation of flood barriers or doors, if they are not already in use. General property level resilience and resistance measures could be considered, such as raising plug sockets	15.6.3	All residents affected have been contacted and invited to apply for property resilience grant funding.	WBC to continue to promote flood recovery and resilience grants where available.
	WBC	It is noted that the highway gullies in Streatley are regularly cleansed, however they become blocked frequently after a flood event. Therefore, WBC could investigate the potential to add mesh gates to collect debris before it enters the drainage network. A maintenance schedule could then be put in place to ensure the regular clearance of any debris, specifically along known high risk roads, such as High Street and Streatley Hill. Furthermore, a schedule could be put in place for the maintenance of the ditches across Streatley. If this is already in place, then the schedule could be updated with ditches in	15.6.4	To be investigated and costed.	Proposed measures to be costed and prioritised.

		Cleeve Court highlighted as a priority location for inspection on receipt of forecasts of heavy rain.			
	WBC	WBC could collaborate with the EA and local residents to investigate the potential for a flood alleviation scheme to be implemented in Streatley. This could include the temporary storage of river water during high flows at sites such as Bishops Field to the north of Cleeve Court, or land to the west of Cleeve Lock. However this will require more detailed investigation outside of the remit of this report.	15.6.5	Significant study would be needed to identify a potential flood storage area.	WBC to cost and prioritise a study to identify potential flood alleviation options for this area.
	WBC	WBC could engage with the electricity provider regarding adequate flood protection for the electricity substation located in Cleeve Court.	15.6.6	WBC to report to SSE for comment.	WBC to report to SSE for comment.
	EA	During WSP's visit to Streatley, many affected residents reported that the EA's flood alerts and warnings were repeatedly issued too late and often the flooding had already occurred before a flood warning was issued. Therefore, the EA could review the levels at which alerts and warnings are issued to the Streatley area to ensure enough time is provided to residents to allow flood plans to be followed and preparations put in place. Residents also reported that it would be useful for information on the predicted arrival time of the peak flood level and the predicted height of the peak flood level, to be communicated within the daily flood alert and flood warning update.	15.6.7	To be reported to the EA.	WBC to report to the EA for comment.
	EA	The village may benefit from the installation of boreholes, used for groundwater monitoring and preparation of groundwater flood plan to help inform flood risk, specifically in the area of Cleeve Court.	15.6.8		
	TW	TW could consider the implementation of flood defences to protect the SPS from future flooding and therefore prevent internal sewer flooding across Cleeve Court. Furthermore, it is recommended that TW consider engaging with affected residents regarding expectations on response during any future incidents affecting the capacity of the sewerage system.	15.6.9	To be reported to Thames Water for comment.	WBC to report to Thames Water for comment.
	PC	The Parish Councils should continue to support the local flood warden in Streatley and provide education and communication to local residents on the following: How to monitor river levels and flows; How to sign up to the EA flood alerts and warnings; How to report concerns to the relevant flood risk management authorities; Guidance on effective property flood resilience; What to do and when, in preparation for a flood. Where to find support following a flood event			

	PC	It was noted during the site visit that the area currently only has one flood warden. If possible, it may prove beneficial to increase the number of flood wardens in the area to aid communication and advancements, with regards to flood risk, between the local community and WBC.	15.6.10		
Winterbourne	LR	Residents should report any road drainage issues to WBC as soon as they become apparent. Riparian owners of Winterbourne Stream should ensure that the watercourse is clear of obstructions, such as vegetation and enable the free passage of water. During WSP's site visit it was noted that several properties have bridges that cross the stream to allow access and egress. During times of high stream levels, these bridges created an obstruction to flow and become unsafe to use. It is recommended that riparian owners should consider raising the height of these bridges to ensure safe access and egress can still be achieved and to reduce the risk of obstruction of flows.	16.6.1	WBC to discuss with landowners.	WBC to discuss with landowners.
	LR	Residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring and sump pumps or tanking their properties to give their premises resilience from flooding during times of high groundwater in addition to other property flood resilient measures.	16.6.2		
	LR	Those affected by fluvial flooding may benefit from the installation of flood gates, barriers or doors, if they are not already in use. General property level resilience and resistance measures could be considered such as raising plug sockets.	16.6.3		
	WBC	A schedule could be put in place for the maintenance of grips through Winterbourne. If this is already in place, then the schedule could be updated, with grips along Winterbourne Lane highlighted as priority locations for inspection on receipt of forecasts of heavy rain.	16.6.4	Grips to be added to the drainage asset register.	Grips to be added to the drainage asset register.
	WBC	It was noted that water from Winterbourne Stream was backing up road drainage and flooding the road. It is acknowledged that the design standard of existing highway drainage is likely to be lower than the rainfall event recorded. However, it is recommended that WBC could conduct a CCTV survey to assess the condition of the highway drainage network and then carry out any necessary remedial works.	16.6.5	Drainage system to be investigated.	Survey to be costed and prioritised.
	WBC	A community schedule could be put in place with the aid of riparian owners and WBC to ensure the regular clearance of Winterbourne Stream of vegetation and debris. This schedule should encourage more frequent maintenance upon receipt of forecasts of heavy rain.	16.6.6		

	WBC	WBC could review the Winterbourne Flood Alleviation Scheme design to see if it is functioning as designed and if so, if other measures are necessary to improve the flood defence standard.	16.6.7	Consultants to be commissioned to investigate whether the FAS could be fitted with a penstock and control device to hold back water in conditions similar to those seen in 2024.	WBC to cost and prioritise a study into altering the existing FAS.
	PC	The Parish Councils should continue to support the local flood warden in Winterbourne and provide education and communication to local residents on the following: How to monitor river levels and flows; How to sign up to the EA flood alerts and warnings; How to report concerns to the relevant flood risk management authorities; Guidance on effective property flood resilience; What to do and when, in preparation for a flood. Where to find support following a flood event	16.6.8		
	PC	It was noted that the area currently only has one flood warden. If possible, additional flood wardens should be sought to aid communication and advancements with regards to flood risk between the local community and WBC.	16.6.9		
Crookham Hill	WBC	Investigate the cause and mitigation of flooding across the highway		Commission an investigation into the cause and potential mitigation for the highway flooding on Crookham Hill.	Flood investigation to be costed and prioritised.

West Berkshire Council

S19 FLOOD INVESTIGATIONS

Storms Henk, Isha, and Jocelyn - January 2024

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WSP

Matrix House
Basing View
Basingstoke, Hampshire
RG21 4FF

Phone: +44 1256 318 800

WSP.com

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EXECUTIVE SUMMARY

The West Berkshire 2024 flood event covers the period from early January to late March, during which time a significant number of villages across West Berkshire were affected by flooding as a result of Storms Henk, Isha, and Jocelyn.

WSP were commissioned by West Berkshire Council, as the LLFA, to conduct a Section 19 Flood Investigation as a result of flooding across the region. The areas that experienced the most serve flooding, and therefore investigated within this report, include Burghfield Bridge, Pingewood, Sheffield Bottom, Eastbury, Great Shefford, Lambourn, Newbury, Pangbourne, Purley on Thames, Streatley, and Winterbourne. Other areas that were noted to have experienced flooding, at a less significant scale, include Bucklebury, Coley, East Garston, East Ilsley, Hampstead Norreys, Shefford Woodlands, Sulhamstead, Thatcham, Theale, Upper Lambourn, and West Ilsley.

The majority of the flooding occurred on the 5th of January, following Storm Henk which occurred on the 2nd of January. However, areas of West Berkshire remained inundated for varying lengths of time, due to Storms Isha and Jocelyn causing further flooding. In total, WSP are aware of approximately 210 properties in total that experienced a form of flooding as a result of the 2024 flood event. Of these, approximately 77 properties experienced internal flooding and approximately 133 properties experienced external flooding. Flooding resulted from multiple sources, such as fluvial, groundwater, sewer, and surface water, creating a complex network of issues.

WSP have completed an investigation into the causes, mechanisms, consequences, and responses associated with the 2024 flood event. This has involved discussions with local flood wardens and affected residents, site visits to the flooded locations, analysis of hydrology data, consultation with risk management authorities, and the review of data gathered by West Berkshire Council, such as questionnaires and photographic evidence.

The analysis of rainfall data across the West Berkshire catchment, did not suggest that Storms Henk, Isha, and Jocelyn had significantly large return periods. However, when combining the heavy rainfall with an already wet winter, high groundwater levels, and high river levels, it created prime conditions for flooding.

The key findings of this investigation are:

- Fluvial and groundwater flooding generally occurred in areas identified as Flood Zone 2 and Flood Zone 3, as indicated on the Environment Agency's flood map for planning. However, some localised flooding occurred within Flood Zone 1.
- Surface water flooding generally occurred in areas identified as being at a high risk of surface water flooding, as indicated on the Environment Agency's long term flood maps. However, again some localised flooding occurred outside of these zones.
- High groundwater levels after an unusually wet winter and extreme precipitation brought by Storms Henk, Isha, and Jocelyn, have been identified as the primary contributing factors to the flooding experienced across West Berkshire in early 2024.

The information obtained from this investigation has highlighted the need for the implementation of a number of measures. The recommendations resulting from this report, range from property flood resilience measures to further investigation for the implementation of flood alleviation schemes. A series of location-specific recommendations has been produced intended to help mitigate against the impact of future flooding.

1 INTRODUCTION

1.1 BACKGROUND

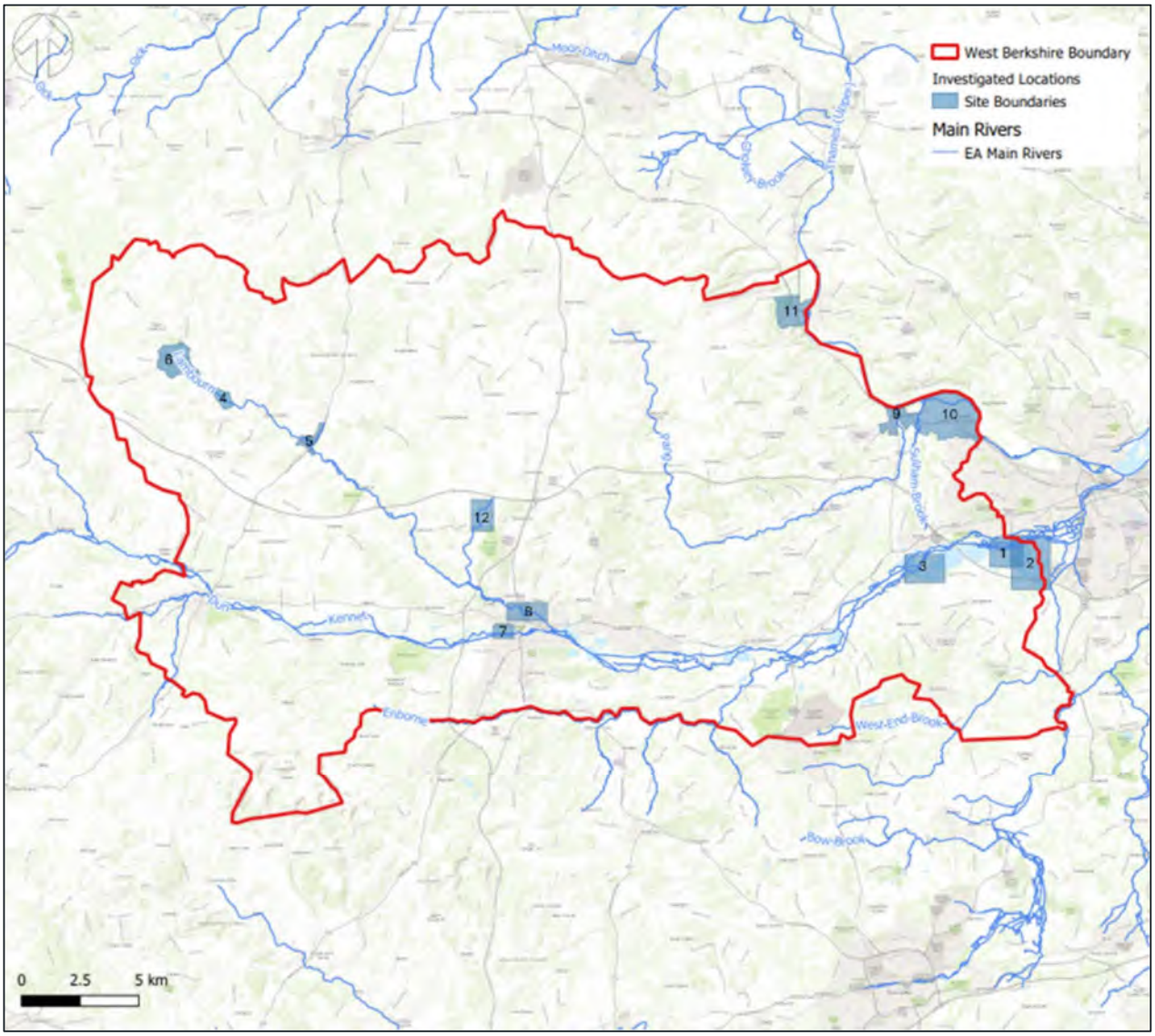
1.1.1. WSP has been commissioned by West Berkshire Council to conduct Section 19 Flood Investigations following flooding which was reported across West Berkshire because of storms in January 2024. The storms included Storm Henk on the 2nd of January, Storm Isha from the 21st to the 22nd of January, and Storm Jocelyn from the 23rd to the 24th of January. The flooding led to internal and external property flooding to residents & businesses and road closures.

1.1.2. The locations under investigation include:

- Burghfield – Burghfield Bridge, Pingewood & Sheffield Bottom
- Eastbury
- Great Shefford
- Lambourn
- Newbury – North & South
- Pangbourne
- Purley on Thames
- Streatley
- Winterbourne

(Refer to Figure 1-1 for Investigation Locations)

Figure 1-1 – Investigation Locations Across West Berkshire



*Refer to Table 1-1 for location details.

1.1.3. West Berkshire Council has a responsibility under the Flood and Water Management Act 2010 (FWMA 2010) to undertake flooding investigations. Specifically, Section 19 states:

"*1) On becoming aware of a flood in its area, a lead local flood authority must, to the extent that it considers it necessary or appropriate, investigate –*

a) which risk management authorities have relevant flood risk management functions, and

b) whether each of those risk management authorities has exercised, or is proposing to exercise, those functions in response to the flood.

2) Where an authority carries out an investigation under subsection (1) it must –

a) publish the results of its investigation, and

b) *notify any relevant risk management authorities*."

1.1.4. Table 1-1 and the figures in Appendix A summarise the areas which have been reported to West Berkshire Council as experiencing flooding following Storms Henk, Isha, and Jocelyn.

Table 1-1 – Effect of Flooding in Each Location (Source: West Berkshire Council, Flood Wardens, the Environment Agency and the Flood Questionnaire)

	Location	Total No. of Properties Flooded	Properties Internally Flooded	Properties Externally Flooded	Road Closures
1	Burghfield Bridge	15	10	5	1
2	Pingewood	4	1	3	2
3	Sheffield Bottom	10	7	3	2
4	Eastbury	9	6	3	2
5	Great Shefford	10	3	7	1
6	Lambourn	5	3	2	1
7	Newbury (South)	10	7	3	2
8	Newbury (North)	51	4	47	2
9	Pangbourne	4	4	Unknown	0
10	Purley on Thames	75	25	50	5
11	Streatley	21	6	15	0
12	Winterbourne	11	2	9	1

1.2 REPORT REQUIREMENTS

1.2.1. West Berkshire Council's Duty to Investigate, Flood Incident Policy, states the purpose and scale of investigations necessary to satisfy the requirements of FWMA 2010. The policy states:

- Any investigations undertaken will seek to establish the likely causes of the flooding incident, the relevant risk management authorities, and identify any recommended actions to be undertaken by the relevant risk management authorities to reduce the risk of a recurrence;
- The investigations will be undertaken during, or as soon as possible after, the flooding incident, and will be appropriate to the scale and nature of the flooding incident;
- Small scale flooding incidents, and incidents where the relevant risk management authorities are immediately apparent or are undertaking actions to alleviate the cause of the flooding incident, are likely to require limited investigations; and

- Large scale flooding incidents, incidents where the relevant flood risk management authorities are unclear, and incidents where several risk management authorities are involved, are likely to require more detailed investigations. In such circumstances the Council will work closely with the risk management authorities involved and may, where appropriate, prepare a detailed report.

1.2.2. To achieve the above requirements:

- Causes of flooding have been investigated by undertaking the following actions:
  - Reviewing the rainfall pattern (hydrological assessment), to determine the magnitude of the flood event;
  - Issuing a questionnaire consultation with affected residents to understand the perceived causes of flooding; and
  - Comparing the flood event with published flood risk maps to understand if the flooding occurred as predicted.
- The responsibilities and necessary actions for the relevant Risk Management Authorities have been established; and
- This report has been produced to capture the data, findings, and recommendations.

1.3 SITE VISITS

1.3.1. WSP staff carried out site visits to each affected area on the following dates:

- Burghfield – Burfield Bridge – 26th February 2024
- Burghfield – Pingewood – 3rd May 2024
- Burghfield – Sheffield Bottom – 3rd May 2024
- Eastbury – 1st March 2024
- Lambourn – 19th April 2024
- Newbury (South) – 15th March 2024
- Newbury (North) – 22nd March 2024
- Pangbourne – 5th April 2024
- Purley on Thames – 14th March 2024
- Streatley – 7th March 2024
- Winterbourne – 18th April 2024

1.3.2. Site visits were completed to assist in the identification and mapping of flooding sources, causes, flow routes, and consequences.

1.3.3. Photographs from these site visits are provided throughout this report and in Appendix G.

1.4 LIMITATIONS

1.4.1. The information contained in this document has been compiled for the benefit of West Berkshire Council officers and contractors, Parish Councils, Thames Water, the Environment Agency, and the affected community.

1.4.2. It should be noted that much of the following record is dependent upon accounts of the flood events from residents, business owners, flood wardens, and West Berkshire Council officers. Prior to taking any recommendations forward, a feasibility study should be undertaken to confirm the viability of any interventions.

1.4.3. During WSP's site visits, it was noted that many properties owners have chosen not to report if they were affected by flooding, for privacy and / or insurance purposes. There has also been some variation between information collected during these site visits, and through the West Berkshire Council flood questionnaire.

2 FLOOD RISK MANAGEMENT ROLES AND RESPONSIBILITIES IN WEST BERKSHIRE

2.1 WEST BERKSHIRE COUNCIL

2.1.1. Under the FWMA 2010, West Berkshire Council, as the Lead Local Flood Authority (LLFA):

- is responsible for coordinating the management of flood risk from local sources. This includes surface water, groundwater and ordinary watercourses;
- has a duty to investigate and publish reports on flood events (to the extent it considers necessary);
- is responsible for compiling and maintaining a register of structures and features that have a significant effect on flood risk;
- has responsibility for consenting third-party works to ordinary watercourses; and
- is required to co-operate with other Risk Management Authorities.

2.1.2. West Berkshire Council is also the Highway Authority and has the following powers and duties:

- maintain highways, including ensuring that highway drainage systems are clear and that blockages on the highway are cleared;
- deliver works that they consider necessary to protect the highway from flooding, either on the highway itself or on land which has been acquired by the Highway Authority in the exercising of highway acquisition powers; and
- divert parts of watercourses or carry out any other works on any form of watercourse if it is necessary for the construction, improvement or alteration of the highway or provides a new means of access to any premises from the highway.

2.1.3. The Council also has other related roles in planning and development control, public health and emergency planning.

2.2 ENVIRONMENT AGENCY

2.2.1. The Environment Agency is responsible for providing a national strategic overview of flooding. The Environment Agency is also responsible for managing flood risk from Main Rivers. The Environment Agency does not have a responsibility for surface water flooding.

2.2.2. The Environment Agency has a key role in providing flood warnings to the public and in protecting and improving the natural environment.

2.2.3. The Environment Agency has permissive powers to reduce flood risk by undertaking work on Main Rivers and flood defence structures.

2.3 THAMES WATER

2.3.1. Thames Water has responsibility for the public foul and surface water sewer systems in its ownership. Thames Water is also responsible for treating sewage from its foul network and to empty and dispose of the contents of their sewers. The Water Company has a general duty (under Section 94 of the Water Industry Act 1991) to provide, extend and improve public sewer systems, ensuring the areas they serve are ‘effectually drained’.

2.3.2. Thames Water must also maintain a register of flooding from sewers. The register records information which is used to apply for investment funds from Ofwat to undertake improvements or repairs to the foul and surface water networks. Investment is agreed with Ofwat on a five-year cycle referred to as Asset Management Periods (AMP). The current AMP runs from 2020-2025.

2.4 RIPARIAN LANDOWNERS

2.4.1. Landowners whose property is adjacent to a river, a stream or a ditch are likely to be 'riparian owners'. Riparian owners have a responsibility to maintain the bed and banks of any watercourse within or adjacent to their property, even if that watercourse is adjacent to a highway (in most cases), and to ensure there are no obstructions to the natural flow of water.

2.5 PROPERTY OWNERS

2.5.1. Responsibility for protecting property from flooding lies in the first instance with property owners. Property owners whose home or business premises are in areas known to be at risk of flooding should consider making their own flood defence preparations. Property owners also have a common law duty to mitigate their losses during a flood event, but without increasing the damage to neighbouring properties.

3 HYDROLOGY

3.1.1. This section assesses the rainfall, water levels, river flows & groundwater levels associated with the Storm Henk event that occurred in January 2024. Whilst there were several storm events; Storm Henk from the 2nd January, Storm Isha from the 21st – 22nd January and Storm Jocelyn from the 23rd – 24th January, Storm Henk has been the focus of the analysis as it had the most significant effect and the most significant rainfall, levels and flows. Storm Henk affected several areas across West Berkshire, including Burghfield, Eastbury, Newbury, Streatley, Purley on Thames, Great Shefford, Pangbourne and Lambourn, which have all been assessed in this report.

3.1.2. Rainfall has been assessed using seven different rainfall gauges from the National River Flow Archives dataset (NRFA) across or close to the West Berkshire unitary authority area. No other rain gauges were considered to be appropriate to use within the assessment of the flood event due to their significant distance from West Berkshire. Additionally, rainfall has also been assessed through purchasing eight 1 x 1 km radar grid squares at each of the affected locations across West Berkshire, from the Met Office. The rainfall radar grid values have then been used to assess the Annual Exceedance Probability (AEP) of Storm Henk.

3.1.3. It is important to note that this rainfall analysis and the AEP estimates are approximates based off observed rainfall data which comes with a degree of uncertainty. Other factors such as catchment characteristics and antecedent rainfall conditions have not been considered for this analysis. Assessment of AEP based solely on rainfall data can only ever provide an approximation of the resultant flood event. Other local factors, such as asset condition and blockage may also have influenced the flooding seen, rather than simply the magnitude of the event.

3.2 RAINFALL GAUGE ANALYSIS

3.2.1. Table 3-1 shows the location of these gauges, the rainfall event recorded and the amount of rainfall between the 4th – 5th January, two days after Storm Henk event and at the start of the flooding occurring. Appendix C.1 at the end of the report shows a map of the location of the Environment Agency rain gauges, along with the location of the eight 1 x 1 radar grid squares and groundwater gauges. The rain gauges recorded a total rainfall ranging from approximately 25 mm – 37 mm for the rainfall event between 14:00 on the 4th January – to 04:00 on the 5th January, varying between 10 hours 45 minutes to 12 hours 30 mins in this time period.

Table 3-1 – The Seven Rainfall Gauges Assessed Between the 4th – 5th January Across West Berkshire Associated with Storm Henk

Rain Gauge	Grid Ref	Rainfall Event (& Duration)	Rainfall (mm)
Chieveley	SU 46952 73862	4th January 14:30 – 5th January 02:15 (11 hours 45 mins)	36.85
Cleeve	SU 60088 81828	4th January 15:00 – 5th January 03:00 (12 hours)	26.30

Rain Gauge	Grid Ref	Rainfall Event (& Duration)	Rainfall (mm)
Kingsclere	SU 53007 60934	4th January 14:00 – 02:30 (12 hours 30 mins)	28.08
Maddle Farm	SU 30520 81777	4th January 14:45 – 5th January 01:30 (10 hours 45 mins)	35.55
Shalbourne	SU 32788 65559	4th January 14:30 – 5th January 03:00 (12 hours 30 mins)	30.70
West Ilsley	SU 45642 82926	4th January 14:15 – 5th January 01:45 (11 hours 30 mins)	29.56
Yattendon	SU 55894 74330	4th January 14:30 – 5th January 02:45 (12 hours 15 mins)	35.29

3.3 RAINFALL RADAR ANALYSIS

3.3.1. Due to the significant distance between the rain gauges and the affected flooded areas (e.g. the closest rain gauge to Newbury is 6.6km) and the localised nature of rainfall events, the rain gauges likely do not represent the rainfall experienced at each of the affected locations across West Berkshire. Rainfall radar data was therefore purchased from the Met Office to support the rainfall analysis. Assessing the radar data alongside the rainfall gauge data provides a better indication of the spatial distribution of rainfall across West Berkshire.

3.3.2. Along with assessing the rainfall amounts between the 4th – 5th January, the AEP of the rainfall event recorded by the radar rainfall data has been assessed.

Methodology

3.3.3. The Flood Estimation Handbook (FEH) web service Event Rarity Calculator can be used to assess the AEP of a recorded rainfall event. This is the likelihood of rainfall of this depth being exceeded in a typical year in that location when compared with FEH22 rainfall probability model. For instance, a rainfall event with an AEP of 1% means that rainfall of this depth or greater would have a 1% chance of occurring in any year in that location. This is also known as a '1 in 100 year' return period event.

3.3.4. Table 3-2 shows the AEP of the rainfall event between the 4th – 5th January at each of the radar locations, along with the time the rainfall event occurred and the amount of rainfall the radar 1 x 1 grid square recorded. The radar data was purchased for eight 1 x 1 km grid squares at each of the affected locations across West Berkshire, covering all the main effected areas from the flood event across January.

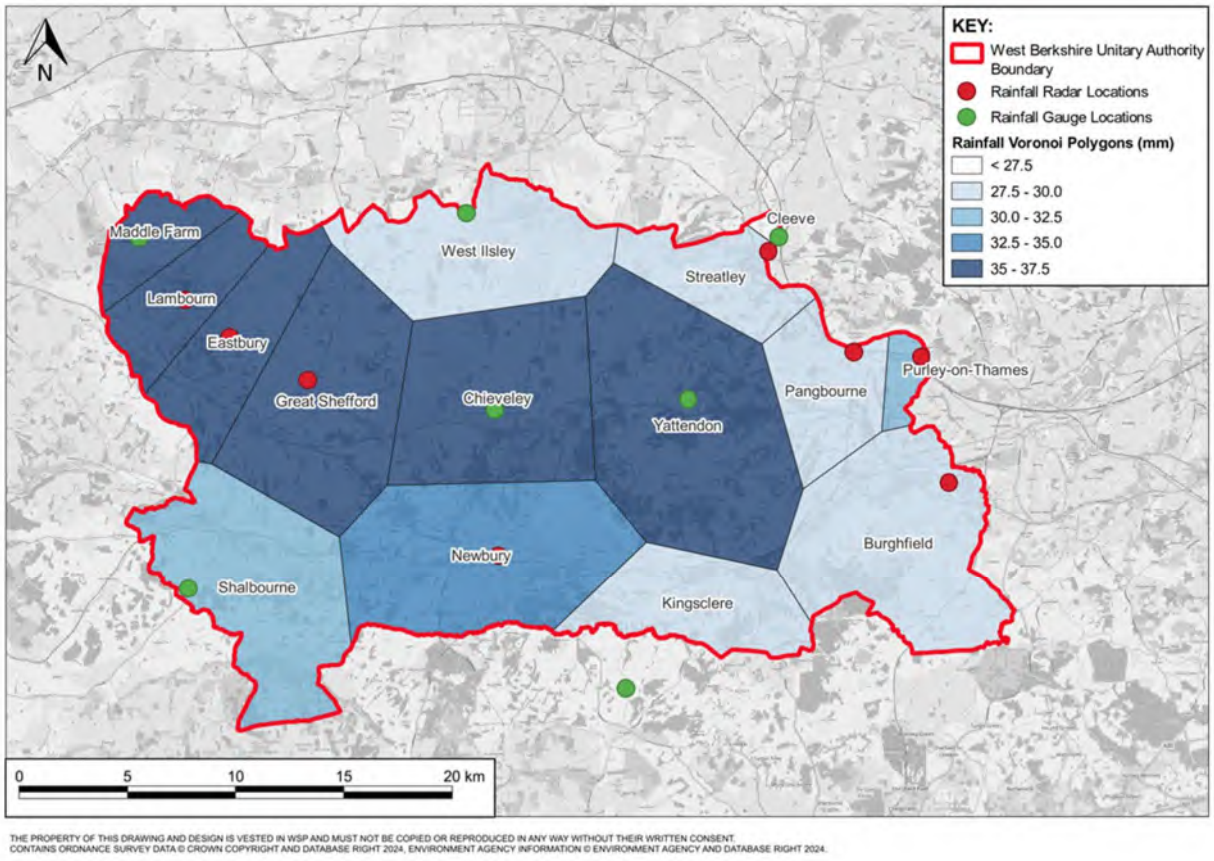
Table 3-2 – The Eight 1 x 1 Radar Grid Squares Assessed between the 4th – 5th January Across West Berkshire. Each of these Grid Squares are Located Across the Main Affected Locations in the Region. Includes the Return Period of the Rainfall Event which Encompasses the Whole Storm Event.

Location	Grid Ref	Rainfall Date (& Duration)	Rainfall (mm)	Annual Exceedance Probability (AEP)
Burghfield	SU 67932 70481	4th January 14:00 – 5th January 04:00 (14 hours)	28.8	*1 in 4-year return period*
Eastbury	SU 34707 77183	4th January 15:00 – 5th January 02:00 (11 hours)	36.0	*1 in 8-year return period*
Newbury	SU 47112 67111	4th January 14:00 – 5th January 03:00 (13 hours)	34.2	*1 in 6-year return period*
Purley on Thames	SU 66657 76287	4th January 15:00 – 5th January 04:00 (13 hours)	30.5	*1 in 5-year return period*
Streatley	SU 59587 81148	4th January 15:00 – 5th January 04:00 (13 hours)	29.1	*1 in 4-year return period*
Great Shefford	SU 38314 75218	4th January 15:00 – 5th January 03:00 (12 hours)	37.5	*1 in 9-year return period*
Pangbourne	SU 63541 76514	4th January 15:00 – 5th January 04:00 (13 hours)	29.9	*1 in 5-year return period*
Lambourn	SU 32646 78910	4th January 15:00 – 5th January 02:00 (11 hours)	37.3	*1 in 10-year return period*

3.3.5. The radar data was purchased for eight 1 x 1 km grid squares at each of the affected locations across West Berkshire, covering all the main affected areas from the flood event across January.

3.3.6. Figure 3-1 below shows the recorded distribution across West Berkshire, incorporating each of the eight radar grids which are located at each of the affected locations as well as the seven rainfall gauges to present the spatial distribution of the rainfall across West Berkshire.

Figure 3-1 – Spatial Distribution of Rainfall for the Rainfall Event Between 4th January 14:00 – 5th January 04:00. This Encompasses Rain Gauges (green dots) and Rainfall Radar Gridded Data (red dots) to Develop an Overall Picture of Rainfall Across West Berkshire.



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3.3.7. The results show that the rainfall events over the West Berkshire region were significant and there was heavy rainfall through the whole region, with gauges/radar data in the west and central areas of the West Berkshire unitary authority showing the highest amount of rainfall during this rainfall period.

3.3.8. The AEP of the rainfall events varied from 1 in 4-year to 1 in 10-year using the rainfall radar data.

3.4 FLOW/LEVEL ANALYSIS

3.4.1. Table 3-3 shows the eight water level gauges which were assessed as they are close to the eight affected sites (see Appendix C.2 for the mapped location of the flow and level gauges). The table displays the highest daily water level recorded in January 2024 (along with the date it was recorded). This level is ranked compared to the rest of the AMAX data record.

Table 3-3 – The Eight Gauges Recording the Water Level (m) through January 2024 and Ranking the Highest Water Level Value of that Month to the Full AMAX Record.

Gauge (Station ID)	Full Data Record	Max January 2024 Water Level (m AOD[1]) (& Date)	January 2024 Peak AMAX Rank Compared to Full Data Record
Eastbury (2254TH)	January 2016 – September 2023	*2.852 (4th January)*	1 of 8
Lambourn (2251TH)	October 2000 – September 2023	*1.36 (4th January)*	2 of 24
Pangbourne (2190TH)	July 1987 – May 2024	*1.128 (7th January)*	1 of 37
Reading (2200TH)	October 1992 – September 2023	*7.54 (7th January)*	1 of 32
Mapledurham Lock (2199TH)	November 1995 – September 2023	*0.847 (7th January)*	1 of 29
Shaw (2270_w1TH)	October 2013 – May 2024	*2.058 (9th January)*	2 of 11
Sulham (2195TH)	October 1991 – September 2023	*0.833 (5th January)*	2 of 33
Theale (2290TH)	November 1985 – September 2023	*1.838 (5th January)*	1 of 38

3.4.2. Table 3-3 shows that in January 2024, the above water level gauges recorded the highest or second highest water levels when compared to the annual AMAX record. This demonstrates that there was unprecedented fluvial flooding in many parts of the region since individual station records began.

3.4.3. As with the level analysis above, flow gauges were also assessed using the same methodology.

Table 3-4 – The Five Gauges Assessing River Flow (m^3/s) through January 2024 and Ranking the Highest Flow Value of that Month Compared to the full AMAX Record.

Gauge (Station ID)	Full Data Record (Up to September 2023)	Max January 2024 Flow (m^3/s (& Date)	January 2023-24 AMAX Rank Compared to Full Data Record	Annual Exceedance Probability (AEP)
Newbury (2250TH)	February 1989 – March 2024	40.10 (7th January)	1 of 35	N/A
Pangbourne (2190TH)	December 1968 - November 1998 (monthly readings), December 1998 – May 2024 (daily readings)	5.09 (7th January)	4 of 56	22

[1] metres Above Ordnance Datum

Gauge (Station ID)	Full Data Record (Up to September 2023)	Max January 2024 Flow (m^3/s (& Date)	January 2023-24 AMAX Rank Compared to Full Data Record	Annual Exceedance Probability (AEP)
Reading (2200TH)	October 1992 – November 2023	276.00 (7th January)	2 of 32	N/A
Shaw (2270_w1TH)	October 2013 – June 2024	7.04 (9th January)	2 of 11	21
Welford (2255TH)	October 1962 – September 1983 (monthly readings), March 2003 – January 2024 (daily readings)	6.65 (9th January)	2 of 44	N/A

3.4.4. Like the water level results, the peak flows across West Berkshire in January 2024 were often the highest, if not the highest recorded flows when compared to the annual AMAX record. This again demonstrates that there was unprecedented fluvial flooding across the region since records for individual stations.

3.5 GROUNDWATER ANALYSIS

3.5.1. Groundwater flooding is known to have occurred during the January 2024 events. To assess this, groundwater levels across West Berkshire were analysed using the Hydrology Data Explorer.

3.5.2. Thirteen groundwater level gauges were analysed to develop an understanding of groundwater levels across West Berkshire in January 2024. After an initial analysis, records from seven gauges were discounted, either due to the data record being too short (< 5 years), or because data was missing for January 2024. Data from the following six level gauges were taken forward: Bangor Manor, Beenham, Bockhampton, Compton Sheperds Hill, Great Shefford and Wash Common.

3.5.3. Table 3-5 shows that recorded groundwater levels at three of the gauge sites were the highest on record when compared to the gauges' full dataset. Recorded levels at the three other gauge sites were also shown to be high. Overall, this demonstrates that in some areas of West Berkshire, groundwater was at unprecedented high levels, which likely meant unprecedented groundwater flooding.

Table 3-5 – The Six Gauges Assessing Groundwater Levels (mAOD) for January 2024 and Ranking the Highest Groundwater Level Value of that Month Compared to the Full AMAX Record.

Gauge (Station ID)	Full Data Record (Upto September 2023)	Max January 2024 Water Level (mAOD) (& Date)	January 2024 Peak AMAX Rank Compared to Full Data Record
Bangor Manor (SU46_7)	January 2001 – September 2023	*85.159 (9th January)*	1 of 23
Beenham (SU56_220)	October 1999 – September – 2023	*53.877 (22nd January)*	1 of 25

Gauge (Station ID)	Full Data Record (Upto September 2023)	Max January 2024 Water Level (mAOD) (& Date)	January 2024 Peak AMAX Rank Compared to Full Data Record
Bockhampton (SU37_60)	March 2001 – September 2023	*121.455 (7th January)*	1 of 23
Compton Shepherds Hill (SU57_154)	October 1999 – September 2023	*95.987 (17th January)*	3 of 25
Great Shefford (SU37_1)	July 2002 – September 2023	*106.647 (9th January)*	2 of 23
Wash Common (SU46_138)	May 2005 – September 2023	*79.097 (7th January)*	5 of 20

3.5.4. See Appendix C.1 for the mapped location of the groundwater gauges and Appendix C.3 for the annual max groundwater level records of the respective groundwater gauges relative to the highest level recorded in January 2024.

3.6 SUMMARY

3.6.1. The analysis shows that the rainfall at the time of Storm Henk led to high river flows which itself led to flooding across many areas of West Berkshire. This was compounded and significantly influenced by unprecedented groundwater levels in the surrounding area which reduced the catchments' ability to absorb rainfall and exacerbated the amount of rainfall runoff into watercourses.

3.6.2. A feature of the flooding that occurred is the amount of time it took for river flows and levels to return to normal levels; an occurrence that can also be attributed to the high groundwater levels and the amount of water in the catchment.

4 FLOOD INVESTIGATION

4.1 OVERVIEW

4.1.1. The next sections of the Flood Investigation Report (FIR) provide an assessment of the information received for the areas that experienced flooding; a review of the sources of flooding; the effect on the local area; and the response and / or actions preceding, during and following the flood events by the relevant flood risk management authorities.

4.1.2. Following the flood events, consultation with local residents, in the form of a questionnaire, was undertaken. A summary of the residents' responses is provided in Appendix B.

4.1.3. Consultation was also undertaken with flood risk management authorities including the Environment Agency, Thames Water and Wokingham Borough Council. Refer to Appendix D for copies of this correspondence.

5 BURGHFIELD – BURGHFIELD BRIDGE

5.1 LOCATION & PREVIOUS FLOODING

5.1.1. The village of Burghfield is located in the east of West Berkshire and south of the town of Reading. Specifically, the area of Burghfield Bridge was affected by flooding in early 2024 and has a National Grid Reference of 468032, 170660. Refer to Figure 5-1 below.

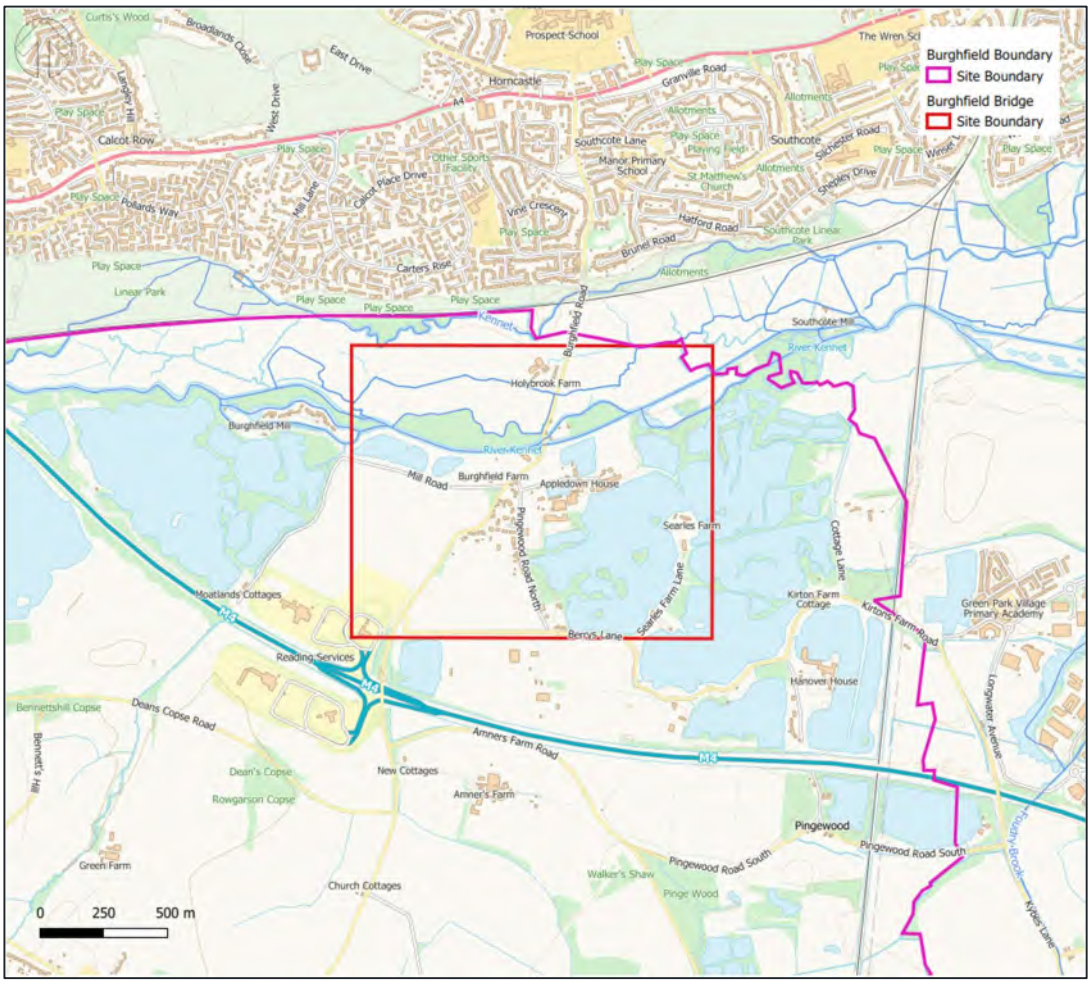
5.1.2. The village is situated in a topographically low point and surrounded by high ground in the form of the M4 to the south and west, and the railway to the north and east.

5.1.3. The village contains lakes from former gravel works, both to the east and west of the residential area. In addition, the Kennet and Avon Canal flows in the north of the village where it hydrologically connects with the River Kennet.

5.1.4. Road drainage is present across the village in the form of ditches, pipes, and gullies, which are in a varying state of maintenance.

5.1.5. Previous flooding occurred in Burghfield Bridge during the winter 2013/14 flood event, during which similar areas were affected. During this event, approximately 18 properties were flooded internally and approximately four properties were flooded externally across the entirety of Burghfield. Similar to the 2024 flood event, sources of flooding included groundwater and fluvial from the River Kennet and Kennet and Avon Canal. Historic flood outlines are mapped within Appendix E.1.

Figure 5-1 – Burghfield Bridge Location Map



5.2 FLOODING

5.2.1. From questionnaire responses and interviews with the Burghfield Bridge residents, it is understood that the flooding in early 2024 was from groundwater and fluvial sources. During WSP's site visit to Burghfield Bridge, local residents described how the Kennet and Avon Canal had overtopped its banks on occasions across January and February, after Storms Henk, Isha, and Jocelyn. This resulted in water flowing south from the canal, through the car park and grounds of the Cunning Man Pub, and through the culvert under the Burghfield Road onto the first 50 yards of Pingewood Road North and down Green Lane affecting some residential properties in the area. Of the two roads, Pingewood Road North experienced the deepest floodwaters, which resulted in cars breaking down and struggling to pass through. This created an access issue for emergency vehicles.

5.2.2. Flooding occurred for approximately a week and a half, during which groundwater emerged and had to be pumped south from the residential area towards lower derelict land where winter groundwater normally accumulates. During this time, internal flooding affected approximately ten properties including both residential and commercial. In addition to this, some properties in Pingewood Road North were unable to use their showers, toilets, and washing machines due to high groundwater filling their septic tanks; a situation which has continued for several months. The high groundwater levels experienced throughout the early months of 2024, meant that floodwaters generally took a long time to completely subside.

Figure 5-2 – Flooding at Burghfield

5.3 CAUSES

5.3.1. The winter of 2023/24 was one of the wettest on record, which served to elevate groundwater levels for prolonged periods of time in areas of West Berkshire. High groundwater in and around the area was noted as a significant contributing factor to the flooding, specifically along Pingewood Close. This was exacerbated by exceptional rainfall during storms Henk, Isha and Jocelyn leading to the Kennet and Avon Canal exceeding its capacity at this location on multiple occasions. Furthermore, it was reported by flood wardens that the septic tank drainage fields in Burghfield Bridge are situated under the water table, contributing to raw sewage emerging above ground level.

5.3.2. Whilst the volumes of water in the catchment are believed to be the main cause of flooding in Burghfield bridge, several other factors were noted during WSP's visit to Burghfield Bridge, which may have had an influence on the severity or consequence of flooding. Some of these factors are potentially long term and complex. Further investigation is recommended to determine the level of influence if any they may have had on the events of early 2024.

- Changes to land use or land cover have taken place over time. Some residents expressed concerns that the infilling of gravel lakes and creation of manmade bunds around the industrial developments in the area may have worsened the flooding experienced. This may have prevented overland flow between the lakes and canal and created disconnected floodplains with an overall decrease in water storage capacity.

- It is noted that the north bank of the Kennet and Avon Canal is significantly higher than the south bank, despite the developed area of Burghfield Bridge being located south of the canal. This means when water levels are high in the canal, they can overtop and flow south into the developed area of Burghfield Bridge, rather than the undeveloped floodplain to the north, as occurred during the 2024 flood event.
- It was observed that the south banks of the canal are significantly weakened in places from mooring canal boats and a potential lack of management. Residents also expressed concerns of the potential for canal boats to break loose from their moorings and block flow downstream under Burghfield Road bridge.
- Further downstream, approximately 400m east of the Burghfield Road bridge, it was noted that only six out of the seven sluice gates were fully operational during the 2024 flood event, causing a reduced flow of water discharging to lakes to the south and a separate branch of the River Kennet.
- Road gullies along Pingewood Road North were noted as being full of mud, debris, and groundwater during WSP's visit, and residents also reported this being the case during the flood event. Following the flooding, this increased the amount of time it took floodwater to recede and made it easy for road flooding to re-occur after heavy rainfall.
- Concerns were raised over long-term land use changes in the land west of Burghfield Road and South of Mill Road.

Figure 5-3 – Flooding at Burghfield Bridge Close

5.4 FLOOD DEFENCES/ASSETS

5.4.1. WSP are not aware of any flood defences in the area that benefit Burghfield Bridge.

5.5 RISK MANAGEMENT AUTHORITIES

Thames Water

5.5.1. A request for information has been sent to Thames Water, however no specific response regarding the 2024 flood event in this area has been received.

5.5.2. Thames Water reported that proactive planned works, such as cleaning blockages in flood prone areas, are carried out each year. Furthermore, in summer months, Thames Water aim to deliver any work that was identified as required in the previous winter period, such as, to address groundwater infiltration or surface water inundation related issues. Investigations are then carried out over the autumn and winter months in catchments known to have issues with groundwater infiltration and surface water inundation.

5.5.3. Thames Water reported having started this work in September 2023 after Swindon received the first storm of the season. Thames Water has reported that it will continue to investigate how water is entering the sewer system and collate information to prioritise works based on likelihood of impact and potential consequences.

Environment Agency

5.5.4. Consultation with the Environment Agency has confirmed that there are no flood defences within the area of Burghfield. Furthermore, the Environment Agency do not own any gauges within Burghfield to measure river flows and levels. Consultation also confirmed that the Environment Agency has not yet defined the return period of the 2024 flood event.

5.5.5. The following flood alerts were in place during the 2024 flood event:

- River Kennet from Thatcham down to Reading (061WAF22LowerKen) – In force: 31/12/2023 – 04/02/2024
- River Enborne and Foudry Brook (061WAF22EnbnFdry) – In force: 02/01/2024 – 07/01/2024

5.5.6. The following flood warning was in place during the 2024 flood event:

- Properties closest to the River Kennet at the Burghfield, Southcote, Coley and Holybrook areas (061FWF22XThlRdg) – In force: 02/01/2024 – 11/01/2024

5.5.7. The Environment Agency received 10 reports of flooding across the whole of Burghfield, during the 2024 flood event. Of these reports, two properties reported internal flooding, and seven properties reported external flooding. Six of these properties were located within Burghfield Bridge. Of the affected properties in Burghfield Bridge, two properties were flooded internally, and four properties were flooded externally. It is noted that the Environment Agency received reports of external fluvial flooding to two properties in Dewe Lane and one property in Mill Road, which were not reported to WSP during site visits, or West Berkshire Council through the flooding questionnaire. Subsequently, this information has been added to Table 1-1 and Table 5-1.

5.5.8. Consultation with the Environment Agency has confirmed that there were no specific issues or constraints associated with the River Kennet within Burghfield and that there are no plans to carry out improvement works. However, details of the Thames Valley Flood Scheme have been provided. The scheme, led by the Environment Agency, is investigating the possibility to store water across

the Thames catchment. This is likely to include a combination of flood storage and natural flood management currently across approximately 17 locations.

West Berkshire Council

5.5.9. Consultation with West Berkshire Council has confirmed that site visits to the Burghfield area were conducted on the following dates:

- 7th January 2024
- 9th January 2024
- 11th January 2024
- 12th January 2024
- 16th January 2024
- 23rd January 2024

5.5.10. Furthermore, road closures were put in place on Pingewood Road North on the 8th of January 2024 until the 10th of January 2024, and Berrys Lane on the 10th of January 2024 until the 14th of January 2024.

Canal and River Trust

5.5.11. A request for information has been sent to the Canal and River Trust, however no response has been received at this time.

Royal Berkshire Fire and Rescue Service

5.5.12. As part of the investigation Royal Berkshire Fire and Rescue Service (RBFRS) have been consulted for information. RBFRS reportedly did not attend any incidents in relation to the 2024 flood event in this area.

5.6 RECOMMENDATIONS

Local Residents

5.6.1. Residents should report any highway drainage issues to West Berkshire Council as soon as they become apparent.

5.6.2. Residents and business owners affected by flooding may benefit from property flood resilience measures, such as flood doors, waterproof airbricks, non-return valves that can be fitted to drains and placing electrical sockets above floor levels, to improve resilience to their premises during subsequent storm events.

Riparian Owners

5.6.3. Riparian owners within Burghfield Bridge, should ensure that ditches are well maintained and allow the free passage of water during flood events.

West Berkshire Council

5.6.4. It is considered there may be potential ongoing issues with the condition, and therefore the capacity, of existing highway drainage assets along Pingewood Road North. It is acknowledged that the design standard of existing highway drainage is likely to be lower than the rainfall event recorded and that it will also not be designed to cope with groundwater. However, it is recommended that a

CCTV survey could be undertaken to confirm its condition. Remedial works could then be identified and prioritised in consideration of their impact on local flood risks.

5.6.5. It is recommended that West Berkshire Council could review the current highway drainage maintenance schedule and, where appropriate, increase the frequency of inspections. Alternatively, these assets could be marked as a priority, and arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain.

5.6.6. The area may also benefit from a local level flood mitigation scheme including the retrofit of drainage facilities to improve conveyance capacity and reduce the risk of blockage. There may be the potential to divert flow from the Kennet and Avon Canal into fields to the north as a form of temporary storage and controlled release. Further data needs to be collected to ascertain the potential benefits and options for the provision of practicable solutions.

5.6.7. During WSP's site visit to Burghfield Bridge, residents expressed concerns that general land use changes and raising of land may have increased flood risk.

5.6.8. Where there is sufficient evidence that land use change or land raising has taken place without the appropriate permissions, West Berkshire Council as planning authority and LLFA may choose to use enforcement powers to ensure any works deemed to have increased flood risk is rectified.

Environment Agency

5.6.9. This investigation has indicated that there may be potential issues with the capacity or condition of the River Kennet with frequent overtopping occurring during the flood event. It is recommended that the Environment Agency review how flow is being managed upstream of Burghfield Bridge to determine whether peak volumes can be reduced at Burghfield Bridge during times of flood.

5.6.10. Additionally, opportunities to improve capacity should be identified such as clearing channels of debris or vegetation. It is recommended that the Environment Agency review the necessity and frequency of any maintenance programme if one is in place for the area.

5.6.11. There may also be potential for a flood alleviation scheme along the River Kennet which should be further investigated and communicated with West Berkshire Council. The floodplain to the north of the River Kennet could be more efficiently utilised for floodplain storage during times of high flows, to reduce the potential for the canal and river to overtop their banks. This will require further investigation and communication between West Berkshire Council, the Environment Agency, and local landowners.

Parish Council

5.6.12. The Parish Council should continue to support local flood wardens in Burghfield Bridge and provide education and communication to local residents on the following:

- How to monitor river levels and flows.
- How to sign up to the Environment Agency flood alerts and warnings.
- How to report concerns to the relevant flood risk management authorities.
- Guidance on effective property flood resilience.
- What to do and when, in preparation for a flood.
- Where to find support following a flood event.

Canal and River Trust

5.6.13. The flood investigation has highlighted the unstable banks along the Kennet and Avon Canal, potentially the result of erosion from mooring boats. It is recommended that the Canal and River Trust investigate the condition of the canal banks and carry out the necessary remedial works, specifically to the south bank. Restoration works could be completed using Nature Based Solutions (NBS) to help raise and strengthen the canal banks to increase the capacity of the canal and prevent further overtopping.

5.7 SUMMARY

5.7.1. The flooding generally occurred in areas categorised as Flood Zone 2 and Flood Zone 3 as indicated on the Environment Agency's flood map for planning (refer to Appendix E.1), however some flooding occurred outside of these zones.

5.7.2. Table 5-1 summarises the flooding experienced in Burghfield Bridge as a result of Storms Henk, Isha, and Jocelyn. Refer to Appendix A.1 which details the locations of the flooded areas.

Table 5-1 – Summary of Flooding in Burghfield Bridge

Total No. of Properties Flooded	Source of Flooding	No. of Properties Flooded Internally	No. of Properties Flooded Externally*	No. of Road Closures
15	Fluvial and Groundwater	10	5	2 – Berrys Lane & Pingewood Road North

**Excluding properties recorded as having flooded internally.*

5.7.3. West Berkshire Council, and the Environment Agency had flood management responsibilities related to this event due to the multiple flood sources and assets involved. West Berkshire Council attended multiple times during the flooding to monitor the situation and enforce road closures where required. It is unknown whether the Environment Agency carried out any actions during or following the event. Recommendations have been identified to help manage the impact of any future flooding events.

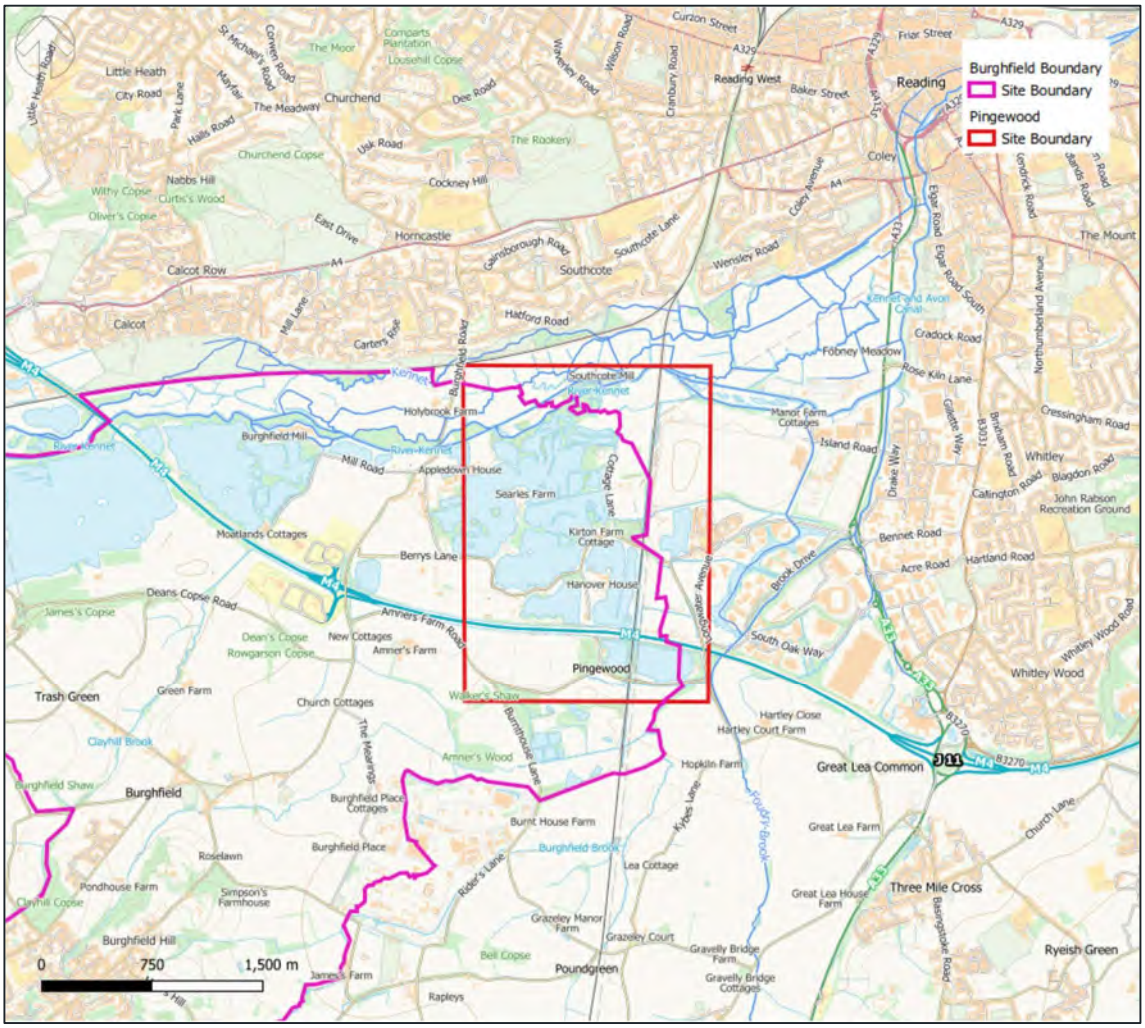
6 BURGHFIELD – PINGEWOOD

6.1 LOCATION

6.1.1. Pingewood is located in the east of West Berkshire and falls within the Burghfield Parish Council. Pingewood is situated downstream of Burghfield Bridge along the Kennet and Avon Canal. Refer to Figure 6-1 below.

6.1.2. Previous flooding occurred in Pingewood during the winter 2013/14 flood event, during which similar areas were affected. During this event, approximately 18 properties were flooded internally and approximately four properties were flooded externally across the entirety of Burghfield. Similar to the 2024 flood event, flooding was the result of fluvial sources from the River Kennet and Kennet and Avon Canal, and the overtopping of the lakes to the north of Pingewood. Historic flood outlines are mapped within Appendix E.2.

Figure 6-1 – Pingewood Location Map



6.1.3. The area is home to several interconnected fishing lakes and ditches, as well as the Kennet and Avon Canal and River Kennet to the north.

6.1.4. Pingewood is situated in a topographical low point and surrounded by features set on higher ground – such as the Reading-Basingstoke railway line to the east, the M4 to the south and west, and the Kennet and Avon Canal to the north – that ese act as barriers which prevent floodwater from escaping, as experienced in early 2024.

6.2 FLOODING

6.2.1. From questionnaire responses and interviews with the Pingewood flood warden, it is understood that the flooding in early 2024 was from fluvial sources. The area that was affected by flooding in January 2024 has a National Grid Reference of (469120, 169892) and is shown in Figure 6-1. The flooding in Pingewood generally occurred in areas categorised as Flood Zone 2 and Flood Zone 3 as indicated on the Environment Agency's Flood Map for Planning (refer to Appendix E.2).

6.2.2. WSP is aware of approximately three properties that were affected by fluvial flooding in early January. It is possible that more properties were affected but their owners have chosen not to report the issues.

6.2.3. Internal fluvial flooding affected one residential property along Kirtons Farm Road. External fluvial flooding also affected another residential property in Kirtons Farm Road and an angling club in Pingewood. It is understood that flood depths varied across Pingewood, with maximum depths reported to have reached approximately 0.5m in the angling club carpark. It is also understood that a SSE substation in Cottage Lane may have flooded, however not significantly enough to cause a loss of power. Flooding began in early January following Storm Henk and continued for approximately one month.

6.2.4. The ditch that drains Farnham Flint Lake and runs west to east below Cottage Lane (hereby referred to as Cottage Lane Ditch) played an important role in the 2024 flood event. The local flood warden and the angling club manager reported that the ditch backed up and overtopped its banks causing water to flow across and southwards along Cottage Lane. From here, floodwater affected Kirtons Farm Road and flowed down to Berrys Lane where further internal flooding of residential properties may have occurred. The water then flowed into Pingewood Lagoon and Englefield Lagoon via grips along Berrys Lane. Refer to Flood Event figure in Appendix A.2.

Figure 6-2 – Flooding at Pingewood Substation

6.3 CAUSES

6.3.1. The winter of 2023/24 was one of the wettest on record, specifically because of heavy rainfall during storms Henk, Isha, and Jocelyn in January. As a result, groundwater was unusually high and waterbodies were full throughout the early months of 2024.

6.3.2. During WSP's site visit to Pingewood, the flood warden and angling club manager expressed concerns over the condition of Cottage Lane ditch and culverts downstream of Cottage Lane. At the time of WSP's visit it was noted that Cottage Lane ditch was dense with vegetation. It was not possible to survey any culverts during the visit, but WSP is aware that Network Rail has undertaken its own surveys of the culvert below the Reading-Basingstoke railway line in the past.

6.3.3. There are two culverts that run under the Reading-Basingstoke railway line, north of Reading Green Park Station, and both were believed by the angling club manager to have been contributory factors in the 2024 flood event, by preventing high flows from moving downstream of Pingewood.

6.3.4. The northern culvert is designed to convey flows from the northern lakes in Pingewood below the railway line to the Kennet and Avon Canal. If this culvert is blocked, as it was considered to be in early 2024, then flows back up into the northern lakes and flow south to the southern culvert. The southern culvert takes flows from Cottage Lane ditch, under the railway, and past the Green Park development. During early 2024, locals considered that that the southern culvert was approximately 30% blocked, which caused flows to back up and flood Cottage Lane.

6.3.5. In addition to the two railway line culverts, a third culvert is located to the east of the railway line and north of the Green Park development. Anecdotal evidence, provided by the angling club manager, indicates that this culvert was also blocked during early 2024, further restricting flows in Cottage Lane ditch.

6.3.6. During WSP's site visit to Pingewood, it was noted that Kirtons Farm Road has a lack of highway drainage, therefore acting as another potential, yet smaller, contributing factor. In addition to this, Kirtons Farm Road has raised ground on either side, meaning floodwater is restricted to the road.

6.3.7. Finally, during WSP's site visit, the angling club manager remarked on a culvert constructed below Green Lane in 2015 (approximately) to convey water from the small lake next to Burghfield Bridge Tyres, under Green Lane and into Burghfield Lake to alleviate flooding in Burghfield Bridge. The club manager believes that the culvert has affected the dynamics of flow and flooding in this area and may have worsened the flood risk in Pingewood.

Figure 6-3 – Flooding at Kirtons Farm Road

6.4 FLOOD DEFENCES/ASSETS

6.4.1. WSP is not aware of any flood defences in the area that benefit Pingewood.

6.5 RISK MANAGEMENT AUTHORITIES

Thames Water

6.5.1. A request for information has been sent to Thames Water, however no specific response regarding the 2024 flood event in this area has been received.

6.5.2. Thames Water reported that proactive planned works, such as cleaning blockages in flood prone areas, are carried out each year. Furthermore, in summer months, Thames Water aim to deliver any work that was identified as required in the previous winter period, such as, to address groundwater infiltration or surface water inundation related issues. Investigations are then carried out over the autumn and winter months in catchments known to have issues with groundwater infiltration and surface water inundation.

6.5.3. Thames Water reported having started this work in September 2023 after Swindon received the first storm of the season. Thames Water has reported that it will continue to investigate how water is entering the sewer system and collate information to prioritise works based on likelihood of impact and potential consequences.

Environment Agency

6.5.4. Consultation with the Environment Agency has confirmed that there are no flood defences within the area of Burghfield. Furthermore, the Environment Agency do not own any gauges within Burghfield to measure river flows and levels. Consultation also confirmed that the Environment Agency has not yet defined the return period of the 2024 flood event.

6.5.5. The following flood alerts were in place during the 2024 flood event:

- River Kennet from Thatcham down to Reading (061WAF22LowerKen) – In force: 31/12/2023 – 04/02/2024
- River Enborne and Foudry Brook (061WAF22EnbnFdry) – In force: 02/01/2024 – 07/01/2024

6.5.6. The following flood warning was in place during the 2024 flood event:

- Properties closest to the River Kennet at the Burghfield, Southcote, Coley and Holybrook areas (061FWF22XThlRdg) – In force: 02/01/2024 – 11/01/2024

6.5.7. The Environment Agency received 10 reports of flooding across the whole of Burghfield, during the 2024 flood event. Of these reports, two properties reported internal flooding, and seven properties reported external flooding. The Environment Agency did not receive any reports of flooding within Pingewood specifically.

6.5.8. Consultation with the Environment Agency has confirmed that there were no specific issues or constraints associated with the River Kennet within Burghfield and that there are no plans to carry out improvement works. However, details of the Thames Valley Flood Scheme have been provided. The scheme, led by the Environment Agency, is investigating the possibility to store water across the Thames catchment. This is likely to include a combination of flood storage and natural flood management currently across approximately 17 locations.

West Berkshire Council

6.5.9. Consultation with West Berkshire Council has confirmed that site visits to the Pingewood area were conducted on the following dates:

- 7th January 2024
- 9th January 2024
- 11th January 2024
- 12th January 2024
- 16th January 2024
- 23rd January 2024

6.5.10. Furthermore, the following road closures were put in place:

- Kirtons Farm Road – 8th of January 2024 until the 14th of January 2024
- Berrys Lane – 10th of January 2024 until the 14th of January 2024
- Amers Farm Road – 8th of January 2024 until 10th of January 2024
- Pingewood Road South – 8th of January 2024 until 10th of January 2024

Canal and River Trust

6.5.11. A request for information has been sent to the Canal and River Trust. No response has been received at this time however due to the nature of flooding it is assumed that no actions were necessary during, or as a result of, the flood event.

Royal Berkshire Fire and Rescue Service

6.5.12. As part of the investigation Royal Berkshire Fire and Rescue Service (RBFRS) have been consulted for information. RBFRS reportedly did not attend any incidents in relation to the 2024 flood event in this area.

6.6 RECOMMENDATIONS

Local Residents

6.6.1. Residents and business owners should report any ditch maintenance and / or culvert issues to West Berkshire Council and Network Rail as soon as they become apparent.

6.6.2. Residents and business owners affected by flooding may benefit from property flood resilience (PFR) measures, such as flood doors, waterproof airbricks, and placing electrical sockets above floor levels, to provide resilience to their premises during storm events.

West Berkshire Council

6.6.3. One recommendation of this report is that WBC could carry out an investigation into the road drainage along Kirtons Farm Road to determine the potential requirement for additional road drainage, for example in the form of gullies and grips.

6.6.4. It is recommended that West Berkshire Council review and enforce the maintenance of ditches within Pingewood, specifically Cottage Lane Ditch. During WSP's site visit to Pingwood, it was noted that there may not be a clear understanding of who is responsible for maintaining Cottage Lane Ditch and its culverts. West Berkshire Council could seek to confirm these details and ensure that regular maintenance of the ditch is carried out.

6.6.5. Finally, it is recommended that an investigation could be undertaken into the feasibility of clearing the northern railway culvert. During WSP's site visit to Pingwood, it was reported by the angling club manager that this culvert has been blocked for a significant period (possibly 20 years) and that the ditch downstream of the culvert has likely silted up. An assessment could be carried out to determine the effect of opening the culvert up with regards to the ability of the downstream ditch to accommodate flows and to understand the effect on flood dynamics upstream and downstream of the culvert.

Parish Council

6.6.6. The Parish Council should continue to support local the flood warden in Pingewood and provide education and communication to local residents on the following:

- How to monitor river levels and flows.
- How to sign up to the Environment Agency flood alerts and warnings.
- How to report concerns to the relevant flood risk management authorities.
- Guidance on effective property flood resilience.
- What to do and when, in preparation for a flood.

- Where to find support following a flood event.

6.6.7. During WSP's site visit to Pingewood, it was noted that the area currently only has one flood warden. If possible, an additional flood warden should be sought to strengthen communication and co-operation between the local community and West Berkshire Council.

Network Rail

6.6.8. Network Rail as a riparian owner have a responsibility under the Land Drainage Act 1991 to ensure that all culverts that run under their railways are clear and free of blockages that could cause an obstruction to flow and influence flood risk. It is recommended that Network Rail work with West Berkshire Council to assess the condition of the two culverts below the Reading-Basingstoke railway line, north of Reading Green Park Station, and determine what measures are required to improve their capacity (e.g. by increasing the frequency of maintenance and / or clearing the blocked culvert) and reduce the risk of flooding upstream in Pingewood whilst not increasing risk to properties and land downstream.

6.7 SUMMARY

6.7.1. The flooding in Pingewood generally occurred in areas categorised as Flood Zone 2 and Flood Zone 3 as indicated on the Environment Agency's Flood Map for Planning (refer to Appendix E.2).

6.7.2. Table 6-1 summarises the flooding experienced in Pingewood as a result of Storms Henk, Isha, and Jocelyn. Refer to Appendix A.2 which details the locations of the flooded areas.

Table 6-1 – Summary of Flooding Occurring in Pingewood

Total No. of Properties Flooded	Source of Flooding	No. of Properties Flooded Internally	No. of Properties Flooded Externally*	No. of Road Closures
4	Fluvial	1	3	2 – Kirtons Farm Road & Berrys Lane

**Excluding properties recorded as having flooded internally.*

6.7.3. West Berkshire Council attended several times during the flooding to monitor the situation and enforce road closures where required. Recommendations have been made to help manage the effect of any future flooding events.

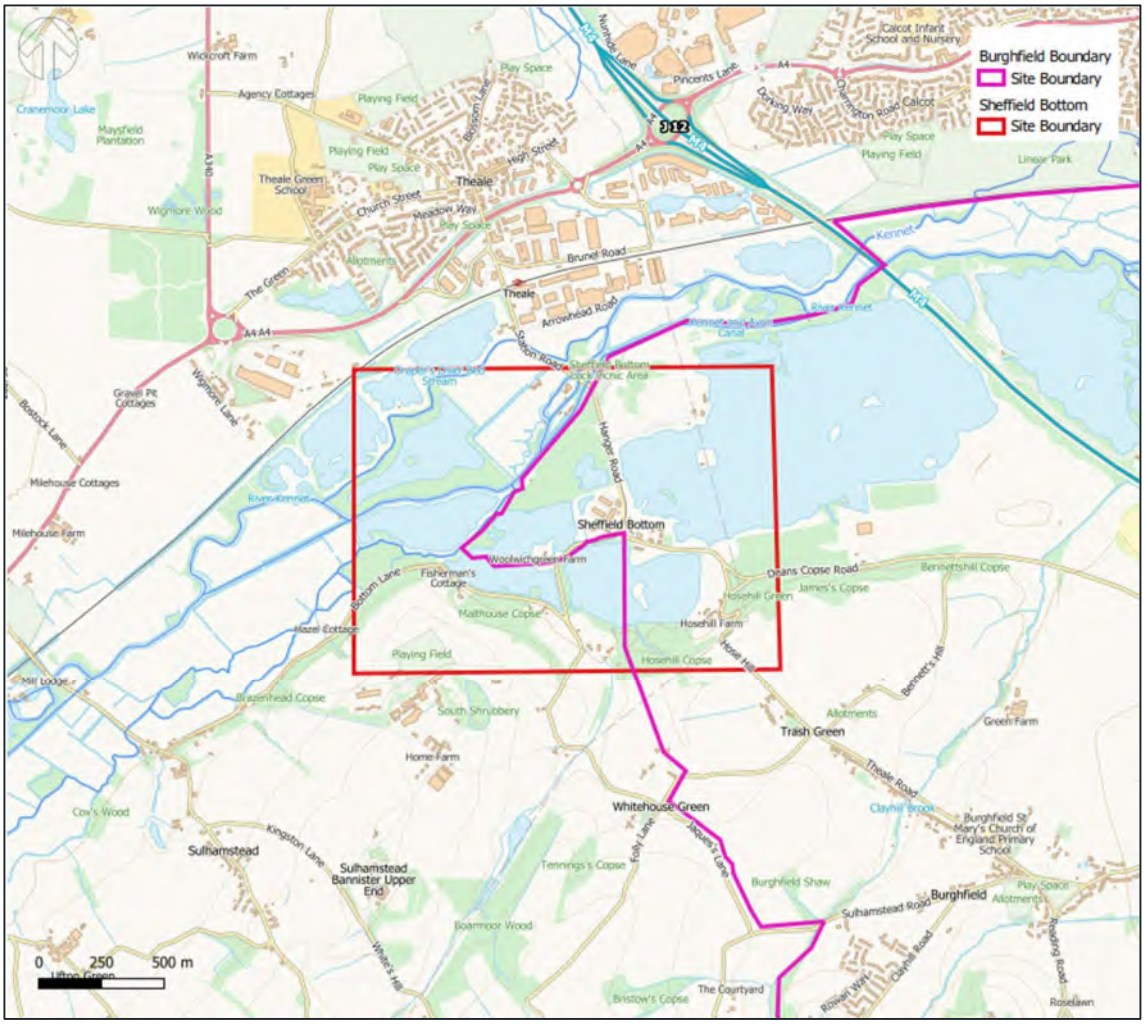
7 BURGHFIELD – SHEFFIELD BOTTOM

7.1 LOCATION

7.1.1. Sheffield Bottom is located in the east of West Berkshire and falls within Burghfield Parish Council. Sheffield Bottom is situated upstream along the Kennet and Avon Canal from Burghfield Bridge. The area affected by flooding has a National Grid Reference of 469120, 169892 and is shown in Figure 7-1.

7.1.2. Previous flooding occurred in Sheffield Bottom during the winter 2013/14 flood event, during which similar areas were affected. During this event, approximately 18 properties were flooded internally and approximately four properties were flooded externally across the entirety of Burghfield. Similarl to the 2024 flood event, flooding was the result of fluvial sources from the River Kennet and the Kennet and Avon Canal, and the overtopping of the lakes to the west of Sheffield Bottom. Historic flood outlines are mapped within Appendix E.3.

Figure 7-1 – Sheffield Bottom Location Map



7.1.3. Sheffield Bottom is situated in a topographical low point and bordered by steep hills to the south of the village. This encourages surface water runoff to flow along Hose Hill and Bottom Lane towards the village.

7.1.4. The area is home to interconnected lakes, as well as the Kennet and Avon Canal, River Kennet, and The Draper's Osier Bed Stream (DOBS).

7.2 FLOODING

7.2.1. From questionnaire responses and interviews with local residents and the Sheffield Bottom flood wardens, it is understood that the flooding in early 2024 was mainly from fluvial and groundwater sources although surface water flooding also occurred as mentioned above.

7.2.2. The fluvial flooding mainly occurred in areas categorised as Flood Zone 3 as well as some areas categorised as Flood Zone 2, as indicated on the Environment Agency's Flood Map for planning (refer to Appendix E.3). Furthermore, the surface water flooding generally occurred within areas of high surface water flood risk, as shown from the Environment Agency's long term flood maps (refer to Appendix E.3).

7.2.3. It is understood that approximately seven properties experienced internal flooding and approximately ten properties experienced external flooding.

7.2.4. Internal surface water flooding affected two properties on Hose Hill. Both properties and a third property on Hose Hill also experienced external surface water flooding.

7.2.5. Three properties along Station Road experienced internal fluvial flooding on the 12th of January. Internal flood depths subsided quickly; however, external floodwaters remained for approximately three days. Another property along Station Road, and one commercial property along Deans Copse Road, also experienced external fluvial flooding in January. Two industrial properties along Arrowhead Road also experienced internal fluvial flooding.

7.2.6. It is also believed that residential properties opposite Theale Lakes Business Park, may have experienced internal groundwater flooding; however, further details have not been received.

7.2.7. From interviews with local residents and flood wardens, it is understood that in early January 2024, water in The Draper's Osier Bed Stream (DOBS) overtopped into Elephant Lake. Once Elephant Lake was full, it overflowed into the field to the north-east where it then flowed under Station Road and back into the DOBS.

7.2.8. It was also reported that the River Kennet overtopped its banks in early 2024. As a result, excess water flowed into Fishing Lake 1 and then into Woolwich Green Lake, which is shallower than the fishing lake and therefore likely to have a smaller water storage capacity. Woolwich Green Lake is connected to Hosehill Lake via a culvert and Hosehill Lake is connected to Theale Lake via another culvert. During high flows, water from Hosehill Lake overtopped and flowed over the top of Deans Copse Road and into Theale Lake.

7.2.9. During WSP's site visit to Sheffield Bottom, it was reported that during flood conditions a large volume of flows passed below Station Road. During these conditions, the Canal and River Trust opened hatches by Station Road, allowing the canal to flow and move floodwaters away from Sheffield Bottom, however as no response has been received by the Canal and River Trust it is not possible to verify this.

7.2.10. Roads flooded by surface water and fluvial floodwaters in January 2024 included Station Road, Deans Copse Road, Hose Hill, and Hagnar Road, which experienced flood depths of approximately 150mm. Station Road and Hagnar Road were affected by fluvial flooding, whereas Hose Hill was affected by surface water flooding because of its steep gradient. Deans Copse Road was affected by fluvial flooding to the west and surface water flooding to the east because of surface water runoff from Hose Hill. This created flood depths that made the road impassable for cars and affected safe access and egress, specifically for AWE employees.

7.2.11. During WSP's site visit to Sheffield Bottom, it was reported that the 2024 flood event was not as significant as the 2013/14 flood event, however, floodwater took a longer time to dissipate.

7.3 CAUSES

7.3.1. The winter of 2023/24 was one of the wettest on record, which served to elevate groundwater levels for prolonged periods of time in areas of West Berkshire. High groundwater in and around the Sheffield Bottom was noted as a significant contributing factor to the flooding. This was exacerbated by exceptional rainfall during storms Henk, Isha and Jocelyn leading to the River Kennet and DOBS exceeding their capacity.

7.3.2. Whilst the volume of water in the catchment is believed to be the main cause of flooding in Sheffield Bottom, several factors were reported during WSP's visit to Burghfield Bridge as potentially having an influence on the severity and / or consequence of flooding.

7.3.3. Residents expressed concerns over the effect of a fish pass which was installed immediately upstream of the weir near Sulhamstead Lock prior to the 2013/14 flood event. This allows a continuous flow from the River Kennet into DOBS, potentially contributing to DOBS being overwhelmed during times of high flows. This issue and lack of ability to control flow into DOBS at the fish pass and weir, was highlighted in the 2013/14 s19 Flood Investigation. WSP are not aware of any steps having been taken to investigate this.

7.3.4. Some residents also expressed concerns that the infilling of gravel lakes and raising of land around industrial developments in the area may have exacerbated the flooding experienced in January 2024. These factors may have removed historic overland flow routes between the lakes and watercourses and created disconnected floodplains with an overall decrease in water storage capacity. Residents considered that potential changes to ploughing and hedge removal in the local area may also have increased the runoff of surface water along Hose Hill.

7.3.5. Another potential influence on the 2024 flood event, was the condition of watercourses within and around Sheffield Bottom. During WSP's site visit, local flood wardens reported that bank erosion, due to factors such as Signal crayfish, moles, and high flows, is an issue in the area. As a result of this and a potential lack of maintenance, channel capacity is less than optimal.

7.3.6. The efficiency of locks in the area was also questioned. The Canal and River Trust open and close the locks along the Kennet and Avon Canal in response to high flows; however, it is believed by residents that the locks may be closed by members of the public, therefore preventing the flow of water downstream and encouraging the flooding of Sheffield Bottom.

7.4 FLOOD DEFENCES/ASSETS

7.4.1. WSP is not aware of any flood defences in the area that benefit Sheffield Bottom.

7.5 RISK MANAGEMENT AUTHORITIES

Thames Water

7.5.1. A request for information has been sent to Thames Water, however no specific response regarding the 2024 flood event in this area has been received.

7.5.2. Thames Water reported that proactive planned works, such as cleaning blockages in flood prone areas, are carried out each year. Furthermore, in summer months, Thames Water aim to deliver any work that was identified as required in the previous winter period, such as, to address groundwater infiltration or surface water inundation related issues. Investigations are then carried out over the autumn and winter months in catchments known to have issues with groundwater infiltration and surface water inundation.

7.5.3. Thames Water reported having started this work in September 2023 after Swindon received the first storm of the season. Thames Water has reported that it will continue to investigate how water is entering the sewer system and collate information to prioritise works based on likelihood of impact and potential consequences.

Environment Agency

7.5.4. During WSP's site visit to Sheffield Bottom, local residents and flood wardens reported that the Environment Agency had completed a site visit as a result of the flooding; however, no further details have been provided.

7.5.5. Consultation with the Environment Agency has confirmed that there are no flood defences within the area of Burghfield. Furthermore, the Environment Agency do not own any gauges within Burghfield to measure river flows and levels. Consultation also confirmed that the Environment Agency has not yet defined the return period of the 2024 flood event.

7.5.6. The following flood alerts were in place during the 2024 flood event:

- River Kennet from Thatcham down to Reading (061WAF22LowerKen) – In force: 31/12/2023 – 04/02/2024
- River Enborne and Foudry Brook (061WAF22EnbnFdry) – In force: 02/01/2024 – 07/01/2024

7.5.7. The following flood warning was in place during the 2024 flood event:

- Properties closest to the River Kennet at the Burghfield, Southcote, Coley and Holybrook areas (061FWF22XThlRdg) – In force: 02/01/2024 – 11/01/2024

7.5.8. The Environment Agency received 10 reports of flooding across the whole of Burghfield, during the 2024 flood event. Of these reports, two properties reported internal flooding, and seven properties reported external flooding. The Environment Agency did not receive any reports of flooding within Sheffield Bottom specifically.

7.5.9. Consultation with the Environment Agency has confirmed that there were no specific issues or constraints associated with the River Kennet within Burghfield and that there are no plans to carry out improvement works. However, details of the Thames Valley Flood Scheme have been provided. The scheme, led by the Environment Agency, is investigating the possibility to store water across the Thames catchment. This is likely to include a combination of flood storage and natural flood management currently across approximately 17 locations.

West Berkshire Council

7.5.10. Consultation with West Berkshire Council has confirmed that site visits to the Sheffield Bottom area were conducted on the following dates:

- 7th January 2024
- 9th January 2024
- 11th January 2024
- 12th January 2024
- 16th January 2024
- 23rd January 2024

7.5.11. Furthermore, road closures were put in place on Deans Copse Road on the 5th of January 2024 until the 12th of January 2024, and Hangar Road on the 8th of January 2024 until the 12th of January 2024.

Canal and River Trust

7.5.12. A request for information has been sent to the Canal and River Trust, however no response has been received at this time.

Royal Berkshire Fire and Rescue Service

7.5.13. As part of the investigation Royal Berkshire Fire and Rescue Service (RBFRS) have been consulted for information. RBFRS reportedly did not attend any incidents in relation to the 2024 flood event in this area.

7.6 RECOMMENDATIONS

Local Residents

7.6.1. Residents should report any highway drainage issues to West Berkshire Council and any foul or surface water sewer drainage issues to Thames Water as soon as they become apparent.

7.6.2. Residents and business owners affected by fluvial flooding may benefit from property flood resilience measures, such as flood doors, waterproof airbricks, and placing electrical sockets at raised levels. Residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring, non-return valves, and sump pumps to protect and / or make their premises more resilient from flooding during times of high groundwater.

Riparian Owners

7.6.3. Riparian owners across Sheffield Bottom should ensure that watercourses within their ownership are clear of obstructions, such as vegetation, and enable the free passage of water. Furthermore, landowners should ensure that regular maintenance of the ditches are carried out.

West Berkshire Council

7.6.4. It is considered there may be potential issues with the condition, and therefore the capacity, of the existing highway drainage assets along Hose Hill and Jacques Lane. It is acknowledged that the design standard of existing highway drainage is likely to be lower than the rainfall event recorded and that it will also not be designed to cope with groundwater. However, it is recommended that a

CCTV survey could be undertaken to confirm its condition. Remedial works could then be undertaken, focussing on areas at highest risk of flooding, to ensure that flood risk is reduced.

7.6.5. West Berkshire Council could review the current highway drainage inspection and maintenance schedule and, where appropriate, increase their frequency. Alternatively, critical assets could be marked as a priority, and arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain.

7.6.6. As the LLFA, West Berkshire Council could review the maintenance schedule for the culvert that takes DOBS under Station Road. During WSP's site visit, residents expressed concerns that the culvert often has fallen trees and vegetation blocking the channel and therefore a more routine clearing of debris is recommended.

Environment Agency

7.6.7. It was reported that after the 2013/14 flood event, the Environment Agency dug a ditch behind the Fox and Hounds Pub. During WSP's site visit it was noted that this ditch was blocked and full of vegetation. The Environment Agency could consider clearing the ditch and creating a schedule to ensure regular maintenance of the ditch occurs to help decrease flood risk along Deans Copse Road.

7.6.8. As recommended in response to the 2013/14 flood event, controls could be installed at the weir and fish pass at the head of Draper's Osier Bed Stream. If the channel were to overtop in the future, the controls could be used to reduce the volume in the channel and prevent it continuing to flood out of bank.

Parish Council

7.6.9. The Parish Council should continue to support local flood wardens in Sheffield Bottom and provide education and communication to local residents on the following:

- How to monitor river levels and flows.
- How to sign up to the Environment Agency flood alerts and warnings.
- How to report concerns to the relevant flood risk management authorities.
- Guidance on effective property level protection.
- What to do and when, in preparation for a flood.
- Where to find support following a flood event.

7.6.10. During WSP's site visit to Sheffield Bottom, it was noted that the area could benefit from increasing the number of flood wardens, specifically for the southern area of Sheffield Bottom. This would aid communication and advancements, with regards to flood risk, between the local community and West Berkshire Council.

7.7 SUMMARY

7.7.1. The fluvial flooding mainly occurred in areas categorised as Flood Zone 3 as well as some areas categorised as Flood Zone 2, as indicated on the Environment Agency's Flood Map for planning (refer to Appendix E.3). Furthermore, the surface water flooding generally occurred within areas of high surface water flood risk, as shown from the Environment Agency's long term flood maps (refer to Appendix E.3).

7.7.2. Table 7-1 summarises the flooding experienced in Sheffield Bottom as a result of Storms Henk, Isha, and Jocelyn. Refer to Appendix A.3 which details the locations of the flooded areas.

Table 7-1 – Summary of Flooding in Sheffield Bottom

Total No. of Properties Flooded	Source of Flooding	No. of Properties Flooded Internally	No. of Properties Flooded Externally*	No. of Road Closures
10	Fluvial & Groundwater.	7	3	2 – Deans Copse Road & Hagnar Road

**Excluding properties recorded as having flooded internally.*

7.7.3. West Berkshire Council and the Environment Agency each had flood management responsibilities related to this event due to the flood sources and assets involved. West Berkshire Council attended the area several times during the flooding to monitor the situation and enforce road closures where required. Recommendations have been identified to help manage the impact of any future flooding events.

8 EASTBURY

8.1 LOCATION

8.1.1. The village of Eastbury is located in the north-west of West Berkshire and falls within the Lambourn Parish Council. The village has a National Grid Reference of 434765, 177195 and is shown in Figure 8-1.

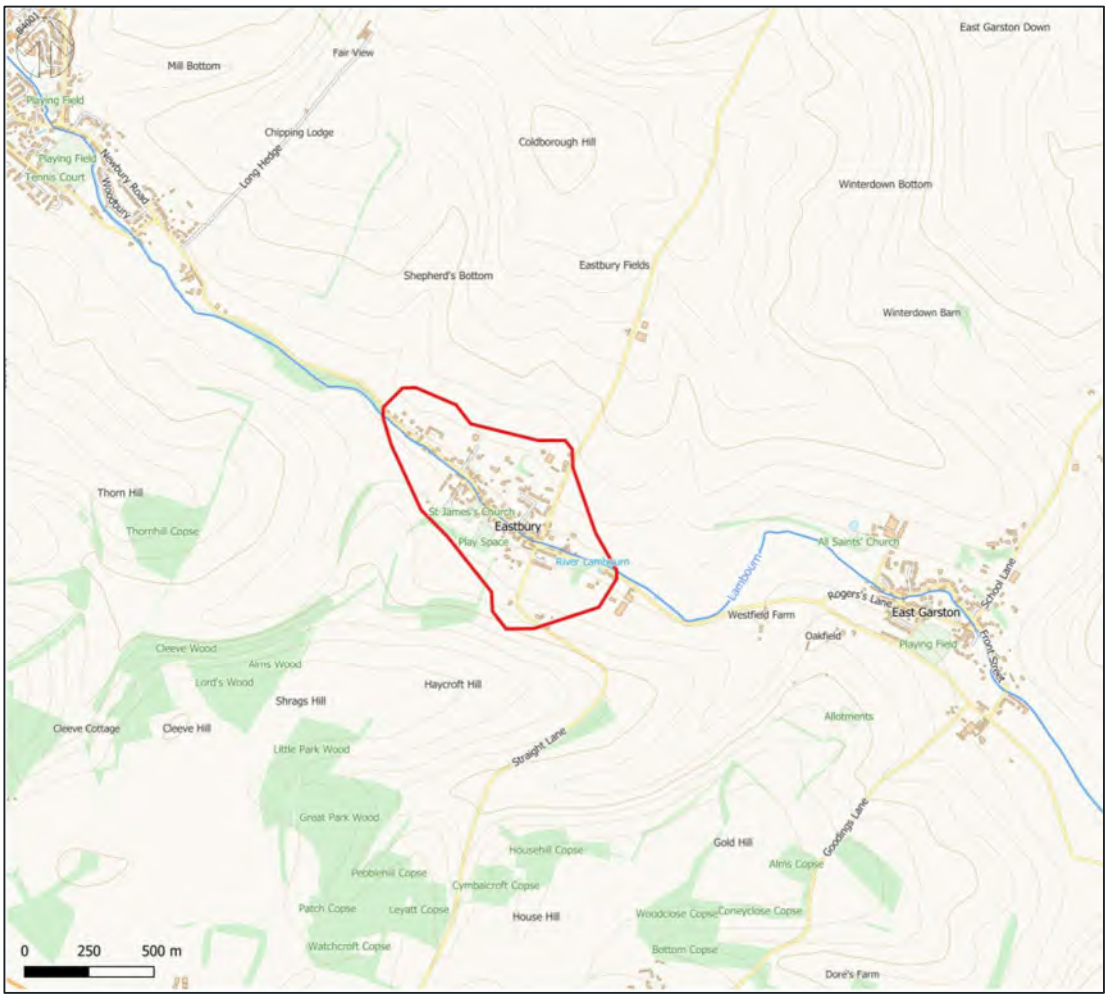
8.1.2. The village is located in a topographical low point and is surrounded by tracks, such as Eastbury Shute and Straight Lane, that lead to Eastbury and create flows of surface water coming down from the surrounding hills.

8.1.3. The village is situated around the River Lambourn, which is a winterbourne river that flows through the middle of Eastbury, parallel to Lambourn Valley Road and Back Street. During a typical year the River Lambourn will cease to flow for several months in late autumn / early winter, however this was not the case over the 2023/24 winter season, where flow was continuous.

8.1.4. Road drainage is present across the village in the form of pipes and gullies that discharge into the River Lambourn. The River Lambourn banks are also lined with grips to allow floodwaters to channel back into the watercourse.

8.1.5. Previous flooding occurred in Eastbury during the winter 2013/14 flood event, during which similar areas were affected. Similarly to the 2024 flood event, flooding was the result of fluvial sources from the River Lambourn. Historic flood outlines are mapped within Appendix E.4.

Figure 8-1 – Eastbury Location Map



8.2 FLOODING

8.2.1. From questionnaire responses and interviews with the Eastbury flood wardens, it is understood that the flooding in early 2024 was from sewer, groundwater, and fluvial sources. During WSP's site visit to Eastbury, the local flood wardens described how the River Lambourn overtopped its banks after Storms Henk, Isha, and Jocelyn. This led to fluvial flooding affecting Back Street and Lambourn Valley Road and the drives and gardens of properties along Back Street.

8.2.2. Flooding along Back Street reached depths of approximately 140mm and a road closure was put in place to prevent waves of floodwater entering properties. Flood wardens have reported that the fluvial flooding experienced in 2024 has been less significant than previous years, such as 2013/14, thanks to the implementation of the alleviation scheme further upstream on the River Lambourn.

8.2.3. The majority of internal flooding within Eastbury was reported as a result of emergence of groundwater inside resident's properties. Groundwater flooding started on the 5th of January following a period of heavy rainfall brought by Storm Henk. During WSP's site visit to Eastbury, it was noted that several properties in Eastbury have property level flood protection, in the form of flood gates and doors, however this was not successful in preventing groundwater flooding. A spring also appeared along Lambourn Valley Road, in between The Hermitage and Station Lane, and begun to erode the road. Subsequently, a road closure was put in place.

8.2.4. Lambourn Valley Road was also affected by sewer flooding, specifically in Eastbury Newtown, and led to a partial road closure. Sewer flooding was caused by two surcharging manholes along the road, despite the tankering of sewage in Eastbury by Thames Water. This flooding started on the 5th of January and was still inundated during WSP's site visit on the 1st of March. Flood wardens reported that the sewer floodwaters had remained continuously since January and only subsided for short periods of time during patches of warmer weather. Flood wardens reported that a flap valve had been installed in the sewer network after the 2014 flood event, which has been successful during the 2024 floods in stopping internal sewer flooding to properties in Eastbury Newtown.

Figure 8-2 – Eastbury Flood Alleviation Scheme in operation

8.3 CAUSES

8.3.1. During WSP's site visit to Eastbury, some residents expressed concerns about the sewer network being inundated and exceeding its capacity. As a result, the manholes in Eastbury Newtown are surcharging, however it is not clear whether the source of inundation is from groundwater, river flooding, possible surface water connections to the foul network, or the sewer to the west.

8.3.2. Flood wardens reported that the summer season in 2023 was unusually wet, meaning the chalk aquifers in the area recharged significantly quicker than usual. This caused the River Lambourn to continue to flow through the winter months, when usually it would dry up, and groundwater levels to

remain high. This is likely to have contributed to the internal groundwater flooding to some properties within the village.

8.3.3. The banks of the River Lambourn are lined with grips, originally dug by WBC, who continue to maintain them. Local flood wardens assist in monitoring and maintaining them where necessary. During WSP's site visit to Eastbury, it was noted that these grips were successful in diverting floodwater from Back Street, back into the River Lambourn. However, in some reaches of the river, they were also allowing an escape route for river water during high flows and encouraging road flooding.

Figure 8-3 – Flooding at Back Street

8.4 FLOOD DEFENCES/ASSETS

8.4.1. Eastbury benefits from a flood alleviation scheme, located along the River Lambourn, just upstream of the village. The scheme opened in June 2015 and was designed to control the amount of water flowing into Eastbury. The scheme consists of a bund running along each of the adjacent fields and a dam across the River Lambourn, with a gap on the riverbed to allow the river to flow through at

normal levels. This encourages the river to spill into its floodplain during high flows, where it is stored and slowly released as levels drop. This protects Eastbury from fluvial flooding and allows time for residents to install property level protection, such as flood barriers, in the event of high flows.

8.4.2. During the 2024 flood event, the scheme worked as planned and successfully held back significant amounts of water from inundating Eastbury. As detailed in this report, Eastbury still experienced flooding in early 2024 however, flood wardens have expressed the level of flooding experienced would probably have been much worse had the alleviation scheme not been in place.

8.4.3. During WSP's site visit to Eastbury, it was noted that debris was gathering at the base of the scheme and preventing flow from passing through. As a result, local flood wardens were regularly checking the scheme and clearing any debris to prevent damage and improve efficiency.

8.5 RISK MANAGEMENT AUTHORITIES

Thames Water

8.5.1. During WSP's site visit to Eastbury, flood wardens reported that Thames Water provided sandbags to residents which were successfully used to divert floodwaters away from properties and prevent waves of floodwaters entering properties when cars drove past. Residents also reported that Thames Water employees assisted and were able to unblock the highway gully, however shortly after they found the gully had become blocked again. It was also noted that Thames Water had been pumping sewage from manholes at the Lambourn Valley Road and Back Street junction.

8.5.2. A request for information has been sent to Thames Water, however no specific response regarding the 2024 flood event in this area has been received.

8.5.3. Thames Water reported that proactive planned works, such as cleaning blockages in flood prone areas, are carried out each year. Furthermore, in summer months, Thames Water aim to deliver any work that was identified as required in the previous winter period, such as, to address groundwater infiltration or surface water inundation related issues. Investigations are then carried out over the autumn and winter months in catchments known to have issues with groundwater infiltration and surface water inundation.

8.5.4. Thames Water reported having started this work in September 2023 after Swindon received the first storm of the season. Thames Water has reported that it will continue to investigate how water is entering the sewer system and collate information to prioritise works based on likelihood of impact and potential consequences.

Environment Agency

8.5.5. Consultation with the Environment Agency has confirmed their ownership of the Eastbury flood alleviation scheme. The Environment Agency does not own any gauges within Eastbury to measure river flows however, the Eastbury gauge is used to measure river levels. Upon review of this data, the Environment Agency believe the upstream data for all three storms is reliable and of good quality. The downstream data recorded during Storm Henk is also reliable however, data recorded during Storm Isha and Jocelyn is believed to be less reliable, possibly due to an interference with measuring equipment. Consultation also confirmed that the Environment Agency has not yet defined the return period of the 2024 flood event.

8.5.6. The following flood alert was in place during the 2024 flood event:

- River Lambourn and its tributaries from Upper Lambourn down to Newbury (061WAF22Lambourn) – In force (04/01/2024 – 05/06/2024)

8.5.7. The following flood warning was in place during the 2024 flood event:

- River Lambourn from Upper Lambourn to Great Shefford (061FWF22UpLamGSh) – In force (04/01/2024 – 11/02/2024)

8.5.8. The Environment Agency received two reports of flooding in Eastbury during the 2024 flood event. Both of these reports were for external fluvial flooding from the River Lambourn.

8.5.9. Consultation with the Environment Agency has confirmed that there were no specific issues or constraints associated with the River Lambourn within Eastbury and that there are no plans to carry out improvement works.

West Berkshire Council

8.5.10. During WSP's site visit to Eastbury, it was reported that West Berkshire Council attended to assess the safety and condition of Lambourn Valley Road after a spring of groundwater began eroding a section of the road. As a result of their visit, a temporary road closure was put in place.

8.5.11. Consultation with West Berkshire Council has confirmed that site visits to the Eastbury area were conducted on the following dates:

- 7th January 2024
- 10th January 2024
- 12th January 2024
- 16th January 2024
- 18th January 2024
- 23rd January 2024
- 25th January 2024

8.5.12. Furthermore, road closures were put in place on Back Street and Lambourn Valley Road on the 5th of January 2024.

Royal Berkshire Fire and Rescue Service

8.5.13. As part of the investigation Royal Berkshire Fire and Rescue Service (RBFRS) has been consulted for information. RBFRS reportedly did not attend any incidents in relation to the 2024 flood event in this area.

8.6 RECOMMENDATIONS

Local Residents

8.6.1. Residents should report any highway drainage issues to West Berkshire Council and any foul sewer drainage issues to Thames Water as soon as they become apparent.

8.6.2. Residents and business owners affected by fluvial flooding may benefit from property flood resilience measures, such as flood doors, waterproof airbricks, and placing electrical sockets at raised levels, to further protect their premises during subsequent storm events. In contrast, residents and business owners affected by groundwater flooding may benefit from the installation of hard

flooring, non-return valves, and sump pumps to protect their premises from further flooding during times of high groundwater.

West Berkshire Council

8.6.3. An immediate recommendation of this report is for West Berkshire Council to unblock the road gully in Eastbury Newtown to allow floodwaters to subside more efficiently. A CCTV survey could then be conducted to access the condition of the highway drainage network, specifically in Eastbury Newtown, and explore the cause of the blocked gully. Remedial works should then be investigated to determine if it is possible to prevent the gully from becoming blocked again and reduce flood risk.

8.6.4. West Berkshire Council could review the current highway drainage maintenance schedule and, where appropriate, increase the frequency of inspections, specifically in Eastbury Newtown. Alternatively, these assets could be marked as a priority, and arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain.

8.6.5. A schedule should be put in place for the maintenance of the grips along the River Lambourn. If this is already in place, then the schedule should be updated, with Eastbury highlighted as a priority location for inspection on receipt of forecasts of heavy rain.

8.6.6. Furthermore, improved communication is required between the Eastbury flood wardens and West Berkshire Council, specifically regarding decisions on road closures and safety, to allow the flood wardens to communicate these decisions to the rest of the local community and reduce confusion.

Environment Agency

8.6.7. This flood investigation has highlighted the potential need for a trash screen to be added to the existing flood alleviation scheme located upstream of Eastbury. This would serve to prevent the build-up of large debris and improve the efficiency of the scheme. Subsequently, a maintenance schedule should be put in place to encourage regular inspection and clearance of the trash screen.

8.6.8. In addition to this, during WSP's site visit to Eastbury, it was noted that the downstream river levels gauge on the flood alleviation scheme is reading incorrectly. Currently, it is reading levels from splashes of water as they flow through. The gauge should be moved slightly further downstream to ensure it reads precise river levels that can then accurately inform residents of Eastbury during high rainfall events.

8.6.9. Additionally, the village may benefit from the installation of boreholes, used for groundwater monitoring, and preparation of a groundwater flood plan to help inform flood risk.

Thames Water

8.6.10. It is understood that Thames Water have previously lined the sewers and sealed manholes within the area to reduce flood risk. This flood investigation has highlighted that sewer flooding has still occurred despite these works. Therefore, it is recommended that Thames Water could carry out a full CCTV survey to investigate the capacity and condition of the sewer network. Once it is understood what is causing the excessive inundation of the sewer system, RMAs should work in partnership to identify any feasible remedial works.

8.6.11. Recognising the significant costs associated with upgrading sewerage assets, it is recommended that potential remedial works are identified and prioritised for maximum benefit. Potential works could include the relining of the sewer network using new technologies, or the installation of a new,

isolated sewer line to take foul water from Eastbury Newtown, directly to East Garston sewage works. Furthermore, Thames Water could consider upgrading Bockhampton pumping station.

Parish Council

8.6.12. The Parish Council should continue to support local flood wardens in Eastbury and provide education and communication to local residents on the following:

- How to monitor river levels and flows.
- How to sign up to the Environment Agency flood alerts and warnings.
- How to report concerns to the relevant flood risk management authorities.
- Guidance on effective property level protection.
- What to do and when, in preparation for a flood.
- Where to find support following a flood event.

8.7 SUMMARY

8.7.1. The flooding generally occurred in areas categorised as Flood Zone 2 and 3 where there is also a high surface water flood risk, according to the Environment Agency's long term flood maps (refer to Appendix E.4). However, some internal groundwater flooding has occurred outside of these high-risk areas.

8.7.2. Table 8-1 summarises the flooding experienced in Eastbury as a result of Storms Henk, Isha, and Jocelyn. Refer to Appendix A.4 which details the locations of the flooded areas.

Table 8-1 – Summary of Flooding in Eastbury

Total No. of Properties Flooded	Source of Flooding	No. of Properties Flooded Internally	No. of Properties Flooded Externally*	No. of Road Closures
9	Fluvial, Groundwater, and Sewer.	6	3	2 – Back Street and Lambourn Valley Road

**Excluding properties recorded as having flooded internally.*

8.7.3. WBC, Thames Water and the Environment Agency all had flood management responsibilities related to this event due to the multiple flood sources and assets involved. WBC and Thames Water both attended during flooding to carry out remedial actions. Several recommendations have been identified to help manage the impact of any future flooding events.

9 GREAT SHEFFORD

9.1 LOCATION

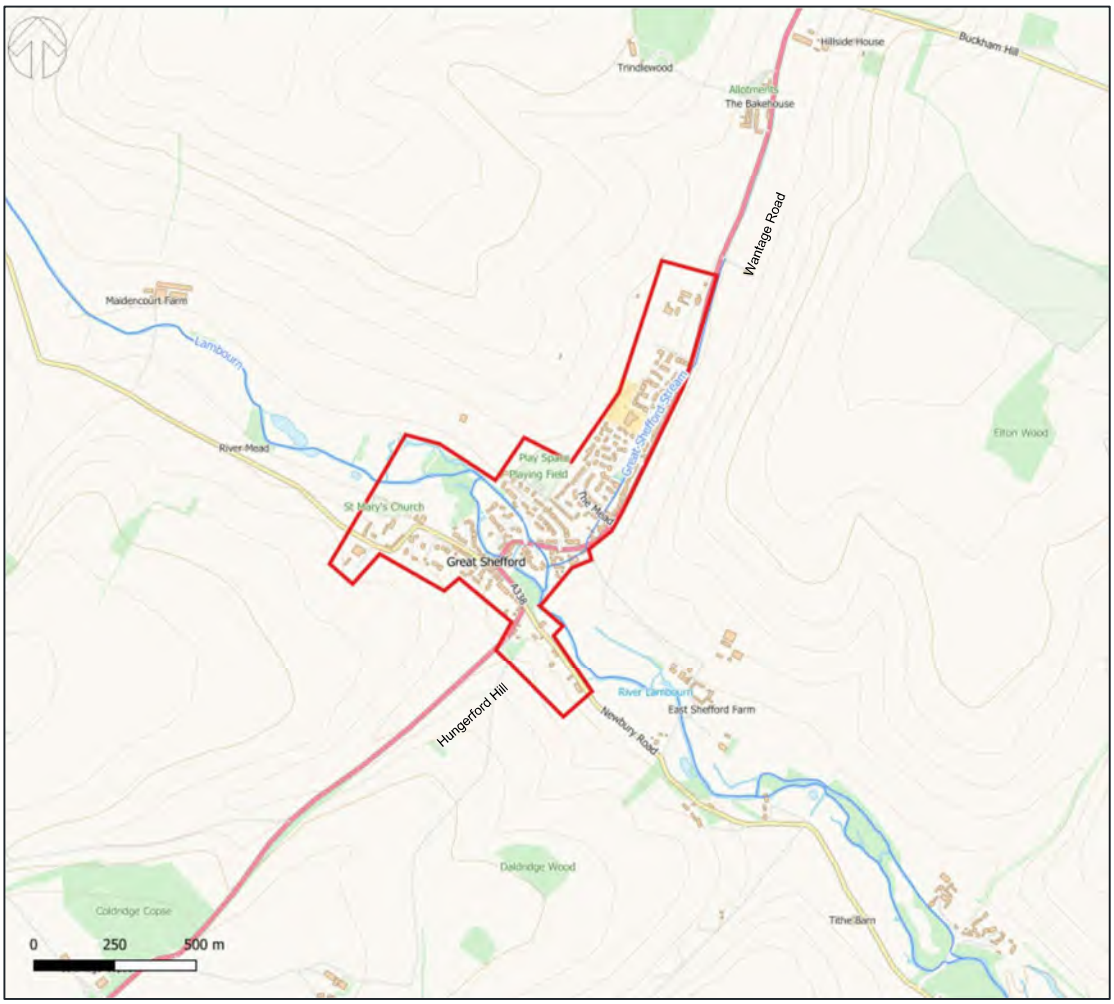
9.1.1. The village of Great Shefford is located in the west of West Berkshire and is located downstream along the River Lambourn from Lambourn and Eastbury. The centre of the village has a National Grid Reference of 438314, 175218 and is shown in Figure 9-1.

9.1.2. The village is surrounded by agricultural fields and hills, specifically to the east and west of Wantage Road, and south of Great Shefford, along Hungerford Hill.

9.1.3. The River Lambourn splits into two channels just upstream of the village and flows parallel to Newbury Road. The village also has a winterbourne stream that flows parallel to Wantage Road before joining the River Lambourn. During a typical year the winterbourne stream will cease to flow for several months over the late autumn / early winter, however this was not the case during the 2023/24 winter season.

9.1.4. Previous flooding occurred in Great Shefford during the winter 2013/14 flood event, during which similar areas were affected. During this event, approximately 16 properties were flooded internally and approximately 21 properties were flooded externally across Great Shefford. Similar to the 2024 flood event, flooding the result of fluvial, groundwater, sewer, and surface water sources. Historic flood outlines are mapped within Appendix E.9.

Figure 9-1 – Great Shefford Location Map



9.2 FLOODING

9.2.1. From questionnaire responses and interviews with affected residents, it is understood that the flooding in January 2024 was from sewer, groundwater, fluvial, and surface water sources. Approximately three properties suffered internal flooding and approximately 10 properties suffered external flooding. Approximately 20 properties within the village were affected by disruption to their wastewater facilities. Whilst disruption to wastewater facilities did not affect everyone in the village, some properties still could not use their wastewater facilities during WSP's visit on the 28th of March 2024.

9.2.2. There were no incidents of internal sewer flooding, however several properties experienced external sewer flooding because of surcharged manholes. This resulted in raw sewage entering the winterbourne stream and subsequently the River Lambourn which is classed as an Environment Agency Main River.

9.2.3. One property within Great Shefford was affected internally by groundwater flooding. When visited by WSP on the 28th of March 2024 groundwater was seen coming up through the floor and from skirting boards. Having first started on the 4th of January, groundwater flooding initially took approximately 10 days to subside, however, during WSP's site visit, it was noted that the property had flooded several times after this first incident.

9.2.4. One property that experienced external surface water flooding on the 4th of January reported that floodwater reached a depth of approximately 150mm but that it had subsided by midnight on the same day. The occupants used a pump to remove floodwater from the back garden and prevent it from flowing into the properties opposite. This was successful in preventing internal flooding, however the floodwater levels only started to drop after using the pump for an hour.

9.2.5. During WSP's site visit, it was reported that approximately 10 properties were affected by external flooding, specifically in gardens, from fluvial sources. It is understood that flooding started on the 9th of January, and it was still evident during WSP's site visit. In addition, approximately two properties were affected by internal fluvial flooding from the River Lambourn following Storm Henk.

Figure 9-2 – Flooding at Great Shefford Stream

9.3 CAUSES

9.3.1. The winter of 2023/24 was one of the wettest on record, which served to elevate groundwater levels for prolonged periods of time in areas of West Berkshire. High groundwater in and around the area was noted as a significant contributing factor to the flooding and caused springs to appear at topographical low points within Great Shefford. This was exacerbated by exceptional rainfall during storms Henk, Isha, and Jocelyn leading to the River Lambourn and Great Shefford Stream exceeding their capacity in places.

9.3.2. These high groundwater levels may have infiltrated into the sewer system and contributed to the system reaching capacity and surcharging, however this cannot be confirmed until a CCTV survey can be completed. The sewer system being overrun resulted in manholes surcharging outside properties along Wantage Road. During WSP's site visit it was reported that there was potentially a collapsed drain in front of Downside House, along Wantage Road, which may also be affecting sewer capacity.

9.3.3. Surface water flooding was likely caused by the heavy rainfall, brought by Storms Henk, Isha, and Jocelyn, falling on already saturated ground. This meant it could not infiltrate into the soil and instead ran down off the hills that surround Great Shefford.

Figure 9-3 – Flooding at Wantage Road

9.4 FLOOD DEFENCES/ASSETS

9.4.1. Great Shefford currently benefits from a temporary flood alleviation scheme that takes water from the winterbourne stream running along Wantage Road and pumps it 900m before discharging it into the River Lambourn along Newbury Road. During the 2024 flood event, the temporary scheme worked as planned. The pump was switched off a week prior to WSP's visit.

9.4.2. In response to the 2013 / 14 flood event, a permanent flood alleviation scheme was designed by the Environment Agency. Proposals for the scheme are such that it will be an adaptation of the current temporary scheme, with the addition of a trash grid. Boreholes have been put in place, but further works cannot go ahead until groundwater levels have dropped (at time of writing).

9.4.3. Furthermore, storage basins are located along the winterbourne stream on either side of Blakeney Fields road. This allows the stream to safely overflow during high flows and provides protection to the Spring Meadows estate, which was built on water meadows and subsequently has a high surface water flood risk.

9.5 RISK MANAGEMENT AUTHORITIES

Thames Water

9.5.1. During WSP's site visit to Great Shefford it was noted that, according to local flood wardens, Thames Water had been tankering the sewer system since January. It was reported by local residents that for the first month of tanking, residents did not experience relief to the sewer system but changing the location of pumps appeared to improve this, particularly when two tankers were used.

9.5.2. A request for information has been sent to Thames Water, however no specific response regarding the 2024 flood event in this area has been received.

9.5.3. Thames Water reported that proactive planned works, such as cleaning blockages in flood prone areas, are carried out each year. Furthermore, in summer months, Thames Water aim to deliver any work that was identified as required in the previous winter period, such as, to address groundwater infiltration or surface water inundation related issues. Investigations are then carried out over the autumn and winter months in catchments known to have issues with groundwater infiltration and surface water inundation.

9.5.4. Thames Water reported having started this work in September 2023 after Swindon received the first storm of the season. Thames Water has reported that it will continue to investigate how water is entering the sewer system and collate information to prioritise works based on likelihood of impact and potential consequences.

Environment Agency

9.5.5. Consultation with the Environment Agency has confirmed that there are currently no permanent flood defences within Great Shefford. The Environment Agency confirmed there are temporary pumping plans in place to reduce flood risk prior to the implementation of Great Shefford flood alleviation scheme.

9.5.6. The Environment Agency do not own any gauges within Great Shefford to measure river flows or levels. Consultation also confirmed that the Environment Agency has not yet defined the return period of the 2024 flood event.

9.5.7. Upon consultation with the Environment Agency, no information was received regarding flood alerts, suggesting there were no alerts in place during the 2024 flood event.

9.5.8. The following flood warning was in place during the 2024 flood event:

- River Lambourn from Upper Lambourn to Great Shefford (061FWF22UpLamGSh) – In force (04/01/2024 – 11/02/2024)

9.5.9. The Environment Agency received one report during the 2024 flood event, on the 4th of January, reporting that the village was affected by groundwater and fluvial flooding across roads and pavements.

9.5.10. Consultation with the Environment Agency has confirmed that there were no specific issues or constraints associated with Great Shefford Stream and that there are no plans to carry out improvement works. However, construction of Great Shefford flood alleviation scheme is currently underway, and works will continue to increase flood resilience across the village.

West Berkshire Council

9.5.11. A request for information was sent to West Berkshire Council to detail their response to the 2024 flooding events. The information received, details that Newbury Road was closed for one day on the 25th of April 2024. In addition to this, representatives of West Berkshire Council visited Great Shefford on the following dates:

- 7th of January 2024
- 10th of January 2024
- 12th of January 2024
- 16th of January 2024
- 18th of January 2024
- 23rd of January 2024
- 25th of January 2024

Royal Berkshire Fire and Rescue Service

9.5.12. As part of the investigation Royal Berkshire Fire and Rescue Service (RBFRS) have been consulted for information. RBFRS reportedly did not attend any incidents in relation to the 2024 flood event in this area.

9.6 RECOMMENDATIONS

Local Residents

9.6.1. Residents should report any foul and surface water sewer issues to Thames Water as soon as they become apparent. In addition to this, residents affected by sewer issues may benefit from the installation of non-return valves to prevent future internal sewer flooding.

9.6.2. The resident affected by groundwater flooding may benefit from the installation of Property Flood Resilient measures such as hard flooring and sump pumps to help reduce the risk of flooding to their premises during times of high groundwater.

West Berkshire Council

9.6.3. West Berkshire Council should continue to work with and support the Environment Agency to complete the installation of the new flood alleviation scheme as soon as weather and ground conditions allow.

Environment Agency

9.6.4. During WSP's site visit, it was reported that the Great Shefford groundwater monitoring gauge appeared to have intermittently stopped working during the early months of 2024. It would be

beneficial for the Environment Agency to investigate the gauge and carry out any necessary remedial works.

Thames Water

9.6.5. It is recommended that Thames Water could carry out a full CCTV survey to investigate the capacity and condition of the sewer network. Once it is understood what is causing the excessive inundation of the sewer system, RMAs should work in partnership to identify any feasible remedial works.

9.6.6. Recognising the significant costs associated with upgrading sewerage assets, it is recommended that potential remedial works are identified and prioritised for maximum benefit. Potential works could include the relining of the sewer network using new technologies, the sealing of manholes to prevent surcharging, and the addition of non-return valves.

Parish Council

9.6.7. The Parish Council should provide support to local flood wardens and aid the communication between residents in the area. This may include the distribution of information regarding the following:

- How to monitor groundwater levels.
- How to sign up to the Environment Agency flood alerts and warnings.
- How to report concerns to the relevant flood risk management authorities.
- Guidance on effective property level protection.
- What to do and when, in preparation for a flood.
- Where to find support following a flood event.

9.7 SUMMARY

9.7.1. The flooding generally occurred in areas categorised as Flood Zone 3 where there is also a high surface water flood risk, according to the Environment Agency's flood maps (refer to Appendix E.9). However, the property affect by surface water flooding is located outside of these high-risk areas.

9.7.2. Table 9-1 summarises the flooding experienced in Great Shefford as a result of Storms Henk, Isha, and Jocelyn. Refer to Appendix A.9 which details the locations of the flooded areas.

Table 9-1 – Summary of Flooding in Great Shefford

Total No. of Properties Flooded	Source of Flooding	No. of Properties Flooded Internally	No. of Properties Flooded Externally*	No. of Road Closures
10	Fluvial, Groundwater, Sewer, and Surface Water.	3	7	1 – Newbury Road

**Excluding properties recorded as having flooded internally.*

9.7.3. West Berkshire Council, Thames Water, and the Environment Agency all had flood management responsibilities related to this event due to the multiple flood sources and assets involved. West Berkshire Council attended the area during the flooding to monitor the situation and enforce road

closures where required. Thames Water were also in regular attendance to carry out ongoing remedial works. Recommendations have been identified to help manage the impact of any future flooding events.

10 LAMBOURN

10.1 LOCATION

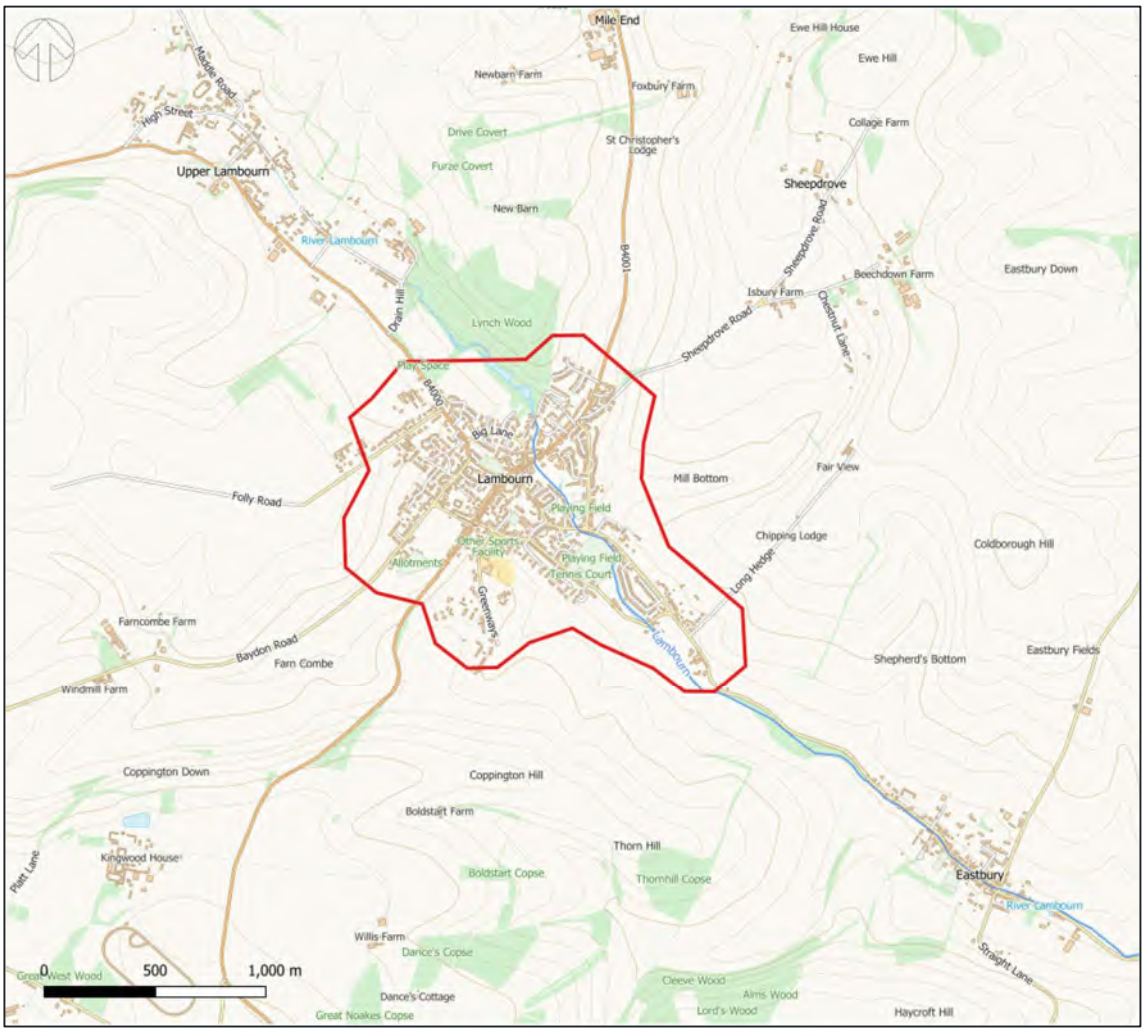
10.1.1. The village of Lambourn is located in the west of West Berkshire and is located at the head of the River Lambourn; upstream from Eastbury and Great Shefford. The village has a National Grid Reference of 432672, 178895 and is shown in Figure 10-1.

10.1.2. Previous flooding has occurred in Lambourn during the following events:

- 1947
- 1992
- 2000/01
- 2003
- 2012/13
- 2013/14

10.1.3. Most recently, during the winter 2013/14 flood event, approximately 12 properties were flooded internally and approximately nine properties were flooded externally across Lambourn. Similar to the 2024 flood event, flooding was the result of fluvial, sewer, and surface water sources. Historic flood outlines are mapped within Appendix E.11.

Figure 10-1 – Lambourn Location Map



10.1.4. The village is situated in a low point in comparison to the surrounding agricultural fields and hills to the east, south, and west, and an area of woodland to the north. The village is accessed by four main routes, including Wantage Road, Newbury Road, Hungerford Hill, and Upper Lambourn Road.

10.1.5. The source of the River Lambourn is located just north of the village in an area of woodland. The River Lambourn is classed as a winterbourne river through Lambourn however it does not behave as typically expected. Typically, flow stops for a few months in late autumn / early winter but this varies from year to year and during the 2023/24 autumn and winter seasons it flowed continuously. The river flows through Lambourn and is bridged where it passes under Oxford Street and Newbury Street.

10.2 FLOODING

10.2.1. From questionnaire responses and interviews with the Lambourn flood wardens, it is understood that flooding in early 2024 resulted from different sources, including groundwater, fluvial, surface water, and sewer. Local flood wardens and residents reported that flooding in early 2024 was not as bad as it was in 2013/14, however it was more prolonged.

10.2.2. The flooding generally occurred in areas categorised as Flood Zone 2 where there is also a high surface water flood risk, according to the Environment Agency's flood maps (refer to Appendix E.11).

10.2.3. Lambourn has four main routes into the village, including Wantage Road, Newbury Road, Hungerford Hill, and Upper Lambourn Road. The sloping topography encourages surface water to runoff down the surrounding hills and roads into the village, as was experienced in January 2024.

10.2.4. Flood wardens reported that in early 2024, Hungerford Hill was the only access route in and out of Lambourn that was not affected by to flooding. According to flood wardens, Wantage Road was affected by floodwaters reaching depths of approximately 200mm deep and was impassable for approximately eight weeks.

10.2.5. In addition to this, Newbury Road was affected by sewer flooding from the 4th of December 2023 and sewers were still surcharged during WSP's site visit on the 19th of April 2024. Sewer flooding also affected Oxford Street, where foul water had been discharging since January, allowing it to runoff into the road, and directly into the River Lambourn. Some roads within Lambourn also had springs coming up through the road, for example in Newbury Street. The paddock located south of Crowle Road had been flooded with groundwater since January and had still not fully subsided during WSP's site visit on the 19th of April 2024.

10.2.6. One property along Newbury Street suffered internal fluvial flooding and external sewer and surface water flooding in January 2024. Following Storm Henk, it was reported that surface water runoff flowed down Mill Lane causing the external flooding of this property. This property backs onto the River Lambourn and experienced internal flood depths of approximately 50mm from the river. Residents here reported that river levels rose higher than the garden bridges that cross the river and logs and debris built up against them.

10.2.7. Two properties along Sheepdrove Road suffered internal groundwater flooding on the 4th of January 2024 with floodwater reaching depths of approximately 250mm. Both properties had flood barriers and / or doors, however groundwater came up through the floor and the use of a sump pump was not successful in preventing internal flooding.

Figure 10-2 – Flooding at Wantage Road

10.3 CAUSES

10.3.1. The winter of 2023/24 was one of the wettest on record, which served to elevate groundwater levels for prolonged periods of time in areas of West Berkshire. High groundwater levels in and around Lambourn were noted as being a significant contributing factor to the flooding experienced. This was exacerbated by significant rainfall during storms Henk, Isha, and Jocelyn in January.

10.3.2. Infiltration of groundwater into the sewer system contributed to it being inundated. In addition to this, it is understood that Lambourn has a gravity fed sewage system which receives flows from pumped systems. This added to the flooding issue.

10.3.3. Whilst high groundwater levels are thought to be the main contributing factor to the 2024 flood event, other factors were noted during WSP's site visit to the area. For example, on the 19th of April 2024 many of the road gullies in the area were either blocked or full of groundwater, potentially contributing to floodwater taking a prolonged period of time to subside. In addition to this, it was noted there is a lack of road drainage along Wantage Road, which creates a flow path of water flowing into the village and encourages surface water flooding.

10.3.4. Finally, during WSP's site visit to Lambourn, flood wardens expressed concerns that the ditches either side of Wantage Road, from Mile End and Seven Barrows, do not have sufficient capacity to

accommodate runoff from Wantage Road. These ditches feed water into the culvert that runs under Gwynn's Piece and Millfield into the River Lambourn. Under flood conditions, the ditches can provide a useful holding function to avoid the culvert becoming overwhelmed and allowing the flooding of Oxford Street.

Figure 10-3 – Signage on Newbury Street

10.4 FLOOD DEFENCES/ASSETS

10.4.1. Lambourn benefitted from a Defra funded, Council promoted and administered Property Level Protection scheme. Fifty-seven properties were contacted and offered PLP, however 21 properties took the Council up on the offer and benefitted from the project. The work was completed in 2020.

10.5 RISK MANAGEMENT AUTHORITIES

Thames Water

10.5.1. During WSP's site visit to Lambourn, local flood wardens provided details of actions they are aware Thames Water carried out prior and in response to the 2024 flood event. It is understood that Thames Water extracted foul water from the sewer network from the 3rd of December 2023 and used an Atac unit to filter the foul water before discharging it into the River Lambourn, under a license

from the Environment Agency. Initially the Atac unit was positioned next to Brookside Cottage before it was moved next to the fire station.

10.5.2. It is also understood that tankering was undertaken at Goose Green. However, an area near the Wheelwright Arms pub was not relieved and led to the pub not being able to use its toilets. Finally, it was noted that Thames Water and West Berkshire Council put up signs to warn local residents of the raw sewage in the road and river.

10.5.3. A request for information has been sent to Thames Water, however no specific response regarding the 2024 flood event in this area has been received.

10.5.4. Thames Water reported that proactive planned works, such as cleaning blockages in flood prone areas, are carried out each year. Furthermore, in summer months, Thames Water aim to deliver any work that was identified as required in the previous winter period, such as, to address groundwater infiltration or surface water inundation related issues. Investigations are then carried out over the autumn and winter months in catchments known to have issues with groundwater infiltration and surface water inundation.

10.5.5. Thames Water reported having started this work in September 2023 after Swindon received the first storm of the season. Thames Water has reported that it will continue to investigate how water is entering the sewer system and collate information to prioritise works based on likelihood of impact and potential consequences.

Environment Agency

10.5.6. Consultation with the Environment Agency has confirmed that there are no flood defences benefiting Lambourn. Furthermore, the Environment Agency do not own any gauges within Lambourn to measure river flows however, the Lambourn gauge is used to measure river levels. Consultation also confirmed that the Environment Agency has not yet defined the return period of the 2024 flood event.

10.5.7. The following flood alert was in place during the 2024 flood event:

- River Lambourn and its tributaries from Upper Lambourn down to Newbury (061WAF22Lambourn) – In force (04/01/2024 – 05/06/2024)

10.5.8. The following flood warning was in place during the 2024 flood event:

- River Lambourn from Upper Lambourn to Great Shefford (061FWF22UpLamGSh) – In force (04/01/2024 – 11/02/2024)

10.5.9. The Environment Agency did not receive any reports of flooding in Lambourn during the 2024 flood event. Community Information Officers (CIOs) visited the area on January 11th, 2024, to provide advice to the community and gather information on the flooding situation.

10.5.10. Consultation with the Environment Agency has confirmed that there were no specific issues or constraints associated with the River Lambourn within Lambourn and that there are no plans to carry out improvement works. However, the Environment Agency has confirmed they are currently working in partnership with West Berkshire Council to raise community awareness and encourage property level flood protection across the village.

West Berkshire Council

10.5.11. A request for information was sent to West Berkshire Council to confirm their response to the 2024 flooding events. The information received confirmed that Wantage Road was closed on the 5th of

January 2024. In addition to this, representatives of West Berkshire Council visited Lambourn on the following dates:

- 7th of January 2024
- 10th of January 2024
- 12th of January 2024
- 16th of January 2024
- 18th of January 2024
- 23rd of January 2024
- 25th of January 2024

10.5.12. It is understood that traffic lights were put in place on Newbury Street, following a request by flood wardens. This was aimed at slowing the traffic driving through sewer flooding and prevent it splashing into houses.

Royal Berkshire Fire and Rescue Service

10.5.13. As part of the investigation Royal Berkshire Fire and Rescue Service (RBFRS) have been consulted for information. RBFRS reportedly did not attend any incidents in relation to the 2024 flood event in this area.

10.6 RECOMMENDATIONS

Local Residents

10.6.1. Residents and business owners affected by fluvial and surface water flooding may benefit from property flood resilience measures, such as flood doors / barriers, waterproof airbricks, and placing electrical sockets at raised levels, to provide resilience to their premises during storm events.

10.6.2. In contrast, residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring and sump pumps or by tanking their property to provide resilience during times of high groundwater. It is noted that some properties in Lambourn already do have property flood resilience measures installed, such as flood doors.

10.6.3. Residents should report any highway drainage issues to West Berkshire Council and any surface and foul water sewer issues to Thames Water as soon as they become apparent. In addition, those affected by sewer flooding may benefit from the installation of one-way valves to prevent sewage backing up into their properties.

Riparian Owners

10.6.4. Confirmation should be sought around which authority / landowners are responsible for the ditch located along the road by Northfields and North Farm Close and measures should be put in place to ensure the ditch is appropriately managed to reduce flood risk.

West Berkshire Council

10.6.5. Two recommendations following WSP's flood investigation, are that WBC could review the current highway drainage maintenance schedule across Lambourn, and consider a CCTV survey of the sewerage network, specifically along Mill Lane and Oxford Street. It is acknowledged that the design standard of existing highway drainage is likely to be lower than the rainfall event recorded and that it will also not be designed to cope with groundwater. However, the condition of the highway drainage

network could be assessed, and the cause of the blocked gullies explored. Remedial works should then be prioritised in areas at higher risk of flooding to prevent the gullies from becoming blocked.

10.6.6. Another recommendation is an investigation into road drainage along Oxford Street and Wantage Road. Hydraulic modelling could be undertaken to understand the hydraulic dynamics of surface water flowing along the road. Surface water runoff from Sheepdrove Road should also be considered, as it was noted that this can flow into Wantage Road if it cannot enter the culvert on Sheepdrove Road. The results of this modelling could then determine the requirement for more road drainage, for example in the form of gullies, or SuDS measures, such as rain gardens, at a local and/or catchment scale.

10.6.7. Finally, West Berkshire Council could consider the addition of flap valves to highway drainage outfalls to watercourses, to prevent river water from backing up into the road drainage system during high flows.

Environment Agency

10.6.8. It is recommended that a feasibility study could be undertaken into the potential for a flood alleviation scheme to be implemented in Lambourn. This could include the temporary storage of river water during high flows, at sites such as Lynch Wood or Lambourn Playing Field. It is noted, however, that although a contributing factor, fluvial flooding was not considered as the main factor to the complex flooding experienced in Lambourn in early 2024.

Thames Water

10.6.9. It is recommended that Thames Water could carry out a CCTV survey to investigate the capacity and condition of the sewer network in Lambourn. Once it is understood what is causing inundation of the sewer system, remedial works can be undertaken to prevent it. Potential works could include the relining of the sewer network using new technologies, the sealing of manholes to prevent surcharging, and the addition of non-return valves.

10.6.10. It is understood that in some situations these measures may have limited effectiveness and Thames Water should prioritise the best possible outcome for the available budget.

10.6.11. Investigation into the effectiveness of a flip pump located in Newbury Road should be carried out following reports of the system being inundated with groundwater and having to continuously pump it down to the main sewer.

Parish Council

10.6.12. The Parish Council should continue to support local flood wardens in Lambourn and provide education and communication to local residents on the following:

- How to monitor river levels and flows;
- How to sign up to the Environment Agency flood alerts and warnings;
- How to report concerns to the relevant flood risk management authorities;
- Guidance on effective property level protection;
- What to do and when, in preparation for a flood; and
- Where to find support following a flood event.

10.6.13. During WSP's site visit to Lambourn, it was noted that West Berkshire Council did not provide sandbags and that the Parish Council provided the bags but not the sand. Therefore, communication with residents could be improved to educate on why sandbags are no longer provided and details of

what support to expect from flood risk authorities during a flood event to allow better preparation for future flood events.

10.7 SUMMARY

10.7.1. The flooding generally occurred in areas categorised as Flood Zone 2 where there is also a high surface water flood risk, according to the Environment Agency's flood maps (refer to Appendix E.11).

10.7.2. Table 10-1 summarises the flooding experienced in Lambourn as a result of Storms Henk, Isha, and Jocelyn. Refer to Appendix A.11 which details the locations of the flooded areas.

Table 10-1 – Summary of Flooding in Lambourn

Total No. of Properties Flooded	Source of Flooding	No. of Properties Flooded Internally	No. of Properties Flooded Externally*	No. of Road Closures
5	Fluvial, Groundwater, Sewer, and Surface Water.	3	2	1 – Wantage Road

**Excluding properties recorded as having flooded internally.*

10.7.3. West Berkshire Council, Thames Water, and the Environment Agency each had flood management responsibilities related to this event due to the multiple flood sources and assets involved. West Berkshire Council attended the area during the flood event to monitor the situation and enforce road closures where required. Thames Water were also in regular attendance to carry out ongoing remedial works. Recommendations have been identified to help manage the impact of any future flooding events.

11 NEWBURY (SOUTH)

11.1 LOCATION

11.1.1. The town of Newbury is located in the south of West Berkshire and is located downstream along the River Lambourn from Great Shefford. The town is built around the River Lambourn which flows from the north-west, and the River Kennet which flows in conjunction with the Kennet and Avon Canal from the west.

11.1.2. The area classed as Newbury (south) includes Northcroft and West Mills and is located in the south-west of Newbury. It is influenced by the River Kennet and the Kennet and Avon Canal. The area of Newbury (south) has a National Grid Reference of 446932, 167216 and is shown in Figure 11-1.

11.1.3. Flooding has previously occurred in Newbury South during the following events:

- 1971
- 1979
- 2000/01
- 2007
- 2012/13
- 2013/14
- 2016

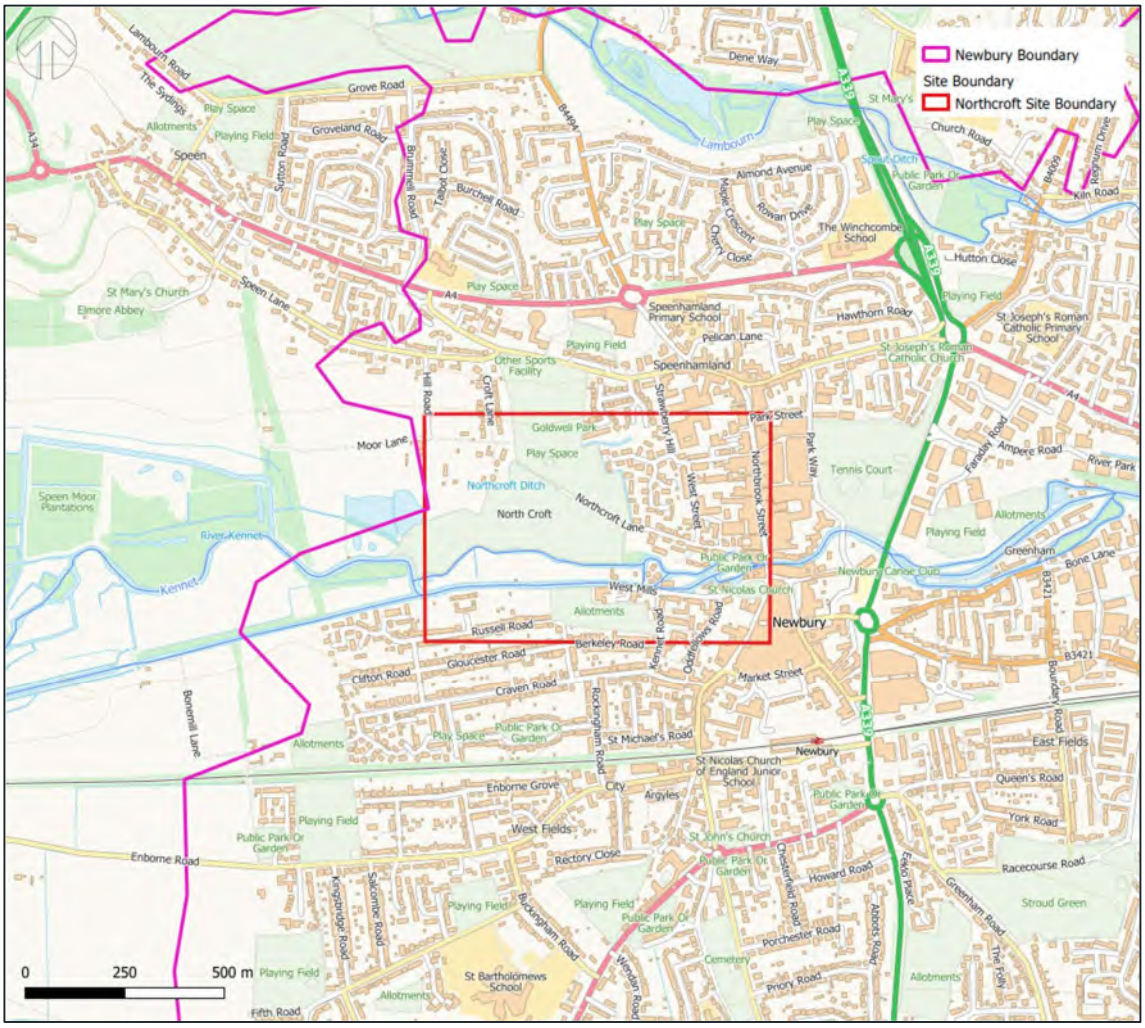
11.1.4. During the winter 2013/14 flood event, approximately 41 properties were flooded internally and approximately 19 properties were flooded externally across the whole of Newbury. Similar to the 2024 flood event, flooding in Newbury South was the result of fluvial and surface water sources.

11.1.5. More recently, during the 2016 flood event, areas of Newbury were affected by surface water flooding following a period of heavy rainfall. According to the September 2016 Flood Investigation Report, these areas included:

- Bartlemy Road
- Bartholomew Street / Pound Street
- Church Road
- Mill Lane
- Paddock Road
- Essex Street
- Ivy Cottage
- Newbury Train Station

11.1.6. Historic flood outlines are mapped within Appendix E.5.

Figure 11-1 – Newbury (South) Location Map



11.2 FLOODING

11.2.1. WSP conducted a site visit to the south of Newbury on the 15th of March 2024 and from this it is understood that flooding issues started on Thursday 4th January. From questionnaire responses and interviews with the Northcroft flood warden and affected residents, it is understood that flooding resulted from groundwater inundation, sewer surcharging, and fluvial factors.

11.2.2. The flooding generally occurred in areas categorised as Flood Zone 3 according to the Environment Agency's flood maps (refer to Appendix E.5).

11.2.3. As a result of Storm Henk, three properties on Northcroft Lane were flooded internally with flood depths peaking on Sunday the 7th of January at approximately 250mm. These properties experienced external flooding to the back of the properties which then flowed inside and caused internal flooding. Although these properties are located next to the River Kennet, the source of this floodwater is considered unlikely to be fluvial due to the flood wall that runs along the back of the properties and provides protection from high river levels. The flood wall was not overtopped during the 2024 flood event; however, it is possible that river water influenced groundwater levels by pushing them up, resulting in above ground flooding. These properties were also flooded to the front from surface water in the road.

11.2.4. It was reported that two further properties on Northcroft Lane experienced internal groundwater flooding, however further details have not been provided. Two other properties on West Mills reported internal fluvial flooding, one on the 5th of January 2024 and another on the 7th of January 2024. It is believed that additional properties on the island between the River Kennet and the Kennet and Avon Canal may have been affected by flooding, however the flood extent has not been reported and is therefore unknown. It is understood that West Berkshire Council Officers are in contact with residents of the island and are investigating several mitigation measures including removal of vegetation and the repair of a potential breach in Northcroft.

11.2.5. It is understood that Northcroft Lane flooded because of sewers surcharging, with the local flood warden and residents commenting that it appeared to be clean. This road flooding backed up along West Street and flooded the road up to the Scout Hut and, as a result, road closures were put in place on both roads.

11.2.6. During WSP's visit to Northcroft, it was also reported that floodwater was flowing out of Swan Court and onto Northcroft Lane, contributing to the flooding. No internal flooding was reported in Swan Court or the offices at the front of Swan Court, however the site flooded externally, affecting the car park. Swan Court is also protected by the flood defence wall, which runs along the back of the site; however, it was reported that floodwater surcharged from the drains in the car park.

11.2.7. It is believed that floodwaters in Swan Court flowed west causing the external flooding to the Northcroft Terrace properties. In addition to this, the gravel car park, located south of the terraced properties, flooded with flood depths reported to have reached 1 – 2m approximately. This car park is located on the river side of the flood wall meaning that flooding would likely have been fluvial.

11.2.8. In addition to flooding, during WSP's site visit to Northcroft, it was noted that several properties in the area experienced issues with wastewater facilities, however no internal sewer flooding was reported.

Figure 11-2 – Flooding at Swan Court

11.3 CAUSES

11.3.1. Following WSP's site visit to the south of Newbury, it is understood that flooding was caused by fluvial, groundwater, and sewer sources. The winter of 2023/24 was one of the wettest on record, which served to elevate groundwater levels for prolonged periods of time in areas of West Berkshire.

11.3.2. High groundwater in and around Newbury was noted as a significant contributing factor to the flooding experienced. This was exacerbated by significant rainfall during storms Henk, Isha, and Jocelyn in January. As a result, the sewer system in Northcroft was inundated and surcharged into roads. It is not clear what specifically has caused the sewer system to become over capacity, however groundwater infiltration and extreme rainfall are likely.

11.3.3. In addition to this, flood wardens commented that during high flows, levels in the River Kennet were high enough to submerge road drainage outfalls. WSP is not aware of these outfalls having one-way valves installed, meaning it is possible that river water backed up the road drainage and caused road gullies to surcharge. Local residents and flood wardens reported that the road drainage continued to surcharge for approximately one week after the rain stopped.

Figure 11-3 – Flooding at Northcroft Park

11.4 FLOOD DEFENCES/ASSETS

11.4.1. Northcroft benefits from two flood alleviation schemes. The first is a bund in Goldwell Field which was built in 2014 for temporary floodwater storage and to protect properties in Cleeveland Grove and Crawford Place from fluvial and above ground flooding from the functional floodplain. During WSP's site visit to Northcroft no reports of flooding to Cleeveland Grove or Crawford Place were reported, so it is assumed that the alleviation bund was successful in preventing flooding to these properties.

11.4.2. The second flood defence benefitting Northcroft is the flood wall that runs along the north bank of the River Kennet from The Lock, Stock & Barrel pub to Northcroft Field. The flood wall was built in February 2014 to protect properties in Northcroft from fluvial flooding as a result of high river levels. During the 2024 flood event, the flood wall worked as planned and was not exceeded.

11.5 RISK MANAGEMENT AUTHORITIES

Thames Water

11.5.1. During WSP's site visit to the south of Newbury, flood wardens provided details of actions that they believe Thames Water may have carried out in response to the 2024 flood event. It was believed

that Thames Water may have cleared a blockage in the sewer system because there had been no more road flooding since January.

11.5.2. A request for information has been sent to Thames Water, however no specific response regarding the 2024 flood event in this area has been received.

11.5.3. Thames Water reported that proactive planned works, such as cleaning blockages in flood prone areas, are carried out each year. Furthermore, in summer months, Thames Water aim to deliver any work that was identified as required in the previous winter period, such as, to address groundwater infiltration or surface water inundation related issues. Investigations are then carried out over the autumn and winter months in catchments known to have issues with groundwater infiltration and surface water inundation. Thames Water reported having started this work in September 2023 after Swindon received the first storm of the season. Thames Water has reported that it will continue to investigate how water is entering the sewer system and collate information to prioritise works based on likelihood of impact and potential consequences.

Environment Agency

11.5.4. During WSP's site visit to Newbury, local flood wardens commented that the Environment Agency attended site to complete a survey of the flooding experienced.

11.5.5. Consultation with the Environment Agency has confirmed that they do not own any flood defences benefiting the Newbury area. Furthermore, the Environment Agency own the Newbury gauge that measures river flows along the River Kennet. However, due to an issue with the equipment the Newbury gauge is believed to have been overreading by more than 10% during the flood event. Consultation also confirmed that the Environment Agency has not yet defined the return period of the 2024 flood event.

11.5.6. The following flood alert was in place during the 2024 flood event:

- River Kennet and its tributaries from Berwick Bassett down to Newbury (061WAF22UpperKen) – In force (02/01/2024 – 07/03/2024).

11.5.7. Upon consultation with the Environment Agency, no information was received regarding flood warnings along the River Kennet, suggesting there were no warnings in place during the 2024 flood event.

11.5.8. The Environment Agency receive multiple reports of flooding across Newbury during the 2024 flood event. This includes flooding from groundwater and fluvial sources from the River Kennet across the south of Newbury. It is noted that the Environment Agency received reports of external fluvial flooding to three properties in Ampere Road, which was not reported to WSP during site visits, or West Berkshire Council through the flooding questionnaire. Subsequently, this information has been added to Table 1-1 and Table 11-1.

11.5.9. Community Information Officers (CIOs) visited the area of Newbury multiple times from the 4th of January to the 12th of January 2024 to provide advice to the community and gather information on the flooding situation.

11.5.10. Consultation with the Environment Agency has confirmed that there were no specific issues or constraints associated with the River Kennet within Newbury. Furthermore, details of the Thames Valley Flood Scheme have been provided. The scheme, led by the Environment Agency, is investigating the possibility to store water across the Thames catchment. This is likely to include a

combination of flood storage and natural flood management currently across approximately 17 locations.

West Berkshire Council

11.5.11. A request for information was sent to West Berkshire Council to detail their response to the 2024 flooding events. With regards to the south area of Newbury, WBC confirmed that Northcroft Lane was closed on the 10th of January 2024 until the 14th of January 2024.

11.5.12. In addition to this, representatives of West Berkshire Council visited the Newbury area on the following dates:

- 7th of January 2024
- 9th of January 2024
- 10th of January 2024
- 12th of January 2024
- 15th of January 2024
- 17th of January 2024
- 19th of January 2024
- 23rd of January 2024
- 24th of January 2024
- 26th of January 2024

Canal and River Trust

11.5.13. A request for information has been sent to the Canal and River Trust, however no response has been received at this time.

Royal Berkshire Fire and Rescue Service

11.5.14. As part of the investigation Royal Berkshire Fire and Rescue Service (RBFRS) have been consulted for information. RBFRS reportedly attended one incident in Newbury during Storm Henk however, no further information has been provided.

11.6 RECOMMENDATIONS

Local Residents

11.6.1. Residents should report any highway drainage issues to West Berkshire Council and any foul and surface water sewer issues to Thames Water as soon as they become apparent. In addition, those affected by sewer flooding may also benefit from the installation of one-way valves to prevent sewage backing up into their properties.

11.6.2. Residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring and sump pumps or tanking their properties to give resilience to their premises during times of high groundwater. Additionally, the area may benefit from the preparation of a groundwater flood plan to help inform flood risk. Owners of properties affected by surface water flooding may benefit by considering the installation of property flood resilience measures such as flood gates / barriers.

11.6.3. During WSP's site visit to Northcroft it was noted that much of the residential area is designed and built with flood risk in mind. For example, Swan Court has non-return valves and a ramp up to the property from the car park. Despite this, it is recommended that the owners could carry out a feasibility study into whether additional drainage storage could be installed within the car park areas to reduce the risk of excess runoff entering Northcroft Lane.

West Berkshire Council

11.6.4. It is acknowledged that the design standard of existing highway drainage is likely to be lower than the rainfall event recorded and that it will also not be designed to cope with groundwater. However, it is recommended that West Berkshire Council could conduct a CCTV survey along Northcroft Lane to access the condition of the highway drainage network. Any required remedial works could then be considered to prevent the gullies from becoming blocked and reduce flood risk.

11.6.5. It is also recommended that West Berkshire Council could review the current highway drainage maintenance schedule across Northcroft and, where appropriate, increase the frequency of inspections, specifically along Northcroft Lane. Alternatively, these assets could be marked as a priority, and arrangements should be made for pre-emptive inspections on receipt of forecasts of heavy rain.

Environment Agency

11.6.6. It is recommended that a feasibility study could be undertaken by the Environment Agency into the potential for a flood alleviation scheme benefitting the island between the River Kennet and the Kennet and Avon Canal. This scheme could be similar to the flood wall that was implemented on the north bank of the River Kennet in 2014, however further investigation and modelling would be required to understand the suitability of this type of defence to ensure it does not increase flood risk downstream.

11.6.7. It is also recommended that the design of the 2013 flood defence wall, to the south of Northcroft Lane, be reviewed to determine whether there is a potential pathway below the wall, allowing fluvial flooding to affect the rear of properties in Northcroft Lane.

Thames Water

11.6.8. It is recommended that Thames Water could carry out a CCTV survey to investigate the capacity and condition of the sewer network in Northcroft, prioritising areas known to be at risk of flooding. Once it is understood what is causing inundation of the sewer system, remedial works could be considered to prevent it. Potential works could include the relining of the sewer network using new technologies and the sealing of manholes to prevent surcharging.

Parish Council

11.6.9. The Parish Council should continue to support local flood wardens in the south of Newbury and provide education and communication to local residents on the following:

- How to monitor river levels and flows.
- How to sign up to the Environment Agency flood alerts and warnings.
- How to report concerns to the relevant flood risk management authorities.
- Guidance on effective property level protection.
- What to do and when, in preparation for a flood.

- Where to find support following a flood event.

11.6.10. During WSP's site visit to Northcroft, it was noted that the area currently only has one flood warden. If possible, it may prove beneficial to increase the number of flood wardens in the area to aid communication and advancements, with regards to flood risk, between the local community and West Berkshire Council.

11.7 SUMMARY

11.7.1. The flooding generally occurred in areas categorised as Flood Zone 3 according to the Environment Agency's flood maps (refer to Appendix E.5).

11.7.2. Table 11-1 summarises the flooding experienced in the south of Newbury as a result of Storms Henk, Isha, and Jocelyn. Refer to Appendix A.5 which details the locations of the flooded areas.

Table 11-1 – Summary of Flooding in Newbury (South)

Total No. of Properties Flooded	Source of Flooding	No. of Properties Flooded Internally	No. of Properties Flooded Externally*	No. of Road Closures
10	Fluvial, Groundwater & Sewer.	7	3	2 – Northcroft Lane & West Street

**Excluding properties recorded as having flooded internally.*

West Berkshire Council, Thames Water, and the Environment Agency each had flood management responsibilities related to this event due to the flood sources and assets involved. West Berkshire Council attended the area during the flood event to monitor the situation and enforce road closures where required. Recommendations have been identified to help manage the impact of any future flooding events.

12 NEWBURY (NORTH)

12.1 LOCATION

12.1.1. The town of Newbury is located in the south of West Berkshire and is located downstream along the River Lambourn from Great Shefford. The town is built around the River Lambourn which flows from the north-west, and the River Kennet which flows in conjunction with the Kennet and Avon Canal from the west.

12.1.2. The area classed as north Newbury includes Clay Hill, Shaw-cum-Donnington, and Newbury North and is influenced by the River Lambourn before it flows into the River Kennet further downstream. The north area of Newbury has a National Grid Reference of 447540, 168481 and is shown in Figure 12-1.

12.1.3. Flooding has previously occurred in Newbury North during the following events:

- 1979
- 2007
- 2012/13
- 2013/14
- 2016

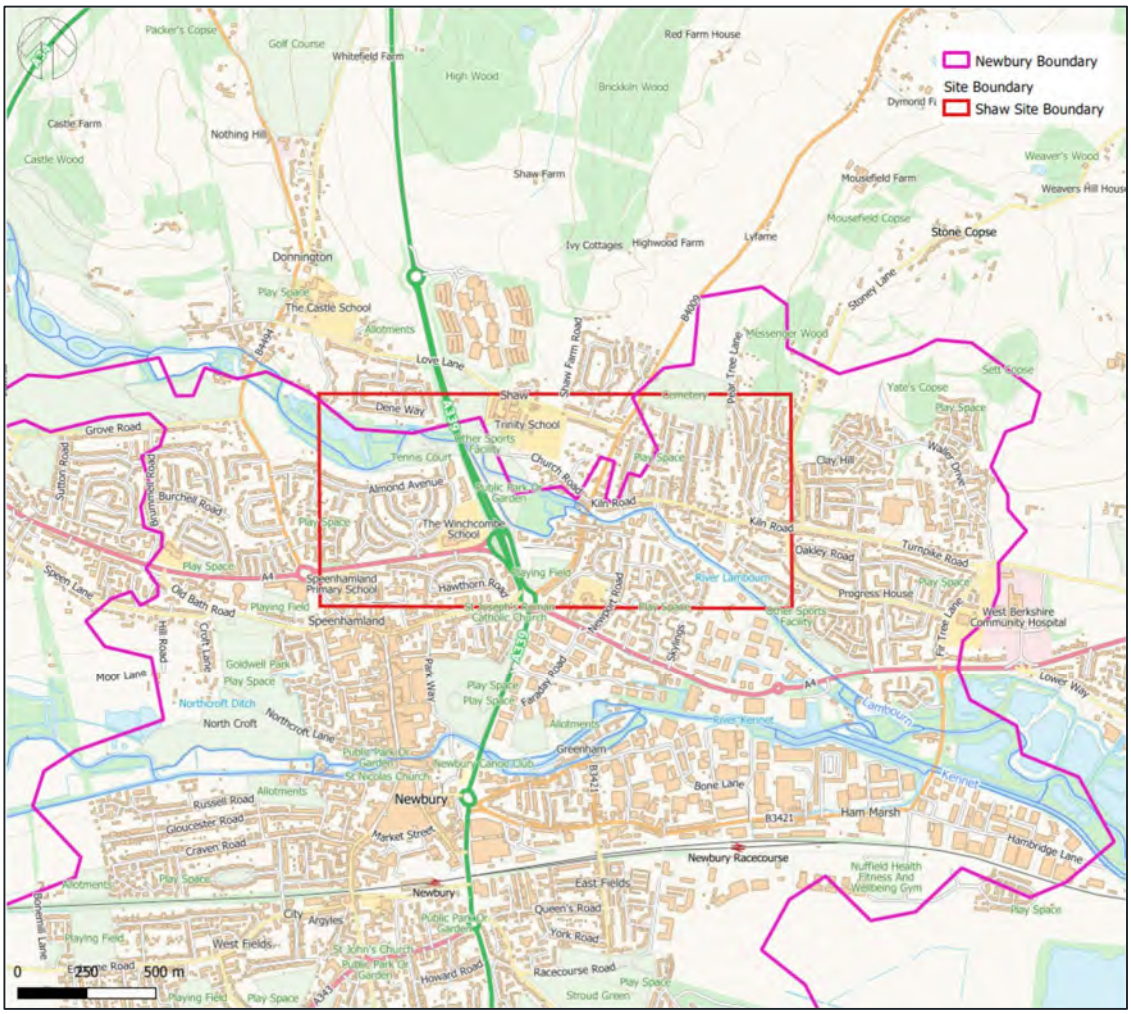
12.1.4. During the winter 2013/14 flood event, approximately 41 properties were flooded internally and approximately 19 properties were flooded externally across the entirety of Newbury. Similar to the 2024 flood event, flooding in Newbury North was the result of fluvial, sewer, and surface water sources.

12.1.5. More recently, during the 2016 flood event, areas of Newbury were affected by surface water flooding following a period of heavy rainfall. According to the September 2016 Flood Investigation Report, these areas included:

- Bartlemy Road
- Bartholomew Street / Pound Street
- Church Road
- Mill Lane
- Paddock Road
- Essex Street
- Ivy Cottage
- Newbury Train Station

12.1.6. Historic flood outlines are mapped within Appendix E.6.

Figure 12-1 – Newbury (North) Location Map



12.2 FLOODING

12.2.1. WSP conducted a site visit to the north area of Newbury on the 22nd of March 2024 and from this it is understood that the first signs of flooding began on approximately the 5th of January 2024. Levels in the River Lambourn had risen causing it to breach in several places, resulting in internal and external flooding. During the 2024 flood event, levels in the River Lambourn peaked at a height of 2.06m, which is believed to be just 40mm less than the peak during the 2014 flood event. From questionnaire responses and interviews with the local flood wardens and affected residents, it is understood that the flooding experienced in 2024 was the result of fluvial, groundwater, and sewer sources.

12.2.2. From interviews with affected residents, it is understood that Newport Road was affected by fluvial, groundwater, and sewer flooding, beginning on the 5th of January. Fluvial flood depths are believed to have been at their deepest along the two alley ways that lead away from the river and into the estate, where it reached approximately 20cm.

12.2.3. Due to the complexity of multiple contributing factors, it is not clear what properties were affected by external fluvial flooding and which were affected by external groundwater flooding. However, it is

believed that approximately 24 properties along Newport Road were affected by external flooding from fluvial or groundwater sources.

12.2.4. Although fluvial floodwaters on the south side of the river receded relatively quickly, groundwater flooding remained an issue for months, and some properties were still inundated during WSP's site visit on the 22nd of March 2024. During WSP's site visit, it was reported that approximately four properties along Doveton Way were affected by a mixture of external fluvial, groundwater, surface water, and sewer flooding. Local flood wardens reported that foul sewer flooding began on the 4th of December 2023 and was still evident during the 2024 flood event.

12.2.5. Approximately eight properties along Newport Road were affected by external sewer flooding. WSP is aware that after Storm Henk, one property on Newport Road experienced internal sewer flooding, which continued for 11 weeks until Thames Water cleared a blockage within the sewer network. Sewer flooding also affected Pike Street and Trout Walk where drains were surcharging foul water, which then flowed into the road gullies on Pike Street.

12.2.6. From WSP's site visit to the north of Newbury, it is understood that debris-filled, fluvial floodwaters flowed from Newport Road to a care home. No reports of internal flooding to the care home have been received, however the property was confirmed to have been affected by significantly deep external groundwater and fluvial flooding.

12.2.7. Floodwaters are also believed to have breached and backed up from the River Lambourn to flood St Richards Road and Coachman's Court on or around the 20th of January. Fluvial floodwater was approximately 30cm deep in Coachman's Court and approximately 20cm deep on St Richards Road. This resulted in external fluvial flooding to several properties and internal fluvial flooding to one property along St Richards Road.

12.2.8. Further downstream along the River Lambourn, River Side Lane was also significantly impacted by fluvial flooding for approximately three weeks in January 2024. Flood depths varied across this time; however, it was reported by local residents that vehicular access was not possible for a few of these days. River Side Lane is also a main route for children walking to school, meaning they were at high risk when walking through floodwaters.

12.2.9. From discussions with local residents, it is understood the lane was tarmacked in response to the 2013/14 flood event, however residents have reported concerns of the tarmac beginning to break apart with river water bubbling up from underneath it. Furthermore, the high river levels have encouraged bankside erosion, causing concerns that the lane will be undercut and eventually begin to subside into the River Lambourn. One property along River Side Lane was significantly affected by external fluvial flooding, however no internal flooding has been reported.

12.2.10. To the north of the River Lambourn, approximately eight properties in Glebefields only have access and egress through the back of their properties. In early 2024, these gardens and the alleyway used to access Kiln Road, were affected by fluvial flooding. Therefore, some residents were trapped inside their properties until floodwaters receded. Due to the proximity to the River Lambourn, these levels fluctuated throughout early January, and it was noted during WSP's site visit to Newbury, that the access alleyway was still flooded. Glebefields car park was also affected by flooding, meaning vehicles had to be relocated during flood warnings.

12.2.11. Floodwaters from Newport Road are reported to have flowed past Lambourn Court Care Home and onto Walton Way and Trout Walk. WSP is not aware of any internal flooding as a result of this; however, following discussions with local flood wardens, it is believed external flooding of garages

along Trout Walk may have occurred. During the early months of 2024, drainage along Trout Walk was already overloaded, meaning fluvial flooding exacerbated these issues. Although no internal flooding along Walton Way was reported, two residents are only able to access their properties via River Walk path, which runs parallel to the River Lambourn. This created an issue for safe access and egress during times of high river levels.

12.2.12. One property on Church Road suffered internal groundwater flooding. Several properties with basements along Shaw Road were also affected by internal groundwater flooding up to depths of approximately 600mm. Another property situated along Shaw Road and the River Lambourn was affected by internal groundwater flooding and external fluvial flooding as a result of Spout Ditch overtopping its banks.

12.2.13. Further upstream along the River Lambourn, south facing properties on Dene Way were affected by external fluvial flooding as a result of the River Lambourn overtopping its banks. During WSP's site visit to Newbury, it was reported that flooding began in early January, and it was noted that some properties were still inundated at the time of WSP's visit. Shaw Recreation Park was also flooded twice for approximately three days in January and February. This is also a main route for children walking to school, meaning they were a high risk when walking through floodwaters, specifically in the flooded underpass to the east of Shaw Park.

12.2.14. Finally, following further consultation with local flood wardens, it has been reported that businesses in Hambridge Lane suffered groundwater infiltration into their foul sewage systems for several months. It was also reported that tankering occurred in this area, however WSP have no received further details.

Figure 12-2 – Flooding to the North of Newport Road

12.3 CAUSES

12.3.1. Following WSP's site visit to Newbury, it is understood that flooding was caused by groundwater, fluvial, and sewer sources. The winter of 2023/24 was one of the wettest on record, which served to elevate groundwater levels for prolonged periods of time in areas of West Berkshire. High groundwater in and around Newbury was noted as a significant contributing factor to the flooding experienced. This was exacerbated by significant rainfall during storms Henk, Isha, and Jocelyn in January. As a result, levels in the River Lambourn were higher than the typical range from the 5th of January 2024. These raised levels caused the River Lambourn to overtop its banks which resulted in internal and external flooding.

12.3.2. As a result of high groundwater levels, short periods of rain falling on already saturated ground encouraged repetitive flooding throughout January and February 2024. During WSP's site visit, local flood wardens expressed concerns that high groundwater levels may be damaging the clay pipes and drains in Newbury, leading to inundation, and therefore surcharging of the sewer network on Newport Road and Pike Street.

12.3.3. Further contributing factors to the flooding experienced in Newbury include blockages in the downstream channels of the River Lambourn and the erosion of Spout Ditch. During WSP's site visit, residents expressed concerns of a channel blockage, approximately half a mile downstream of

River Side Lane, which could be preventing high flows from moving downstream and encouraging water storage upstream.

12.3.4. During WSP's site visit, it was noted that the bank between Spout Ditch and the River Lambourn has been eroded, causing the River Lambourn to flow into Spout Ditch. Due to a blocked trash screen downstream of Dene Way, the water cannot flow freely downstream and instead backs up Spout Ditch, leading to the fluvial flooding to gardens along Dene Way.

Figure 12-3 – Flooding to the North of Coachman's Court

12.4 FLOOD DEFENCES / ASSETS

12.4.1. Since WSP's site visit to Newbury, we have been made aware of Shaw Flood Alleviation Scheme which benefits Wellington Close and Cromwell Road. WSP are not aware of any flooding along these roads, so it is assumed the alleviation scheme worked as intended.

12.4.2. Furthermore, the north area of Newbury has several embankment style spatial flood defences including from Shaw Bridge to the confluence with the River Kennet, at the bottom of Dene Way, and at the exit of the Lake in Donnington Grove Hotel and Country Club. It is believed these defences are in a varying state of maintenance and require restoration to allow improved flood resilience, specifically with an allowance for climate change.

12.5 RISK MANAGEMENT AUTHORITIES

Thames Water

12.5.1. During WSP's site visit to Newbury, local residents and flood wardens commented that Thames Water had been tankering on the corner of Pike Street and Newport Road to remove the mix of groundwater, fluvial, and sewer water from the sewer system. Initially 24 hour tankering commenced on the 18th of January, reducing to every other day from the beginning of February. Following further consultation with local flood wardens, it was reported that tankering remained in place until the 20th of July 2024.

12.5.2. A request for information has been sent to Thames Water, however no specific response regarding the 2024 flood event in this area has been received.

12.5.3. Thames Water reported that proactive planned works, such as cleaning blockages in flood prone areas, are carried out each year. Furthermore, in summer months, Thames Water aim to deliver any work that was identified as required in the previous winter period, such as, to address groundwater infiltration or surface water inundation related issues. Investigations are then carried out over the autumn and winter months in catchments known to have issues with groundwater infiltration and surface water inundation. Thames Water reported having started this work in September 2023 after Swindon received the first storm of the season. Thames Water has reported that it will continue to investigate how water is entering the sewer system and collate information to prioritise works based on likelihood of impact and potential consequences.

Environment Agency

12.5.4. During WSP's site visit to Newbury, local residents and flood wardens commented that the Environment Agency were in attendance during the flood event to conduct surveys. The Environment Agency also visited a property affected by internal groundwater flooding, on Church Road, on seven occasions to gather information.

12.5.5. Consultation with the Environment Agency has confirmed that they do not own any flood defences benefiting the Newbury area. Furthermore, the Environment Agency own the Shaw gauge that measures river flows along the River Lambourn. Consultation also confirmed that the Environment Agency has not yet defined the return period of the 2024 flood event.

12.5.6. The following flood alert was in place during the 2024 flood event:

- River Lambourn and its tributaries from Upper Lambourn down to Newbury (061WAF22Lambourn) – In force (04/01/2024 – 05/06/2024)

12.5.7. The following flood warning was in place during the 2024 flood event:

- River Lambourn from Donnington to Newbury (061FWF22LowLamb) – In force: (07/01/2024 – 30/01/2024)

12.5.8. The Environment Agency receive multiple reports of flooding across Newbury during the 2024 flood event. This includes flooding from groundwater, sewer and fluvial sources from River Lambourn across the north of Newbury.

12.5.9. Community Information Officers (CIOs) visited the area of Newbury multiple times from the 4th of January to the 12th of January 2024 to provide advice to the community and gather information on the flooding situation.

12.5.10. Consultation with the Environment Agency has confirmed that there were no specific issues or constraints associated with the River Lambourn within Newbury. Funding has been provided by the Environment Agency for the study carried out by Berkshire County Council in the Clayhill area of Newbury. Furthermore, details of the Thames Valley Flood Scheme have been provided. The scheme, led by the Environment Agency, is investigating the possibility to store water across the Thames catchment. This is likely to include a combination of flood storage and natural flood management currently across approximately 17 locations.

West Berkshire Council

12.5.11. A request for information was sent to West Berkshire Council to detail their response to the 2024 flooding events. With regards to the north area of Newbury, the information received details that Pike Street and Walton Way were closed, however the date of closure is not confirmed as West Berkshire Council were only made aware of the closure on the 15th of January 2024.

12.5.12. In addition to this, representatives of West Berkshire Council visited the Newbury area on the following dates:

- 7th of January 2024
- 9th of January 2024
- 10th of January 2024
- 12th of January 2024
- 15th of January 2024
- 17th of January 2024
- 19th of January 2024
- 23rd of January 2024
- 24th of January 2024
- 26th of January 2024

Royal Berkshire Fire and Rescue Service

12.5.13. As part of the investigation Royal Berkshire Fire and Rescue Service (RBFRS) have been consulted for information. RBFRS reportedly attended one incident in Newbury during Storm Henk however, no further information has been provided.

12.6 RECOMMENDATIONS

Local Residents

12.6.1. Residents should report any highway drainage issues to West Berkshire Council and any foul and surface water sewer issues to Thames Water as soon as they become apparent. In addition, any issues with river maintenance, such as debris build up on the River Lambourn, should be communicated as soon as possible to the Environment Agency.

12.6.2. Residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring and sump pumps or the tanking the property to improve their premises' resilience during times of high groundwater.

12.6.3. Those affected by fluvial flooding may benefit from the installation of flood barriers or doors, if they are not already in use. Furthermore, general property level resilience and resistance measures should be considered, such as raising plug sockets, and the use of air brick covers.

West Berkshire Council

12.6.4. During WSP's site visit to Newbury, it was noted that the area is complexly hydraulically connected and is at risk from flooding from a variety of sources. Therefore, it is recommended that West Berkshire Council could commission a flood study to identify these sources and gain an understanding of the interaction between them.

12.6.5. During WSP's site visit to Newbury, it was noted that a blocked trash screen along Spout Ditch is obstructing flow from moving downstream. It is recommended that West Berkshire Council remove this blockage in stages during times of lower flows to ensure that the backed-up flows to not suddenly inundate further downstream and cause flooding. A maintenance schedule and flow monitor could then be put in place to ensure blockages are easily identified and regularly cleared in Spout Ditch.

12.6.6. West Berkshire Council also could consider the implementation of a raised footpath through Shaw Park, for use by members of the public, including school children, to ensure safe passage when the floodplain is inundated. However, this should be appropriately modelled and investigated prior to installation to ensure there is no loss of floodplain storage or impact on existing flow routes.

12.6.7. West Berkshire Council could aid residents along River Side Lane and work with the agreed riparian owner(s) to implement flood mitigation measures. These measures could include the use of Nature Based Solutions (NBS) in the form of bank stabilisation.

12.6.8. Furthermore, it has been reported that the drains in Glebefields car park appear to be unmaintained. It is not known who is responsible for the maintenance of this drainage so West Berkshire Council could work with residents to discover ownership and ensure a maintenance schedule is implemented.

Environment Agency

12.6.9. During WSP's site visit to Newbury, affected residents reported that the Environment Agency's flood alerts and warnings were issued too late, however no information or verification has been provided by the Environment Agency in relation to this. Therefore, the Environment Agency should review the levels at which alerts and warnings are issued to the Shaw area to ensure sufficient time is provided to residents to allow flood plans to be followed and preparations put in place.

12.6.10. The Environment Agency could consider the implementation of riverbank protection in the form of NBS along the River Lambourn. This could include taking the trees and natural debris out of the river and using it to line the river as a form of bank reinforcement. Specifically, bank reinforcement could be considered along River Side Lane to prevent high flows from undercutting the lane.

12.6.11. Additionally, Newbury may benefit from the installation of boreholes used for groundwater monitoring and the preparation of a groundwater flood plan to help inform flood risk, specifically in the area near Newport Road and the River Lambourn.

12.6.12. During WSP's site visit to Newbury, it was noted that there is no official appointed individual who is responsible for the operation of sluice gates along the River Lambourn. It may prove beneficial for the Environment Agency to provide specific sluice gate operation guidance to riparian owners, who

are already undertaking sluice gate operation along the River Lambourn, to ensure that gates are correctly operated, thereby reducing the risk of flooding.

12.6.13. Finally, the Environment Agency could consider determining the viability of a flood alleviation scheme upstream of the River Lambourn from Newbury. There may be the potential to divert flow from the River Lambourn into fields as a form of temporary storage and controlled release. However, further data needs to be collected to ascertain the potential benefits and options for the provision of practicable solutions in addition to its financial and technical feasibility.

Thames Water

12.6.14. It is considered that Thames Water could carry out a CCTV survey to investigate the capacity and condition of the sewer network, specifically along Newport Road and Pike Street. Once it is understood what is causing inundation of the sewer system, remedial works could be undertaken to prevent it. Potential works could include the relining of the sewer network using new technologies and the sealing of manholes within the area to reduce flood risk.

12.6.15. During WSP's site visit, local residents expressed concerns that the pumping station in Shaw Park has not been upgraded despite significant housing developments at Donnington Heights. It is recommended that an assessment of its capacity should be undertaken, if not already done.

Parish Council

12.6.16. The Parish Council should continue to support local flood wardens in Newbury and provide education and communication to local residents on the following:

- How to monitor river levels and flows.
- How to sign up to the Environment Agency flood alerts and warnings.
- How to report concerns to the relevant flood risk management authorities.
- Guidance on effective property level protection.
- What to do and when, in preparation for a flood.
- Where to find support following a flood event.

12.7 SUMMARY

12.7.1. The fluvial and groundwater flooding generally occurred in areas categorised as Flood Zone 2 and Flood Zone 3, according to the Environment Agency's flood maps (refer to Appendix E.6). It is also noted that significant portions of the sewer flooding occurred in an area of high surface water flood risk. The flooding reported within this investigation all occurred within the area designated as the Environment Agency's Newbury Flood Risk Area for both groundwater and surface water. It is also noted that some flooding occurred across critical drainage areas, including River Walk and Walton Way.

12.7.2. Table 12-1 summarises the flooding experienced in Newbury (North) as a result of Storms Henk, Isha, and Jocelyn. Refer to Appendix A.6 which details the locations of the flooded areas.

Table 12-1 – Summary of Flooding in Newbury (North)

Total No. of Properties Flooded	Source of Flooding	No. of Properties Flooded Internally	No. of Properties Flooded Externally*	No. of Road Closures
51	Fluvial, Groundwater & Sewer	4	47	2 – Walton Way & Pike Street

*Excluding properties recorded as having flooded internally.

12.7.3. West Berkshire Council, Thames Water, and the Environment Agency each had flood management responsibilities related to this event due to the multiple flood sources and assets involved. West Berkshire Council attended the area during the flooding to monitor the situation and enforce road closures where required. Thames Water were also in regular attendance to carry out ongoing remedial works. Recommendations have been identified to help manage the impact of any future flooding events.

13 PANGBOURNE

13.1 LOCATION

13.1.1. The village of Pangbourne is located in the east of West Berkshire and is located along the River Thames; upstream of Purley on Thames and downstream of Streatley. The village has a National Grid Reference of 463491, 176517 and is shown in Figure 13-1.

13.1.2. The village is situated on the south side of the River Thames in a topographical low point. Other watercourses in Pangbourne include the River Pang and Sulham Brook.

13.1.3. Flooding has previously occurred in Pangbourne during the following events:

- 1947
- 1992
- 2000/01
- 2007
- 2013/14

13.1.4. During the winter 2013/14 flood event, approximately four properties were flooded internally and approximately 20 properties were flooded externally across Pangbourne. Similar to the 2024 flood event, flooding in Pangbourne was the result of fluvial sources from the River Thames, Sulham Brook, and the River Pang. Historic flood outlines are mapped within Appendix E.10.

Figure 13-1 – Pangbourne Location Map

13.2 FLOODING

13.2.1. WSP conducted a site visit to Pangbourne on the 5th of April 2024 and from this it is understood that the first signs of flooding began on the 4th of January 2024. From questionnaire responses and interviews with the Pangbourne flood warden and affected residents, it is understood that the flooding experienced in 2024 was the result of fluvial and groundwater sources.

13.2.2. The flooding generally occurred in areas categorised as Flood Zone 2 and Flood Zone 3, according to the Environment Agency's flood maps (refer to Appendix E.10).

13.2.3. It is understood that four properties in Pangbourne were affected by internal flooding, of varying degrees, in early 2024. During WSP's site visit, the owners of each affected property were interviewed. Two of the affected properties were residential and two were commercial.

13.2.4. One residential property was affected internally by groundwater flooding, likely influenced by high river levels, which started on the 6th of January and lasted approximately three days. The flood depth reached approximately 75mm. The property was also affected by external fluvial flooding from the River Thames; however, the use of flood sacks prevented overland flows from entering the property.

13.2.5. No reports of sewer flooding were received during WSP's site visit to Pangbourne, however one property owner reported having blocked drains approximately three weeks after the flooding had occurred.

13.2.6. Another affected residential property initially experienced internal groundwater flooding before river water entered the back of the property, causing internal fluvial flooding. It is believed internal flood depths peaked around the 12th/13th of January, having reached a depth of approximately 200mm, before subsiding. It is also believed that some properties along Thames Avenue may have been affected by external fluvial flooding, however no further information has been provided and no reports of this were made in the questionnaire responses.

13.2.7. One commercial property was affected internally by fluvial flooding, despite having flood gates installed. From WSP's site visit to Pangbourne, it is understood that the River Thames overtopped its banks, which subsequently caused the flooding of the property's car park. At the beginning of January, the property was flooded internally, with flood depths ranging between 200mm and 1m across the property for approximately one week.

13.2.8. Another affected commercial property was flooded internally from both groundwater and fluvial sources for approximately four weeks from the 4th of January. Initially, external fluvial flooding began in the car park of the property and groundwater flooding affected the property internally. However, river levels continued rising until the patio at the back of the property was flooded and water flowed into the property to add to existing floodwaters. By Saturday 6th of January, flood depths had reached approximately 50cm and flows of floodwaters had become dangerously strong, so residents were evacuated to hotels.

13.2.9. During WSP's site visit, the local flood warden also provided details of flooding that affected roads across Pangbourne. This included flooding that was impassable on Mill Lane, between Mill Corner and Oaklands Farm in Tidmarsh. The Wharf was also affected by flooding as a result of high river levels in the River Thames backing up along the River Pang, causing it to overtop into the road. A medical surgery car park was flooded directly from the River Thames, and, as a result, the surgery had to be moved elsewhere for approximately three days.

Figure 13-2 – Flooding at Shooters Hill

13.3 CAUSES

13.3.1. Following WSP's site visit to Pangbourne, it is understood that flooding was caused by groundwater and fluvial sources. The winter of 2023/24 has been one of the wettest on record, which served to elevate groundwater levels for prolonged periods of time in areas of West Berkshire.

13.3.2. High groundwater in and around Pangbourne was noted as a significant contributing factor to the flooding experienced. This was exacerbated by significant rainfall during storms Henk, Isha, and Jocelyn in January. As a result, throughout January and February, levels in the River Thames rose higher than the typical range. These raised levels caused the River Thames to overtop its banks and back up the River Pang.

13.3.3. Another contributing factor to the flooding in Pangbourne may have been the build-up of debris on Whitchurch Weir. Residents reported that high river levels and flows encouraged the transportation of sediments and debris from upstream, which were then deposited on the weir, creating an obstruction to flows. As a result, water was prevented from flowing as efficiently as possible downstream. During WSP's site visit, it was also noted that there is currently no lock keeper for Whitchurch Lock. This meant there was reduced communication to residents on river levels and warnings of flooding, as there has been during previous flood events.

13.3.4. Flooding on Mill Lane was likely caused by the lack of maintenance of the grips along the road. During WSP's site visit to Pangbourne, it was noted that the grips had silted up and were filled with sediment, meaning they were no longer effectively draining runoff from the road.

13.3.5. One property also experienced indirect flooding from burst pipes after turning off gas, electricity, and water supplies when floodwaters first entered the property. This was then followed by a period of cold weather which caused the pipes to freeze and subsequently burst when the supplies were turned back on.

13.3.6. It was also noted that there is a blocked or damaged road gully along Shooters Hill by The Swan Pub, reducing drainage of surface water. This caused runoff to bypass the gully and flow directly into the pub car park. Although it was not the main cause of flooding, it worsened the flood depths experienced in January 2024.

Figure 13-3 – Flooding at Whitchurch Road

13.4 FLOOD DEFENCES / ASSETS

13.4.1. Pangbourne currently benefits from a flood alleviation scheme which was implemented in response to the 2013/14 flood event. The scheme involves the use of a spillway that allows the Sulham Brook to overspill into a field located along Purley Rise Road. It was reported that, during the 2024 flood event, no internal flooding was caused as a direct result of the River Pang or the Sulham Brook and therefore it is assumed the flood alleviation scheme was effective in reducing flood risk.

13.4.2. Briars Close off the Reading Road also benefits from flood protection barrier around the rear of the properties and no reports of flooding were received from these properties.

13.5 RISK MANAGEMENT AUTHORITIES

Thames Water

13.5.1. A request for information has been sent to Thames Water, however no specific response regarding the 2024 flood event in this area has been received.

13.5.2. Thames Water reported that proactive planned works, such as cleaning blockages in flood prone areas, are carried out each year. Furthermore, in summer months, Thames Water aim to deliver any work that was identified as required in the previous winter period, such as, to address groundwater infiltration or surface water inundation related issues. Investigations are then carried out over the autumn and winter months in catchments known to have issues with groundwater infiltration and surface water inundation. Thames Water reported having started this work in September 2023 after Swindon received the first storm of the season. Thames Water has reported that it will continue to investigate how water is entering the sewer system and collate information to prioritise works based on likelihood of impact and potential consequences.

Environment Agency

13.5.3. During WSP's site visit, local residents reported that the Environment Agency cleared debris from the top of the weir on the River Thames after the first set of high river levels. However, at the time of WSP's site visit, river levels had risen again, and we understand that the Environment Agency were unable to clear anymore debris because of health and safety risks.

13.5.4. Consultation with the Environment Agency has confirmed that they do not own any specific flood defences benefiting the Pangbourne area however, the River Thames has weirs which are primarily used for navigation purposes but do have an effect on river flows and therefore flood risk. These are operated by trained lock and weir keepers in accordance with procedures to maintain water levels for navigation.

13.5.5. The Environment Agency own the Pangbourne gauge that measures river flows and the Whitchurch Lock that measures river levels along the River Thames. However, due to a reset on a site visit in March the data for the Whitchurch Lock is estimated and therefore unreliable. Consultation also confirmed that the Environment Agency has not yet defined the return period of the 2024 flood event.

13.5.6. The following flood alerts were in place during the 2024 flood event:

- River Pang from East Ilsley to Pangbourne and Sulham Brook (061WAF21PangSulm) – In force: 04/01/2024 – 18/02/2024 and between 31/12/2023 – 02/06/2024
- River Thames from Pangbourne to Purley (061WAF23PrlyPang) – In force: 01/01/2024 – 14/01/2024

13.5.7. The following flood warning was in place during the 2024 flood event:

- River Thames at Pangbourne and Whitchurch (061FWF23PngWitch) – In force: 05/01/2024 – 14/01/2024

13.5.8. The Environment Agency received five reports of flooding across Pangbourne during the 2024 flood event. This includes internal fluvial flooding from the River Thames of two properties and external fluvial flooding from the River Thames of three properties. Community Information Officers (CIOs) visited Pangbourne on the 4th of January to the 5th of January 2024 to provide advice to the community and gather information on the flooding situation.

13.5.9. Consultation with the Environment Agency has confirmed that there were no specific issues or constraints associated with the River Thames within Pangbourne and that there are no plans to carry out improvement works. Furthermore, details of the Thames Valley Flood Scheme have been provided. The scheme, led by the Environment Agency, is investigating the possibility to store water across the Thames catchment. This is likely to include a combination of flood storage and natural flood management currently across approximately 17 locations.

West Berkshire Council

13.5.10. A request for information was sent to West Berkshire Council to detail their response to the 2024 flooding events. The information confirmed that no road closures were put in place in early 2024.

13.5.11. Representatives of West Berkshire Council visited the Pangbourne area on the following dates:

- 7th of January 2024
- 9th of January 2024
- 12th of January 2024
- 15th of January 2024
- 17th of January 2024
- 19th of January 2024
- 23rd of January 2024
- 25th of January 2024

Royal Berkshire Fire and Rescue Service

13.5.12. As part of the investigation Royal Berkshire Fire and Rescue Service (RBFRS) have been consulted for information. RBFRS reportedly did not attend any incidents in relation to the 2024 flood event in this area.

Parish Council

13.5.13. During WSP's site visit to Pangbourne, local residents reported that the Parish Council had distributed flood sacks.

13.6 RECOMMENDATIONS

Local Residents

13.6.1. Residents should report any highway drainage issues to West Berkshire Council as soon as they become apparent. In addition, any issues with river maintenance, such as debris build up on the weir on the River Thames, should be communicated as soon as possible to the Environment Agency.

13.6.2. Residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring and sump pumps or the tanking the property to increase the resilience of their premises, especially basements, during times of high groundwater.

13.6.3. Those affected by fluvial flooding may benefit from the installation of flood barriers or doors. Furthermore, some properties that are located directly on the bank of the River Thames, may benefit from the installation of a flood wall to provide better flood protection during times of high flows. General property level resilience and resistance measures should be considered, such as raising plug sockets.

13.6.4. Owners of properties with outfalls discharging into the River Thames should consider installing flap valves to prevent backing up of river water. Another option is the use of temporary caps that can be used to cover the outfalls during times of high river levels.

West Berkshire Council

13.6.5. It is recommended that WBC should investigate the road gully located at the entrance to The Swan Pub. During WSP's site visit to Pangbourne, it was noted that the road gully was blocked, thereby increasing the risk of road runoff flowing directly into the pub carpark. Remedial works should be carried out to prevent the gully from becoming blocked/damaged again and reduce flood risk.

13.6.6. West Berkshire Council should review their current highway drainage maintenance schedule and, where appropriate, increase the frequency of inspections in areas at risk of flooding.

13.6.7. A schedule should be put in place for the maintenance of drainage grips across Pangbourne. If this is already in place, the schedule should be reviewed, with grips along Mill Lane and the River Pang highlighted as priority locations for inspection.

13.6.8. Another recommendation is a consideration of whether there is sufficient road drainage along Mill Lane, because during WSP's site visit it was noted that there appears to be a lack of drainage features.

Environment Agency

13.6.9. A schedule should be put in place for the regular inspection and removal of debris, if necessary, from Whitchurch Weir to prevent flows backing up and flooding upstream. If this is already in place, then the schedule should be updated to allow for more frequent inspections, specifically upon receipt of forecasts of heavy rain.

13.6.10. Another recommendation is for the employment of a new lock keeper, since WSP was made aware on their site visit that the role is currently vacant. The new lock keeper would be responsible for communication of river levels and flood risks to local residents.

Parish Council

13.6.11. The Parish Council should continue to support local flood wardens in Pangbourne and provide education and communication to local residents on the following:

- How to monitor river levels and flows;
- How to sign up to the Environment Agency flood alerts and warnings;
- How to report concerns to the relevant flood risk management authorities;
- Guidance on effective property flood resilience measures;
- What to do and when, in preparation for a flood; and
- Where to find support following a flood event.

13.7 SUMMARY

13.7.1. The flooding generally occurred in areas categorised as Flood Zone 2 and Flood Zone 3, according to the Environment Agency's flood maps (refer to Appendix E.10).

13.7.2. Table 13-1 summarises the flooding experienced in Pangbourne as a result of Storms Henk, Isha, and Jocelyn. Refer to Appendix A.10 which details the locations of the flooded areas.

Table 13-1 – Summary of Flooding in Pangbourne

Total No. of Properties Flooded	Source of Flooding	No. of Properties Flooded Internally	No. of Properties Flooded Externally*	No. of Road Closures
4	Groundwater & Fluvial.	4	Unknown	0

**Excluding properties recorded as having flooded internally.*

13.7.3. West Berkshire Council and the Environment Agency each had flood management responsibilities relating to this event due to the multiple flood sources and assets involved. West Berkshire Council attended the area during the flooding to monitor the situation and enforce road closures where required. Recommendations have been made to help manage the effect of any future flooding events.

14 PURLEY ON THAMES

14.1 LOCATION

14.1.1. The village of Purley on Thames is located in the east of West Berkshire and is situated downstream along the River Thames from Pangbourne. The village has a National Grid Reference of 466653, 176284 and is shown in Figure 14-1.

14.1.2. The village is situated on the south side of the River Thames. Another waterbody affecting flood risk in Purley on Thames is Scraces Farm Stream.

14.1.3. The area most affected by flooding in early 2024 is referred to as Lower Purley, which is the residential area north of St Mary's Church. In comparison to the rest of Purley on Thames, Lower Purley is located in a low point.

14.1.4. Flooding has previously occurred in Purley on Thames during the following events:

- 2000/01
- 2003
- 2013/14

14.1.5. During the winter 2013/14 flood event, approximately 29 properties were flooded internally and approximately 27 properties were flooded externally across Purley on Thames. Similar to the 2024 flood event, flooding in Purley on Thames was the result of groundwater, sewer, and fluvial sources from the River Thames. Historic flood outlines are mapped within Appendix E.8.

Figure 14-1 – Purley on Thames Location Map

Whitchurch Hill
Collins End
Path Hill
Whitchurch-on-Thames
Pangbourne
Purley on Thames
Mapledurham
Tidmarsh
Sulham
Tilehurst
Cane End
Kidmore End
Nuney Green
Trench Green
Chazey Heath
Thames (Upper)
River Thames
Scraces Farm Stream
Whitchurch Hill
Knowsley Road
Long Lane
Catsgrove Way
Overdown Road
Oak Tree Road
Kentwood Hill
Deacon Way
Portman Road
Curzon Street
Norcot Road
Armour Hill
Dark Lane
Chapel Hill
Little Heath Road
Little Heath
City Road
Churchend
Dee Road
Lyk Road
Cockney Hill
Nabbs Hill
North Street
Hardwick Road
Westbury Lane
Jacksom Lane
Chazey Road
The Warren
Gravel Hill
Rose Farm
Sandy Hill
Park Farm
New Farm
New Lodge
Pike Shaw
Harry Jaw's Wood
Deacon Copse
Moor Copse
Alder Copse
Further Moor Copse
Home Farm
The Gatehouse
Old Rectory Cottage
Oakwood Farm
Sulham Wood
Vicarage Wood
Barefoots Copse
Cornwell Copse
Park Wood
Moor Copse
Harescroft Copse
Horsemoor Copse
Ashen Copse
Coltmoor Cottages
Boxgrove Wood
Mount Skyver Wood
Harefield Copse
Withy Copse
Oliver's Copse
Churchend Copse
Malpas Farm
Chalkpit Farm
Horns Copse
Lone Barn
Maidenhatch Brook
Hogmoor Copse
Alder Pightle
Sulham Brook
Pang
Thatched Cottage
Whitehill Plantation
Holmes's Wood
Ashmoor Wood
Long Ground Plantation
Hangings Grove
Sounding House
The Grove
Straw Hall
Hardwick House
Bozedown House
Boze Down
West Lodges
Coombe Park
Foxglove Manor
Firhill Plantation
Parkfield Clumps
Gravels Belt
Hartslock Wood
Beech Farm
Coombe End Belt
Kessells Copse
Upper Croft Shaw
Common Covert
Copyhold Farm
Haw Farm
Withy Shaw
Nuney Wood
Slip Shaw
Cross Lanes
Whittles Farm
Bottom Farm
Pit Close Plantation
Three Corner Shaw
Stirrups
Hodmore Farm
Hodmore Farm Cottage
Huntley Wood
Roundabout Plantation
Broadstreet Shaw
Ridewood Shaw
Longcross Cottage
Page's Shaw
Greendene Farm
Littleheath Shaw
Green Dean Hill Tankers Table Farm
Tankers Table Wood
Madge Gray's Wood
Brownshill Shaw
Chalkpit Shaw
Nuney Green Walk Shaw
Oakridge Farm
Coldnorton Shaw
Hazelmoorlane Shaw
Hazelmoor Lane
Long Copse
Bardolph's Wood
Peaked Skarnes Plantation
Newell's Wood
Green Dean Plantations
Hawhill Wood
Little College Wood
Collegewood Farm
May Lodge
Bensgrove Farm
Goring Heath Poultry Farm
Great Oaks
Duff's Plantation
Coldharbour Farm
Deadfields Clump
Stapnalls Farm
Upper Gatehampton Farm
Hattonhill Shaw
Coombe End Cottages
Lower Hartslock Wood
Baker's Shaw
Matrons Cottage
Holme Copse
Highfield Shaw
Meadow Cottage
Meandown Copse
Horsham Wood
Northridge Bottom Plantation
Northridgehill Shaw
Wood Land Manor
Collingwood
Collier's Plantation
Bowram's Shaw
Croft Shaw
Wellfield Grove
Gregory's Hill
Long Plantation
Spindleberry Barn
Stile Acre Shaw
Sheep Croft Plantation
Southway Plantation
Mayden Farm
Sawyer's Wood
Furtherfield Shaw
Oxley's Shaw
Oxley's Copse
Alder Pightle
Lower Purley Bridge
Purley Bridge
Purley Lane
Purley Rise
Purley Hill
Purley Park
Purley Park Rise
Purley Park Parade
Purley Park Close
Purley Park Avenue
Purley Park Gardens
Purley Park Drive
Purley Park Court
Purley Park Mews
Purley Park Terrace
Purley Park Square
Purley Park Crescent
Purley Park Road
Purley Park Lane

14.2.5. It was reported that properties were flooded internally for up to two weeks, although it was noted that some external flooding was still present during WSP's site visit on the 14th of March 2024. Flood wardens reported that properties located on River Gardens were at highest risk of flooding due to being situated along the bank of the River Thames.

14.2.6. Most significantly, fluvial flooding affected River Gardens, where the flow of water and uneven ground became extremely dangerous. Fluvial flooding also affected Chestnut Grove, Wintringham Way, Blount's Meadow field, The Short, St Marys Avenue, Brading Way, and Bucknell Meadow.

14.2.7. Groundwater flooding affected Calleys Alley, Colyton Way, The Short, and Blount's Meadow field.

14.2.8. It is understood that sewer flooding affected St Marys Avenue, between Primrose Close and Chiltern View. During the highest levels, flooding from Mapledurham Drive also flowed to the top end of St Marys Avenue.

14.2.9. Flood wardens reported that it was difficult to differentiate whether road flooding was caused by fluvial or groundwater sources, however in many cases it is believed fluvial flooding merged with areas of groundwater flooding.

Figure 14-2 – Flooding at Purley on Thames

14.3 CAUSES

14.3.1. Following WSP's site visit to Purley on Thames, it is understood that flooding was caused by groundwater, fluvial, and sewer sources. The winter of 2023/24 has been one of the wettest on record, which has served to elevate groundwater levels for prolonged periods of time in areas of West Berkshire. High groundwater in and around Purley on Thames was noted as a significant contributing factor to the flooding experienced. This was exacerbated by significant rainfall during storms Henk, Isha, and Jocelyn in January.

14.3.2. As a result, throughout January and February, levels in the River Thames spiked significantly higher than the typical range. Flood wardens reported that peak flood levels were approximately 2m above normal summer level; the highest recorded since 1947. These raised levels enabled the River Thames to overtop its banks and flood the low-lying area of Lower Purely, notably effecting garages that have been converted into living accommodation.

14.3.3. Another significant contributing factor in the 2024 flood event was an overburdened sewer system with reasons likely to be infiltration by groundwater and extreme rainfall.

Figure 14-3 – Flooding at Blount's Meadow

14.4 FLOOD DEFENCES / ASSETS

14.4.1. Purley on Thames currently benefits from a flood alleviation scheme which was implemented in response to the 2013/14 flood event. An approximately 1.5m high bund was built in Blount's Meadow to prevent fluvial floodwater from entering the properties along Wintringham Way. Flood wardens reported that usually the bund is sufficient to prevent fluvial flooding from affecting Wintringham Way however, during the 2024 flood event, river levels were higher than the bund. As a result, two properties experienced internal flooding, ten properties experienced garage flooding, and twelve properties experienced external garden flooding.

14.4.2. Furthermore, it is believed that although the bund helps to reduce the risk of flooding to properties on Wintringham Way, the water is diverted around its western extent and eventually back down Wintringham Way where it floods the road.

14.4.3. 34 Properties in Purley have benefitted from a Defra funded, WBC promoted and delivered property level protection scheme. The scheme was delivered in 2020, and 34 properties were included.

14.4.4. As a result of the 2013/14 flood event, it is understood that a temporary A-Frame flood barrier was proposed to be used by the Environment Agency to provide fluvial flood protection to Lower Purley. However, correspondence from the Environment Agency and local flood wardens detailed that following a national review of temporary flood barrier safety, a number of insurmountable safety issues were identified, leading to the withdrawal of plans in Purley on Thames.

14.5 RISK MANAGEMENT AUTHORITIES

Thames Water

14.5.1. A request for information has been sent to Thames Water, however no specific response regarding the 2024 flood event in this area has been received.

14.5.2. Thames Water reported that proactive planned works, such as cleaning blockages in flood prone areas, are carried out each year. Furthermore, in summer months, Thames Water aim to deliver any work that was identified as required in the previous winter period, such as, to address groundwater infiltration or surface water inundation related issues. Investigations are then carried out over the autumn and winter months in catchments known to have issues with groundwater infiltration and surface water inundation. Thames Water reported having started this work in September 2023 after Swindon received the first storm of the season. Thames Water has reported that it will continue to investigate how water is entering the sewer system and collate information to prioritise works based on likelihood of impact and potential consequences.

Environment Agency

14.5.3. A request for information has been sent to the Environment Agency, however no response has been received at this time.

14.5.4. During WSP's site visit to Purley on Thames, local flood wardens reported that representatives of the Environment Agency visited Purley on Thames two days after the flooding started, to pump water from the road gullies on Wintringham Way down to the river.

14.5.5. In addition to this, flood wardens reported that flood alerts were put in place on the following dates:

- 1st January 2024
- 9th February 2024

- 13th March 2024

14.5.6. And flood warnings were issued on the following dates:

- 3rd of January 2024 – 13th January 2024
- 10th of February 2024 – 15th of February 2024
- 21st of February 2024 – 29th of February 2024

14.5.7. During WSP's site visit, local residents reported that the Environment Agency cleared debris from the top of the weir on the River Thames after the first set of high river levels. However, at the time of WSP's site visit, river levels had risen again, and we understand that the Environment Agency were unable to clear anymore debris because of health and safety risks.

14.5.8. Consultation with the Environment Agency has confirmed the ownership of a flood bund behind Wintringham Way (approximately SU6684976381) that was installed after the 2013/14 flood event. Furthermore, in January 2024, the Environment Agency deployed three pumps which operated in Purley on Thames until property flood risk reduced.

14.5.9. The Environment Agency own the Mapledurham Lock gauge that measures river levels however, there is no gauge in the area to measure river flows. The Environment Agency reported that, weirs along the River Thames are adjusted gradually in response to changes in flows, to maintain levels within a range that allows for navigation. In periods of high river flow, and in advance of any significant flooding, the weirs are fully opened so that water is not held unnecessarily. Consultation also confirmed that the Environment Agency has not yet defined the return period of the 2024 flood event.

14.5.10. The following flood alert was in place during the 2024 flood event:

- River Thames from Pangbourne to Purley (061WAF23PrlyPang) – In force: 01/01/2024 – 14/01/2024

14.5.11. The following flood warning was in place during the 2024 flood event:

- River Thames at Purley Village (061FWF23Purley) – In force: 03/01/2024 – 13/01/2024

14.5.12. The Environment Agency received 12 reports of flooding across Purley on Thames during the 2024 flood event. This includes internal fluvial flooding from the River Thames of two properties and external fluvial flooding from the River Thames of two properties. Furthermore, six properties reported external flooding from unknown sources. Community Information Officers (CIOs) visited Purley on Thames on multiple days across January 2024 to provide advice to the community and gather information on the flooding situation.

14.5.13. Consultation with the Environment Agency has confirmed that there were no specific issues or constraints associated with the River Thames within Purley on Thames and that there are no plans to carry out improvement works. Furthermore, details of the Thames Valley Flood Scheme have been provided. The scheme, led by the Environment Agency, is investigating the possibility to store water across the Thames catchment. This is likely to include a combination of flood storage and natural flood management currently across approximately 17 locations.

West Berkshire Council

14.5.14. A request for information was sent to West Berkshire Council to detail their response to the 2024 flooding events. The information received shows that three road closures were put in place as a result of flooding. St Marys Avenue, Wintringham Way, and Chestnut Grove were all closed from the

5th of January 2024, until the 13th of January 2023. Local flood wardens have reported that Colyton Way and Brading Way were also closed as a result of flooding.

14.5.15. In addition to this, representatives of West Berkshire Council visited the Purley on Thames area on the 7th of January 2024 and 11th of January 2024.

Royal Berkshire Fire and Rescue Service

14.5.16. As part of the investigation Royal Berkshire Fire and Rescue Service (RBFRS) have been consulted for information. RBFRS reportedly did not attend any incidents in relation to the 2024 flood event in this area.

14.6 RECOMMENDATIONS

Local Residents

14.6.1. Residents should report any highway drainage issues to West Berkshire Council and any foul and surface water sewer issues to Thames Water as soon as they become apparent.

14.6.2. Residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring and sump pumps or tanking the property to give their properties increased resilience from flooding during times of high groundwater in addition to other property flood Resilient measures.

14.6.3. Those affected by fluvial flooding may benefit from the installation of flood barriers or doors, if not already in use. General property level resilience and resistance measures should be considered, such as raising plug sockets.

Environment Agency

14.6.4. Whilst it is recognised that the flood alleviation bund in Blount's Meadow protected properties in Wintringham Way it is recommended that the Environment Agency consider reviewing and potentially enhancing the design of the bund, either by raising it and / or extending it to prevent it being overtopped and / or bypassed, thereby providing greater flood protection.

Thames Water

14.6.5. It is recommended that Thames Water could carry out a CCTV survey to investigate the capacity and condition of the sewer network in Purley on Thames. Once it is understood what is causing the excessive inundation of the sewer system, remedial works could be considered to mitigate it, with sewers in higher flood risk areas being prioritised. Potential works could include the relining of the sewer network using new technologies and the sealing of manholes to prevent surcharging.

Parish Council

14.6.6. The Parish Council should continue to support local flood wardens in Purley on Thames and provide education and communication to local residents on the following:

- How to monitor river levels and flows.
- How to sign up to the Environment Agency flood alerts and warnings.
- How to report concerns to the relevant flood risk management authorities.
- Guidance on effective property level protection.
- What to do and when, in preparation for a flood.

- Where to find support following a flood event.

14.7 SUMMARY

14.7.1. The flooding generally occurred in areas categorised as Flood Zone 2 and Flood Zone 3, according to the Environment Agency's flood maps (refer to Appendix E.8).

14.7.2. Table 14-1 summarises the flooding experienced in Purley on Thames as a result of Storms Henk, Isha, and Jocelyn. Refer to Appendix A.8 which details the locations of the flooded areas.

Table 14-1 – Summary of Flooding in Purley on Thames

Total No. of Properties Flooded	Source of Flooding	No. of Properties Flooded Internally	No. of Properties Flooded Externally*	No. of Road Closures
75	Groundwater, Fluvial & Sewer.	25	50	5 – St Marys Avenue, Wintringham Way, Chestnut Grove, Colyton Way, and Brading Way.

**Excluding properties recorded as having flooded internally.*

14.7.3. West Berkshire Council, Thames Water, and the Environment Agency each had flood management responsibilities relating to this event due to the multiple flood sources and assets involved. West Berkshire Council attended multiple times during the flooding to monitor the situation and enforce road closures where required. Recommendations have been identified to help manage the impact of any future flooding events.

15 STREATLEY

15.1 LOCATION

15.1.1. The village of Streatley is located in the north of West Berkshire and is situated upstream from Pangbourne on the River Thames. The village has a National Grid Reference of 459319, 180770 and is shown in Figure 15-1.

15.1.2. The village is situated on the west side of the River Thames. The area most significantly affected by flooding in early 2024 is Cleeve Court, which is situated in a topographical low point. To the west of Streatley, steep topography encourages surface water runoff into the village.

15.1.3. Flooding has previously occurred in Streatley during the following events:

- 2000/01
- 2003
- 2007
- 2012/13
- 2013/14

15.1.4. During the winter 2013/14 flood event, approximately 12 properties were flooded internally and approximately 14 properties were flooded externally across Streatley. Similar to the 2024 flood event, flooding the result of fluvial (River Thames), groundwater, sewer, and surface water sources. Historic flood outlines are mapped within Appendix E.7.

Figure 15-1 – Streatley Location Map

15.2 FLOODING

15.2.1. WSP conducted a site visit to Streatley on the 7th of March 2024 and from this it is understood flooding issues began at the end of December 2023. It is believed, multiple sources contributed to the flooding experienced in early 2024, including fluvial, groundwater, surface water, and sewer. The most significantly affected area is understood to have been land in between Cleeve Lock and Goring Lock, where the River Thames overtopped its banks. This led to a mixture of fluvial flooding and groundwater flooding where springs arose in the agricultural fields to the north of Cleeve Court Road. As a result, residents had to move vehicles to higher ground because flood depths were too deep for safe vehicular access.

15.2.2. From questionnaire responses and interviews with the Streatley flood warden and affected residents, it is understood that approximately 6 properties were flooded internally in early 2024. Approximately 4 properties were affected by internal groundwater flooding, including both residential and commercial. This included The Swan Hotel and the basement of St Mary's Church, which is used by local flood wardens for storage of flood equipment, such as sandbags. The Swan Hotel reported being flooded for approximately 15 days from the 5th of January, with flood depths reaching approximately 1m in the lower levels of the property and approximately 10cm in the higher levels of

the property. The Swan Hotel was also affected by fluvial and surface water flooding as a result of runoff from the high street, resulting in a loss of trading. Surface water runoff was also reported on Streatley Hill, which created a current of debris-filled floodwaters. During WSP's site visit, one resident reported being affected by internal groundwater flooding on three separate occasions, including the 5th of January, the 11th of February, and the 15th of February.

15.2.3. It is understood that several properties in Cleeve Court suffered internal sewer flooding, as a result of sewage coming up through shower drains. It is believed that the properties in Cleeve Court are fitted with non-return valves, however despite this, at least 2 (possibly 3) properties were still impacted by sewage backflow. In addition to this, all 11 properties in Cleeve Court and 3 properties along Cleeve Court Road, were affected by external fluvial flooding from the River Thames. During WSP's site visit to Streatley, residents reported that the 2024 flood depths were deeper than experienced in previous flood events. It is understood that maximum flood depths in Streatley reached approximately 1m in the gardens of properties located along Cleeve Court Road.

Figure 15-2 – Flooding at Cleeve Court

15.3 CAUSES

15.3.1. Following WSP's site visit to Streatley, it is understood that flooding was caused by groundwater, fluvial, surface water, and sewer sources. The winter of 2023/24 has been one of the wettest on record, which has served to elevate groundwater levels for prolonged periods of time in areas of

West Berkshire. High groundwater in and around Streatley was noted as a significant contributing factor to the flooding experienced. This was exacerbated by significant rainfall during storms Henk, Isha, and Jocelyn in January. As a result, throughout January and February, levels in the River Thames spiked significantly higher than the typical range. These heightened levels enabled the River Thames to overtop its banks and flood Streatley, specifically the low-lying area of Cleeve Court.

15.3.2. Cleeve Court is served by a local Sewage Pumping Station (SPS). During the early period of flooding, the sewers from Cleeve Court houses to the SPS began to back up, to the extent that there was some sewage in the lower bathrooms of some properties. It is understood that Thames Water investigated at the time and have been engaged in further discussions since. It appears that there was some flood water getting into the sewers and therefore the SPS (although the exact source has not been identified); and the pumps may have stopped due to the overload.

15.3.3. Local residents reported that floodwaters have taken a significantly long time to recede during the 2024 flood event. Areas of perched water have remained due to high groundwater levels and surface water runoff, encouraging further flooding. Furthermore, during WSP's site visit to Streatley, drainage ditches were often noted as being overgrown with vegetation and therefore less effective at storing water and directing it back into the River Thames.

15.3.4. Although not direct causes of the flooding in early 2024, other issues have been highlighted as concerns by local residents and flood wardens. It was noted that during times of flood the lock telemetry can fail affecting reaction time and that one lock gate did fail during the flooding. Furthermore, it was noted that an accumulation of debris and tree branches in the river channel may be affecting flow capacity, demonstrated by the dead trees along approximately 6m of the Oxford side of the River Thames.

Figure 15-3 – Flooding in Fields North of Cleeve Court

15.4 FLOOD DEFENCES / ASSETS

15.4.1. WSP is not aware of any flood defences in the area that benefit Streatley.

15.4.2. However, during WSP's site visit to Streatley, the local flood warden informed that there is the potential for an Oxford relief scheme that would divert river water through Port Meadow. This would benefit Streatley and potentially reduce fluvial flood risk.

15.5 RISK MANAGEMENT AUTHORITIES

Thames Water

15.5.1. During WSP's site visit to Streatley, the local flood warden and residents reported that, Thames Water response was not immediate, but they have begun taking remedial actions to address residents' concerns such as:

- Improved telemetry to record water levels and pump activity in response to heavy rainfall;
- Quicker response times to any alert of capacity being exceeded; and
- More powerful and upgraded pumps.

15.5.2. A request for information has been sent to Thames Water, however no specific response regarding the 2024 flood event in this area has been received.

15.5.3. Thames Water reported that proactive planned works, such as cleaning blockages in flood prone areas, are carried out each year. Furthermore, in summer months, Thames Water aim to deliver any work that was identified as required in the previous winter period, such as, to address groundwater infiltration or surface water inundation related issues. Investigations are then carried out over the autumn and winter months in catchments known to have issues with groundwater infiltration and surface water inundation.

15.5.4. Thames Water reported having started this work in September 2023 after Swindon received the first storm of the season. Thames Water has reported that it will continue to investigate how water is entering the sewer system and collate information to prioritise works based on likelihood of impact and potential consequences.

Environment Agency

15.5.5. During WSP's site visit to Streatley, the local flood warden and residents reported that the Environment Agency had not been in attendance in response to the flooding experienced in early 2024.

15.5.6. Consultation with the Environment Agency has confirmed that they do not own any specific flood defences benefiting the Streatley area however, the River Thames has weirs which are primarily used for navigation purposes but do have an effect on river flows and therefore flood risk. These are operated by trained lock and weir keepers in accordance with procedures to maintain water levels for navigation. The Environment Agency reported that, during the named storms of early 2024 the river had risen, and the lock and weir keepers adjusted weirs appropriately until they were fully drawn and closed back in when appropriate. On this occasion weirs were only able to be part way shut back in before the next storm arrived, and weirs were reopened.

15.5.7. The Environment Agency own the Goring Lock gauge and Cleeve Lock gauge that measure river levels along the River Thames. However, due to a reset on a site visit in March the data for the Cleeve Lock gauge is estimated and therefore unreliable. Consultation also confirmed that the Environment Agency has not yet defined the return period of the 2024 flood event.

15.5.8. The following flood alert was in place during the 2024 flood event:

- River Thames and its tributaries from Days Lock to above Pangbourne (061WAF23WallGor) – In force: 31/12/2023 – 15/01/2024

15.5.9. Consultation with the Environment Agency detailed that no flood warnings were in place during the 2024 flood event.

15.5.10. The Environment Agency only received one report of flooding across Streatley during the 2024 flood event. This included internal fluvial flooding from the River Thames of one property due to debris build up at Goring Lock.

15.5.11. Consultation with the Environment Agency has confirmed that there were no specific issues or constraints associated with the River Thames within Pangbourne and that there are no plans to carry out improvement works. Furthermore, details of the Thames Valley Flood Scheme have been provided. The scheme, led by the Environment Agency, is investigating the possibility to store water across the Thames catchment. This is likely to include a combination of flood storage and natural flood management currently across approximately 17 locations.

West Berkshire Council

15.5.12. A request for information was sent to West Berkshire Council to detail their response to the 2024 flooding events. The information received details that no road closures were put in place, as a result of flooding, in Streatley, in early 2024.

15.5.13. In addition to this, representatives of West Berkshire Council visited the Streatley area on Sunday the 7th of January 2024.

Royal Berkshire Fire and Rescue Service

15.5.14. As part of the investigation Royal Berkshire Fire and Rescue Service (RBFRS) have been consulted for information. RBFRS reportedly did not attend any incidents in relation to the 2024 flood event in this area.

15.6 RECOMMENDATIONS

Local Residents

15.6.1. Residents should report any foul sewer issues to Thames Water as soon as they become apparent. It is believed that the properties affected by internal sewer flooding, already have non-return valves fitted. Therefore, affected residents should carry out an inspection to check the condition of these valves and carry out any necessary remedial works.

15.6.2. Residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring and sump pumps or the tanking the property to protect their premises, especially basements, from further flooding during times of high groundwater. Such measures have already been utilised and proven to be effective across properties in Cleeve Court.

15.6.3. Those affected by fluvial flooding, may benefit from the installation of flood barriers or doors, if they are not already in use. General property level resilience and resistance measures could be considered, such as raising plug sockets.

West Berkshire Council

15.6.4. It has been noted that the highway gullies in Streatley are regularly cleared, however they become blocked frequently after a flood event. Therefore, West Berkshire Council could investigate the potential to add mesh gates to collect debris before it enters the drainage network. A maintenance schedule could then be put in place to ensure the regular clearance of any debris, specifically along known high risk roads, such as High Street and Streatley Hill. Furthermore, a schedule could be put in place for the maintenance of the ditches across Streatley. If this is already in place, then the schedule could be updated, with ditches in Cleeve Court highlighted as a priority location for inspection on receipt of forecasts of heavy rain.

15.6.5. West Berkshire Council could collaborate with the Environment Agency and local residents to investigate the potential for a flood alleviation scheme to be implemented in Streatley. This could include the temporary storage of river water during high flows, at sites such as Bishops Field to the north of Cleeve Court or land to the west of Cleeve Lock, however this will require more detailed investigation, outside of the remit of this report.

15.6.6. It is recommended that West Berkshire Council could engage with the electricity provider regarding adequate flood protection for the electricity substation located in Cleeve Court.

Environment Agency

15.6.7. During WSP's site visit to Streatley, many affected residents reported that the Environment Agency's flood alerts and warnings were repeatedly issued too late and often the flooding had already occurred before a flood warning was issued. Therefore, the Environment Agency could review the levels at which alerts and warnings are issued to the Streatley area to ensure enough time is provided to residents to allow flood plans to be followed and preparations put in place. Residents also reported that it would be useful for information on the predicted arrival time of the peak flood level and the predicted height of the peak flood level, to be communicated within the daily flood alert and flood warning update.

15.6.8. Additionally, the village may benefit from the installation of boreholes, used for groundwater monitoring, and preparation of a groundwater flood plan to help inform flood risk, specifically in the area of Cleeve Court.

Thames Water

15.6.9. Thames Water could consider the implementation of flood defences to protect the SPS from future flooding and therefore prevent internal sewer flooding across Cleeve Court. Furthermore, it is recommended that Thames Water consider engaging with affected residents regarding expectations on response during any future incidents affecting the capacity of the sewerage system.

Parish Council

The Parish Council should continue to support the local flood warden in Streatley and provide education and communication to local residents on the following:

- How to monitor river levels and flows;
- How to sign up to the Environment Agency flood alerts and warnings;
- How to report concerns to the relevant flood risk management authorities;
- Guidance on effective property level protection;
- What to do and when, in preparation for a flood; and
- Where to find support following a flood event.

15.6.10. During WSP's site visit to Streatley, it was noted that the area currently only has one flood warden. If possible, it may prove beneficial to increase the number of flood wardens in the area to aid communication and advancements, with regards to flood risk, between the local community and West Berkshire Council.

15.7 SUMMARY

15.7.1. The flooding generally occurred in areas categorised as Flood Zone 3, according to the Environment Agency's flood maps (refer to Appendix E.7). It is also noted that, according to the Environment Agency's long term flood map, the High Street has a high surface water flood risk.

15.7.2. Table 15-1 summarises the flooding experienced in Streatley as a result of Storms Henk, Isha, and Jocelyn. Refer to Appendix A.7 which details the locations of the flooded areas.

Table 15-1 – Summary of Flooding in Streatley

Total No. of Properties Flooded	Source of Flooding	No. of Properties Flooded Internally	No. of Properties Flooded Externally*	No. of Road Closures
21	Surface Water, Groundwater, Fluvial & Sewer.	6	15	0 *(Noted that Cleeve Court Drive was impassable)*

**Excluding properties recorded as having flooded internally.*

15.7.3. West Berkshire Council, Thames Water and the Environment Agency all had flood management responsibilities related to this event due to the multiple flood sources and assets involved. West Berkshire Council and Thames Water attended during the flooding to monitor the situation and carry out remedial actions. A number of recommendations have been identified to help manage the impact of any future flooding events.

16 WINTERBOURNE

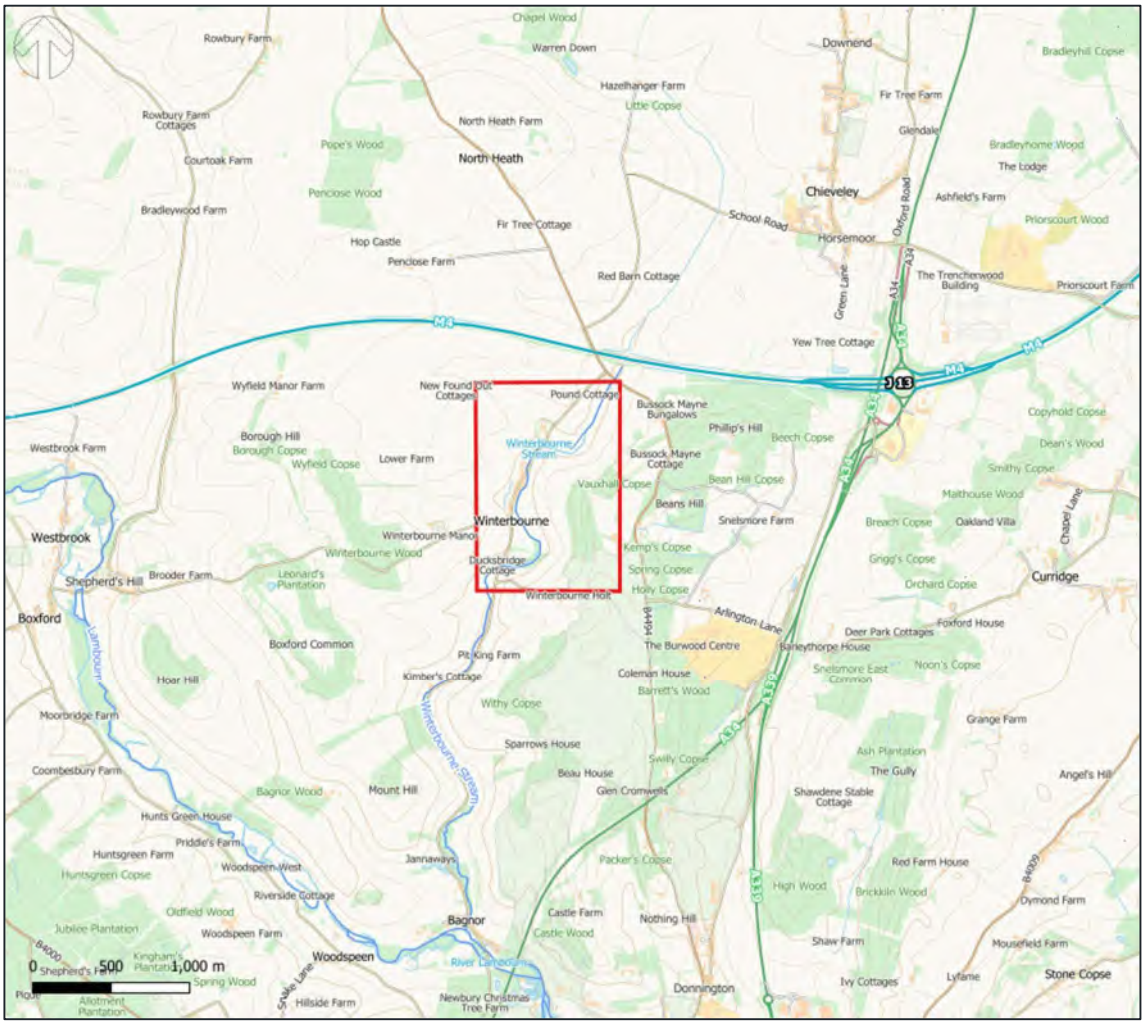
16.1 LOCATION

16.1.1. The village of Winterbourne is located in central West Berkshire and is situated north of Newbury. The village has a National Grid Reference of 445613, 172279 and is shown in Figure 16-1.

16.1.2. The village is situated along Winterbourne Stream in a topographical low point with higher elevations to the east and south.

16.1.3. Previous flooding occurred in Winterbourne during the winter 2013/14 flood event, during which similar areas were affected. During this event, approximately one property was flooded internally and approximately 11 properties were flooded externally across Winterbourne. Similar to the 2024 flood event, flooding the result of groundwater and fluvial sources from the Winterbourne Stream. Historic flood outlines are mapped within Appendix E.12.

Figure 16-1 – Winterbourne Location Map



16.2 FLOODING

16.2.1. WSP conducted a site visit to Winterbourne on the 18th of April 2024 and from this it is understood that flooding issues began on the 4th of January 2024 and resulted from fluvial and groundwater sources.

16.2.2. The majority of flooding occurred in areas categorised as Flood Zone 3, according to the Environment Agency's flood maps (refer to Appendix E.12). However, one property that experienced external fluvial flooding and internal groundwater flooding is located in Flood Zone 1. It is also noted that Winterbourne Lane also has a high surface water flood risk, according to the Environment Agency's long term flood maps (refer to Appendix E.12).

16.2.3. From interviews with the Winterbourne flood warden and affected residents, it is understood that approximately 11 properties were affected by external fluvial and groundwater flooding, initially in early January, and then again in March. It was reported that external flood depths were deepest in two properties located next to the sewage works at the bottom of the village due to their lower elevation.

16.2.4. WSP is not aware of any internal flooding occurring in January 2024, however it is understood that two properties were flooded internally from the 28th of March 2024. One property experienced internal flood depths of approximately 150mm as a result of groundwater rising up through the property's floorboards. Another property experienced internal flood depths of approximately 250mm due to groundwater rising up through the floor and fluvial water seeping in through the external walls.

16.2.5. The main road that runs through Winterbourne (currently unnamed and hereby referred to as Winterbourne Lane) was affected by fluvial flooding from the 4th of January and again from the 28th of March. Through this time flood depths along Winterbourne Lane varied, however it is understood that the maximum depths reached approximately 300mm deep. As a result, Winterbourne Lane was closed, therefore affecting businesses and school bus routes that required access through the road.

Figure 16-2 – Flooding at Winterbourne Lane

16.3 CAUSES

16.3.1. Following WSP's site visit to Winterbourne, it is understood that flooding was caused by groundwater and fluvial sources. The winter of 2023/24 was one of the wettest on record, which served to elevate groundwater levels for prolonged periods of time in areas of West Berkshire. High groundwater in and around Winterbourne was noted as a significant contributing factor to the flooding experienced. This was exacerbated by significant rainfall during storms Henk, Isha, and Jocelyn in January. As a result, throughout January, February, and March, levels in the Winterbourne Stream were likely to be higher than the typical range. These raised levels caused the stream to overtop its banks north of Pebble Lane and flood Winterbourne Lane.

16.3.2. Other contributing factors likely worsened the internal flooding experienced in March 2024. For example, one property's sump pump broke because it could not deal with the amount of water that needed pumping away from the property. In addition to this, residents believe a flood alleviation scheme located north of Pebble Lane (see below) is not believed to have operated as planned,

allowing too much water to flow into Winterbourne village. As a result, the Winterbourne Stream overtopped its banks north of the village, where it flowed into Winterbourne Lane, and in the centre of the village, where it flooded gardens of properties that back onto the stream. However, we have been unable to verify this at this stage.

Figure 16-3 – Winterbourne Flood Alleviation Scheme

16.4 FLOOD DEFENCES / ASSETS

16.4.1. Winterbourne currently benefits from a flood alleviation scheme which was built in 2014 in response to the 2007 flood event. The scheme is located north of the village and diverts Winterbourne Stream into a bunded area, from which flows are restricted by a 'letterbox' style hydraulic control, causing excess flows to be retained upstream of the bund. The size of the opening, and therefore the flow of water through it, cannot be adjusted.

16.4.2. The bund is designed to hold a volume of water with a depth of approximately 8m, however residents reported the depth of water is rarely higher than approximately 3m. During the 2024 flood events, local flood wardens reported that the scheme held back some excess flow, storing it in the field to the north of Pebble Lane. However, residents believe the hydraulic control allowed too much water to flow because the stream was still able to flow out of bank, downstream of the scheme.

16.5 RISK MANAGEMENT AUTHORITIES

Thames Water

16.5.1. A request for information has been sent to Thames Water, however no specific response regarding the 2024 flood event in this area has been received.

16.5.2. Thames Water reported that proactive planned works, such as cleaning blockages in flood prone areas, are carried out each year. Furthermore, in summer months, Thames Water aim to deliver any work that was identified as required in the previous winter period, such as, to address groundwater infiltration or surface water inundation related issues. Investigations are then carried out over the autumn and winter months in catchments known to have issues with groundwater infiltration and surface water inundation. Thames Water reported having started this work in September 2023 after Swindon received the first storm of the season. Thames Water has reported that it will continue to investigate how water is entering the sewer system and collate information to prioritise works based on likelihood of impact and potential consequences.

Environment Agency

16.5.3. A request for information has been sent to the Environment Agency. It should be noted that, the Winterbourne Stream is not a main river and as such they do not have powers to maintain it.

16.5.4. Consultation with the Environment Agency has confirmed details of Winterbourne flood alleviation scheme. The scheme comprised of the realignment of the Winterbourne Stream and the construction of a 300m long, 2.4m high flood defence bund on the land to the north of Winterbourne village. The project also included the construction of associated control structures to form a flood storage reservoir with a capacity of approximately 22,000m³. The aim of the scheme was to intercept fluvial and rainfall flows, and store and release them in a controlled manner.

16.5.5. The Environment Agency confirmed that there are no river flow or level gauges along Winterbourne Stream. Consultation also confirmed that the Environment Agency has not yet defined the return period of the 2024 flood event.

16.5.6. The following flood alert was in place during the 2024 flood event:

- River Lambourn and its tributaries from Upper Lambourn down to Newbury (061WAF22Lambourn) – In force: 04/01/2024 – 05/06/2024

16.5.7. The following flood warning was in place during the 2024 flood event:

- River Lambourn from Weston to Bagnor including Boxford (061FWF22MidLamb) – In force: 04/01/2024 – 11/02/2024

16.5.8. The Environment Agency only received one report of flooding across Winterbourne during the 2024 flood event. This included external flooding of one property.

16.5.9. Consultation with the Environment Agency has confirmed that there were no specific issues or constraints associated with Winterbourne Stream within Winterbourne and that there are no plans to carry out improvement works.

West Berkshire Council

16.5.10. A request for information was sent to West Berkshire Council to detail their response to the 2024 flooding events. The information received details that Winterbourne Lane was closed on the 5th of January 2024, as a result of flooding.

16.5.11. In addition to this, representatives of West Berkshire Council visited the Winterbourne area on the following dates:

- 7th of January 2024
- 16th of January 2024
- 18th of January 2024
- 25th of January 2024

Royal Berkshire Fire and Rescue Service

16.5.12. As part of the investigation Royal Berkshire Fire and Rescue Service (RBFRS) have been consulted for information. RBFRS reportedly did not attend any incidents in relation to the 2024 flood event in this area.

16.6 RECOMMENDATIONS

Local Residents

16.6.1. Residents should report any road drainage issues to West Berkshire Council as soon as they become apparent. Riparian owners of Winterbourne Stream should ensure that the watercourse is clear of obstructions, such as vegetation, and enable the free passage of water. During WSP's site visit to Winterbourne, it was noted that several properties have bridges that cross the stream to allow access and egress. During times of high stream levels, these bridges created an obstruction to flow and became unsafe to use. It is recommended that riparian owners could consider raising the height of these bridges to ensure safe access and egress can still be achieved and to reduce the risk of obstruction of flows.

16.6.2. Residents and business owners affected by groundwater flooding may benefit from the installation of hard flooring and sump pumps or the tanking their properties to give their premises resilience from flooding during times of high groundwater in addition to other property flood Resilient measures.

16.6.3. Those affected by fluvial flooding may benefit from the installation of flood gates or barriers or doors, if they are not already in use. General property level resilience and resistance measures could be considered, such as raising plug sockets.

West Berkshire Council

16.6.4. A schedule could be put in place for the maintenance of grips through Winterbourne. If this is already in place, then the schedule could be updated, with grips along Winterbourne Lane highlighted as priority locations for inspection on receipt of forecasts of heavy rain.

16.6.5. During WSP's site visit to Winterbourne, it was noted that water from Winterbourne Stream was backing up road drainage and flooding the road. It is acknowledged that the design standard of existing highway drainage is likely to be lower than the rainfall event recorded. However, it is recommended that West Berkshire Council could conduct a CCTV survey to assess the condition of the highway drainage network and then carry out any necessary remedial works.

16.6.6. A community schedule could be put in place with the aid of riparian owners and West Berkshire Council to ensure the regular clearance of Winterbourne Stream of vegetation and debris. This schedule should encourage more frequent maintenance upon receipt of forecasts of heavy rain.

16.6.7. It is recommended that West Berkshire Council could review the Winterbourne Flood Alleviation Scheme design to if is functioning as designed and if so if other measures are necessary to improve the flood defence standard.

Parish Council

16.6.8. The Parish Council should continue to support the local flood warden in Winterbourne and provide education and communication to local residents on the following:

- How to monitor river levels and flows.
- How to sign up to the Environment Agency flood alerts and warnings.
- How to report concerns to the relevant flood risk management authorities.
- Guidance on effective property level protection.
- What to do and when, in preparation for a flood.
- Where to find support following a flood event.

16.6.9. During WSP's site visit to Winterbourne, it was noted that the area currently only has one flood warden. If possible, additional flood wardens should be sought to aid communication and advancements, with regards to flood risk, between the local community and West Berkshire Council.

16.7 SUMMARY

16.7.1. The majority of flooding occurred in areas categorised as Flood Zone 3, according to the Environment Agency's flood maps (refer to Appendix E.12). However, one property that experienced external fluvial flooding and internal groundwater flooding is located in Flood Zone 1. It is also noted that Winterbourne Lane also has a high surface water flood risk, according to the Environment Agency's long term flood maps (refer to Appendix E.12).

16.7.2. Table 16-1 summarises the flooding experienced in Winterbourne as a result of Storms Henk, Isha, and Jocelyn. Refer to Appendix A.12 which details the locations of the flooded areas.

Table 16-1 – Summary of Flooding in Winterbourne

Total No. of Properties Flooded	Source of Flooding	No. of Properties Flooded Internally	No. of Properties Flooded Externally*	No. of Road Closures
11	Groundwater & Fluvial.	2	9	1 – Winterbourne Lane

**Excluding properties recorded as having flooded internally.*

16.7.3. West Berkshire Council had flood management responsibilities related to this event due to the flood sources and assets involved. West Berkshire Council attended during the flooding to monitor the situation and carry out remedial actions. Recommendations have been identified to help manage the impact of any future flooding events.

17 NON-INVESTIGATED AREAS

17.1.1. During WSP's site visits across West Berkshire, reports of other areas that were affected by flooding as a result of Storms Henk, Isha, and Jocelyn were noted. However, it is currently considered that flooding in these areas do not meet the requirements of a s19 Flood Investigation. The areas include:

- Bucklebury
- Coley
- East Garston
- East Ilsley
- Hampstead Norreys
- Shefford Woodlands
- Sulhamstead
- Thatcham
- Theale
- Upper Lambourn
- West Ilsley

17.1.2. West Berkshire Council also enforced the following road closures in early 2024, as a result of flooding.

Location	Road Name	Date of Closure	Date Reopened (if known)
Bucklebury	Bucklebury Ford	5th January 2024	
Burghfield	Reading Road	5th January 2024	8th January 2024
Burghfield	Padworth Road	5th January 2024	8th January 2024
Greenham	Burys Bank Road	5th January 2024	10th January 2024
Kintbury	Station Road	10th January 2024	
Newbury	Milkhouse Road	10th January 2024	
Newbury	Two Rivers Way	5th January 2024	
Speen	Milkhouse Road	10th January 2024	
Sulhamstead	Sulhamstead Hill	5th January 2024	8th January 2024
Thatcham	Crookham Hill	5th January 2024	
Ufton Nervet	Ufton Lane	5th January 2024	
Woolhampton	Carbinswood Lane	5th January 2024	5th January 2024

17.1.3. It should be noted that cellar flooding was experienced in East Ilsley and West Ilsley and these were seen to be pumping onto the Highway. Whilst this does not reach the threshold for investigation under Section 19 of the Flood and Water Management Act, this report will act as a record to note that cellar flooding occurred.

17.1.4. Of note, Crookham Hill was flooded to varying degrees for 4-5 months which significantly impacted on Avenell's Cottages. The cause of this flooding is believed to be from the River Kennet and will need investigating further due to the impact on this critical infrastructure and the cottages.

17.1.5. Sewer flooding was also experienced in Hampstead Norreys and this will be taken up with Thames Water.

18 CONCLUSIONS

18.1.1. WSP were commissioned by West Berkshire Council to conduct a Section 19 Flood Investigation following flooding which was reported across West Berkshire. The majority of flooding occurred on the 5th of January 2024, following Storm Henk, which occurred on the 2nd of January. Areas of West Berkshire remained inundated for varying lengths of time, due to Storms Isha and Jocelyn causing further flooding. The flooding led to road closures and internal and external property flooding.

18.1.2. An analysis of the gauged and radar rainfall data provided by the Met Office has identified that the rainfall event experienced across West Berkshire had an annual exceedance probability ranging between 1 in 4-year and 1 in 10-year. Therefore, the rainfall at this time was not largely significant; however, this analysis does not include the antecedent conditions and preceding wet winter.

18.1.3. An analysis of the river level gauges across West Berkshire demonstrated that the peak river levels experienced in January 2024 were the highest or second highest on record for all eight analysed sites. A further analysis of river flows across five gauges, demonstrated that the peak flows experienced in January 2024 were within the top four on record.

18.1.4. Finally, an analysis of the peak groundwater levels experienced across West Berkshire in January 2024, demonstrated that groundwater levels were within the top five highest levels on record. Individually, these factors may not have been significant however, when combined in early 2024, they created prime conditions for flooding to occur.

18.1.5. During WSP's site visits across West Berkshire, recurring comments from local residents were made regarding housing insurance. It appears that residents across West Berkshire are struggling to obtain insurance cover, even if they have never flooded in the past. Therefore, where highlighted in this report, recommendations could be implemented to help lower future flood risk.

18.1.6. Another recurring comment amongst local residents and flood wardens was the need for better communication and collaboration between all risk management authorities.

18.1.7. The key findings of this report are:

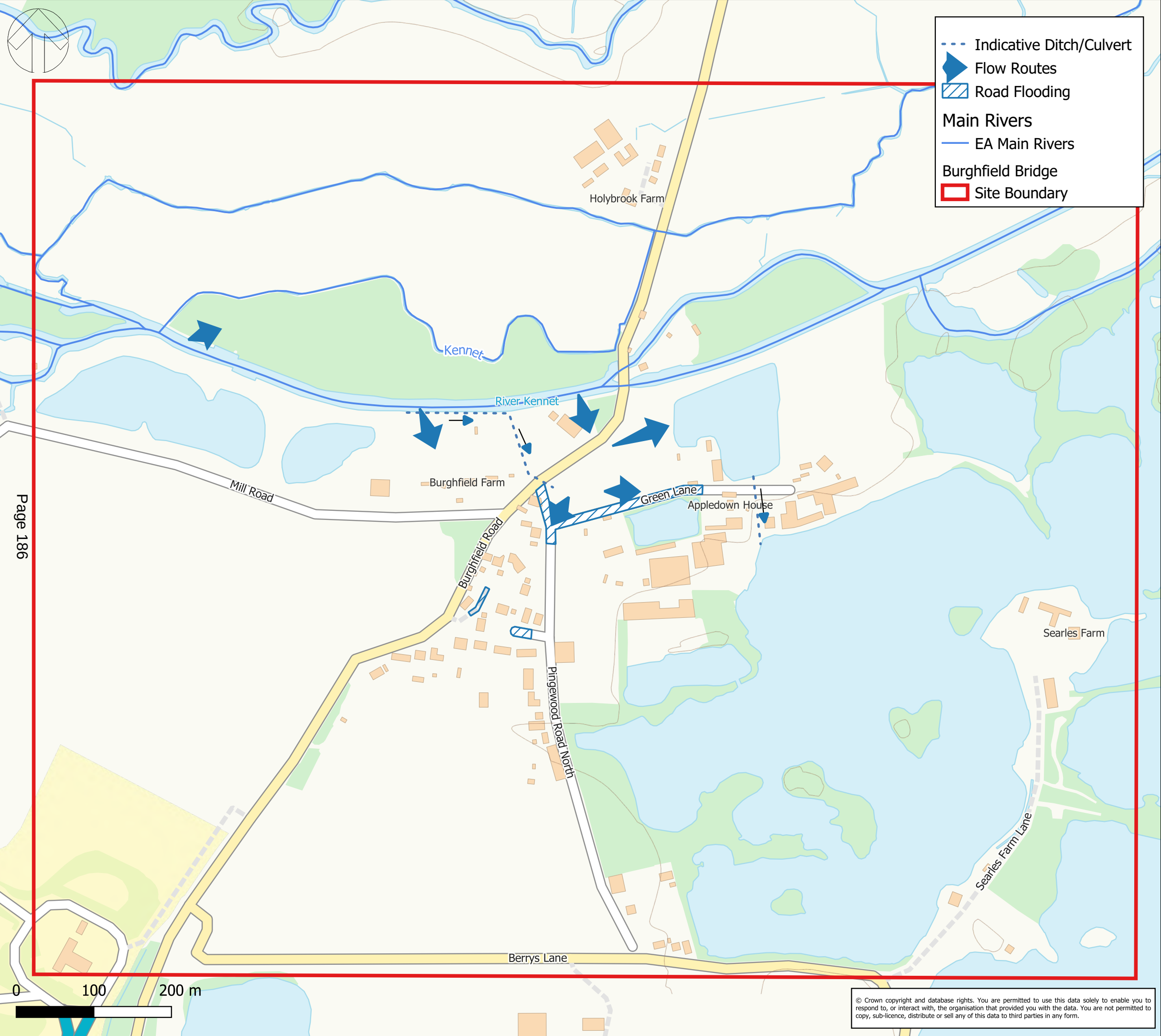
- Fluvial and groundwater flooding generally occurred in areas identified as Flood Zone 2 and Flood Zone 3, as indicated on the Environment Agency's flood map for planning. However, some localised flooding occurred within Flood Zone 1.
- Surface water flooding generally occurred in areas identified as being at a high risk of surface water flooding, as indicated on the Environment Agency's long term flood maps. However, again some localised flooding occurred outside of these zones.
- High groundwater levels after an unusually wet winter and extreme precipitation brought by Storms Henk, Isha, and Jocelyn, have been identified as the primary contributing factors to the flooding experienced across West Berkshire in early 2024.

Appendix A

2024 FLOODED AREAS

Appendix A.1

BURGHFIELD BRIDGE



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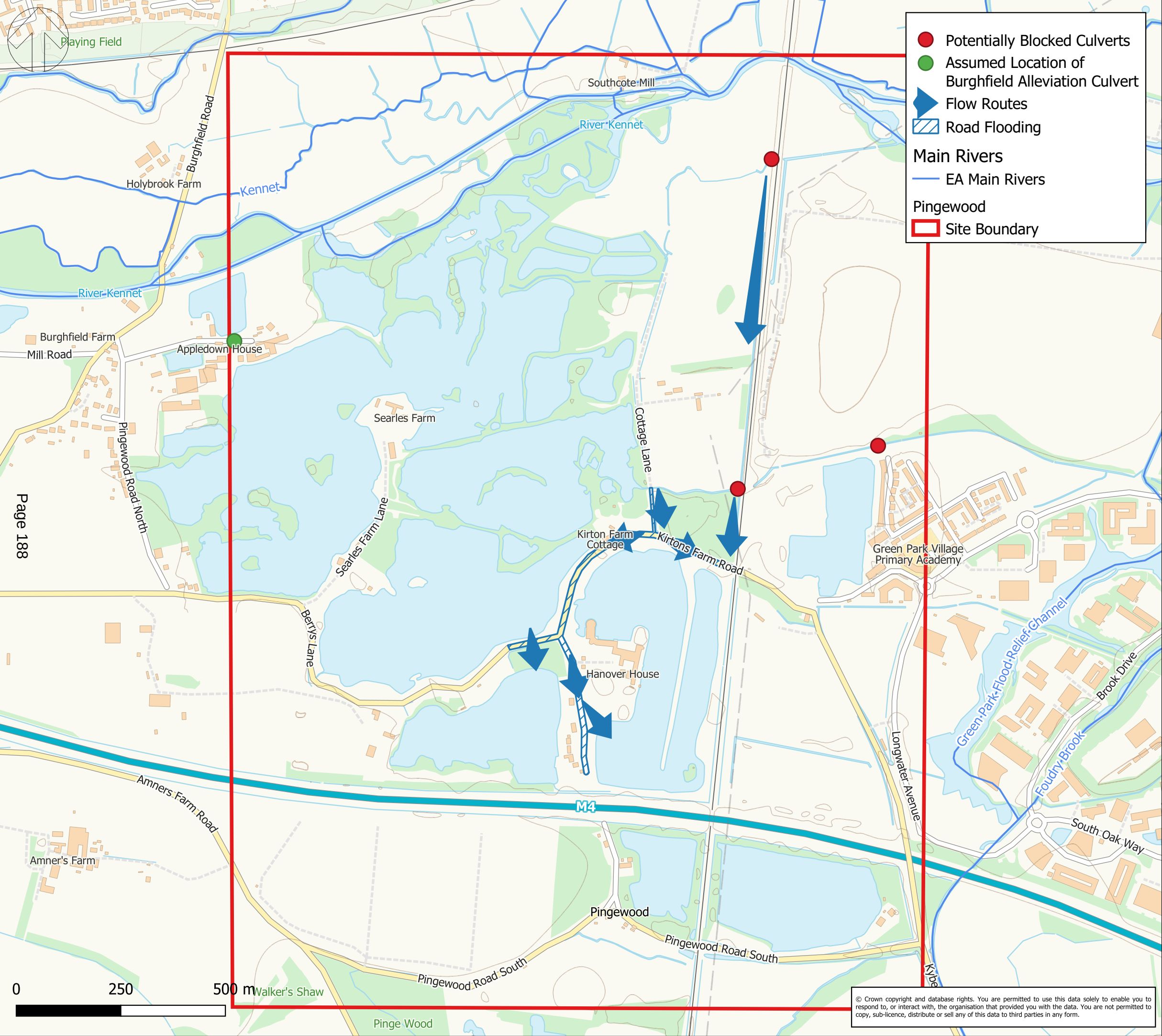
Appendix A.2

PINGEWOOD



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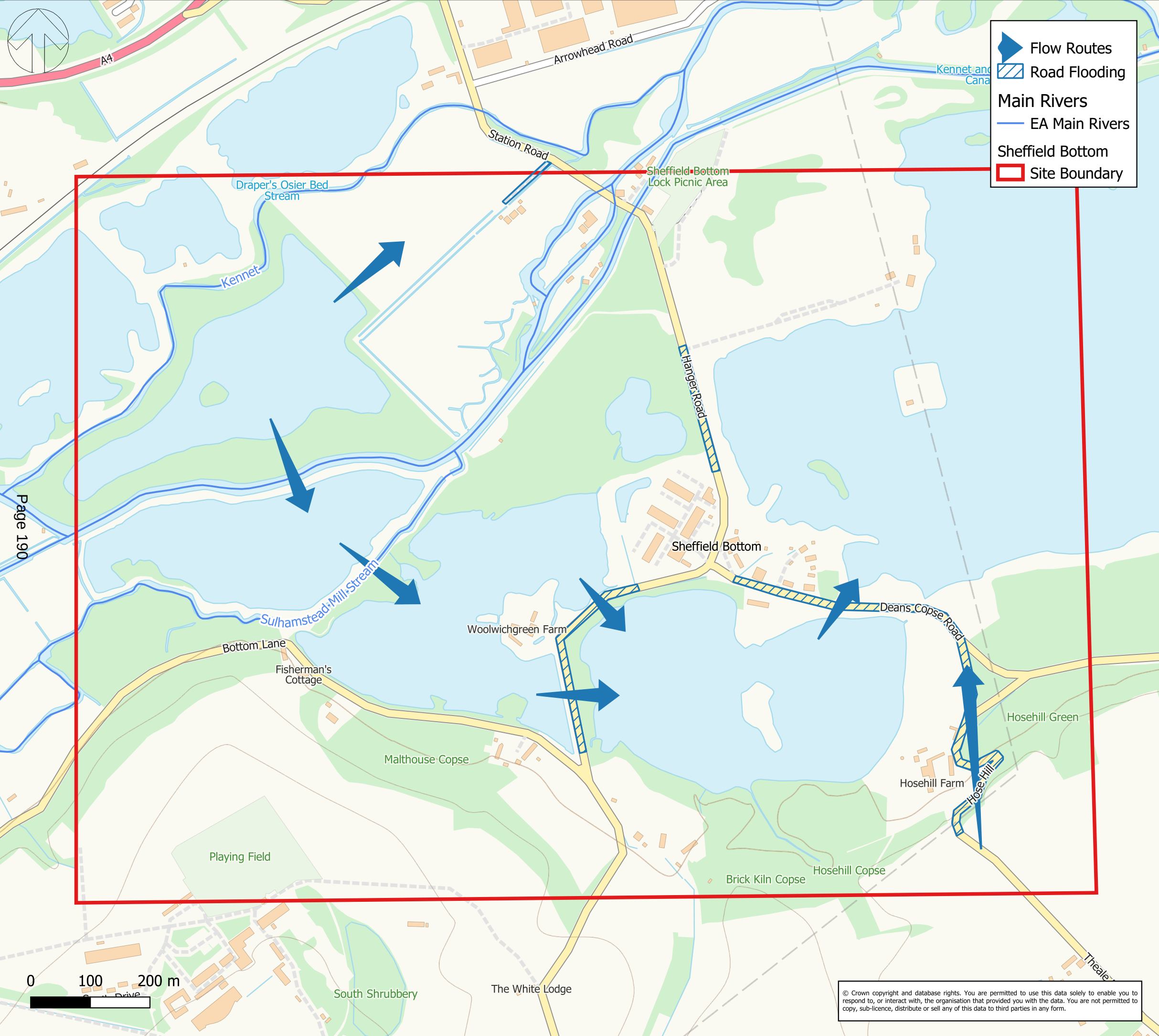
Appendix A.3

SHEFFIELD BOTTOM



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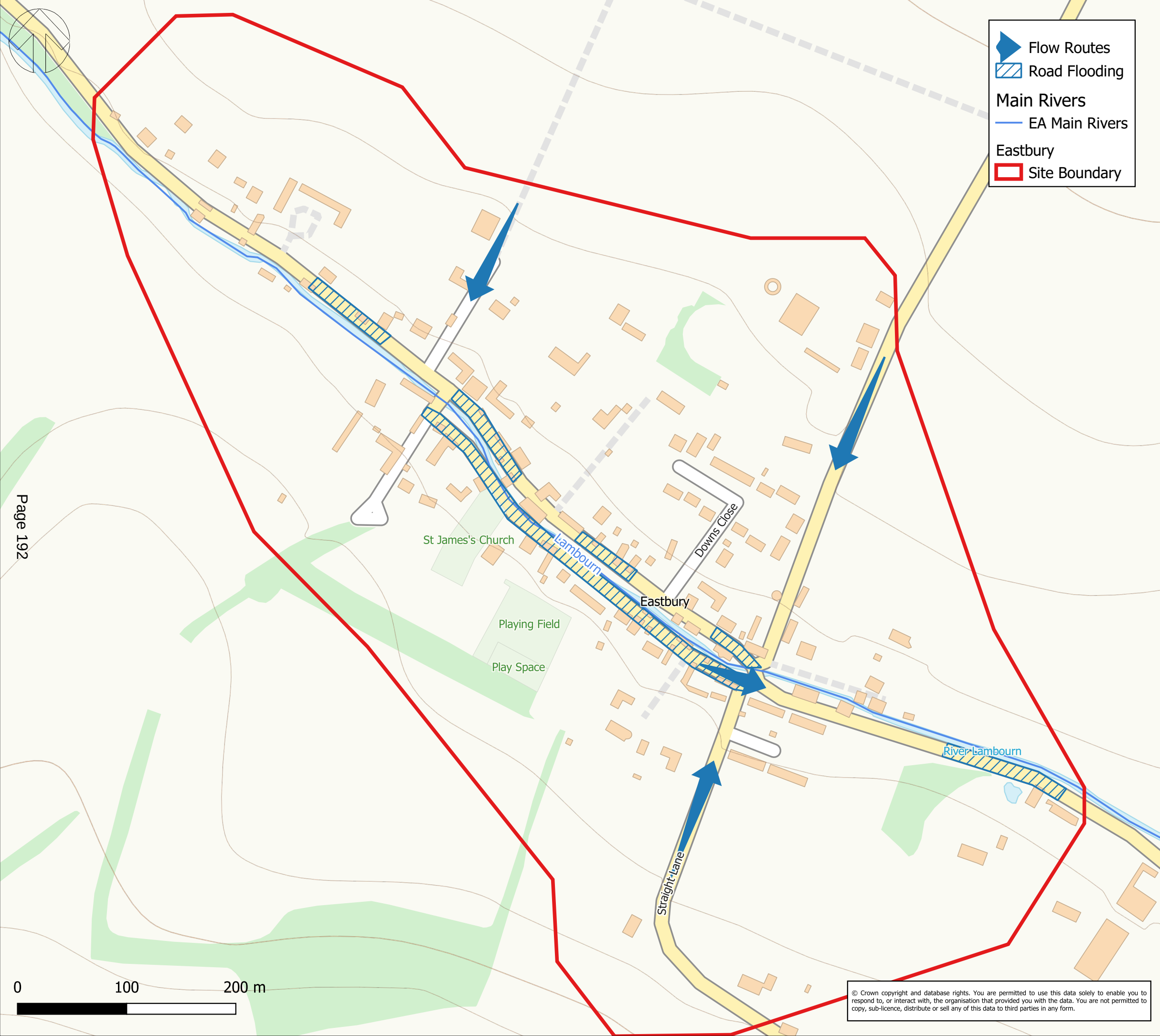
Appendix A.4

EASTBURY



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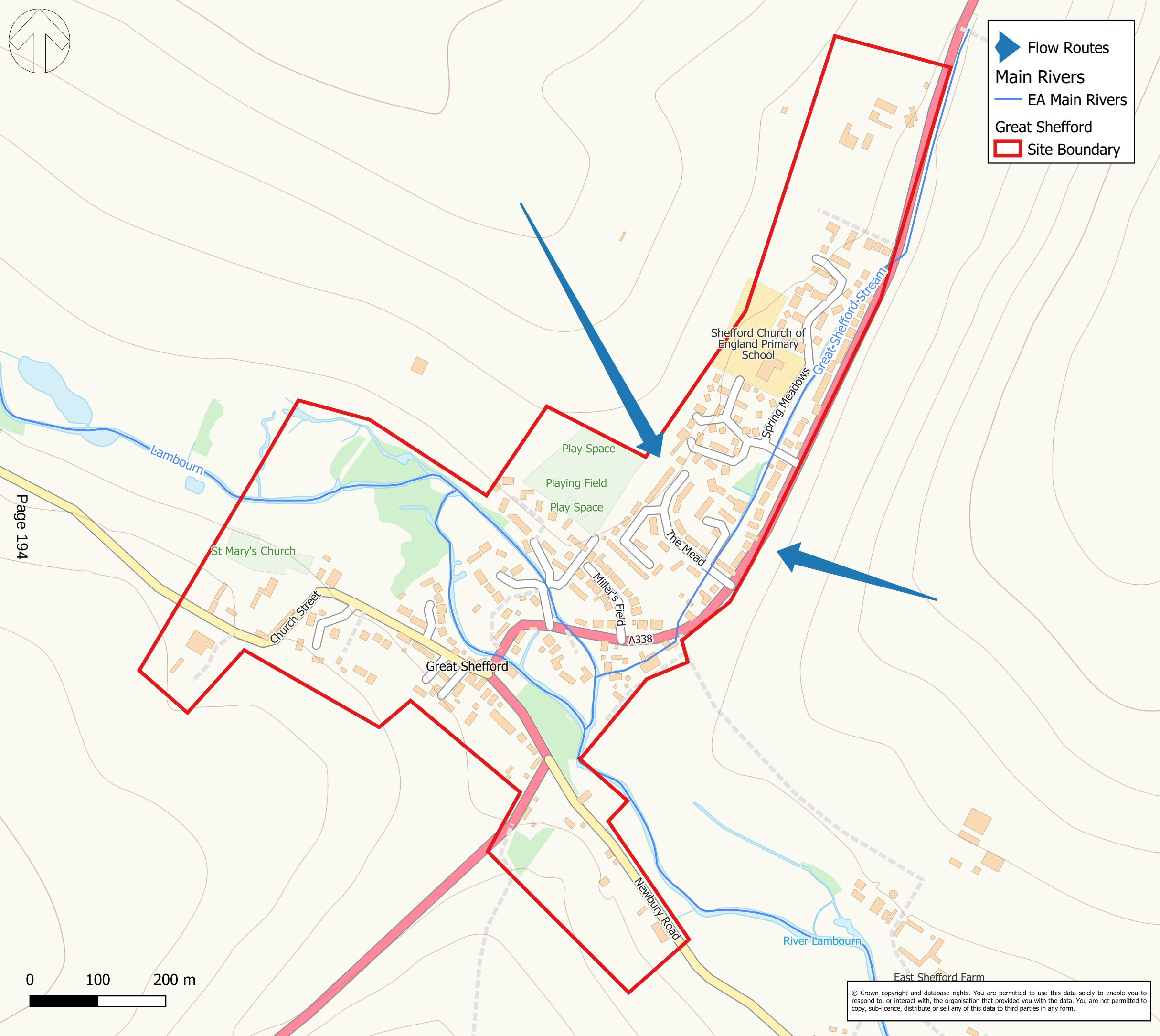
Appendix A.5

GREAT SHEFFORD


Flow Routes
Main Rivers
EA Main Rivers
Great Shefford
Site Boundary
Shefford Church of England Primary School
Great Shefford Stream
Spring Meadows
Play Space
Playing Field
Play Space
Lambourn
St Mary's Church
Church Street
Great Shefford
Miller's Field
The Mead
A338
Newbury Road
River Lambourn
East Shefford Farm
0
100
200 m
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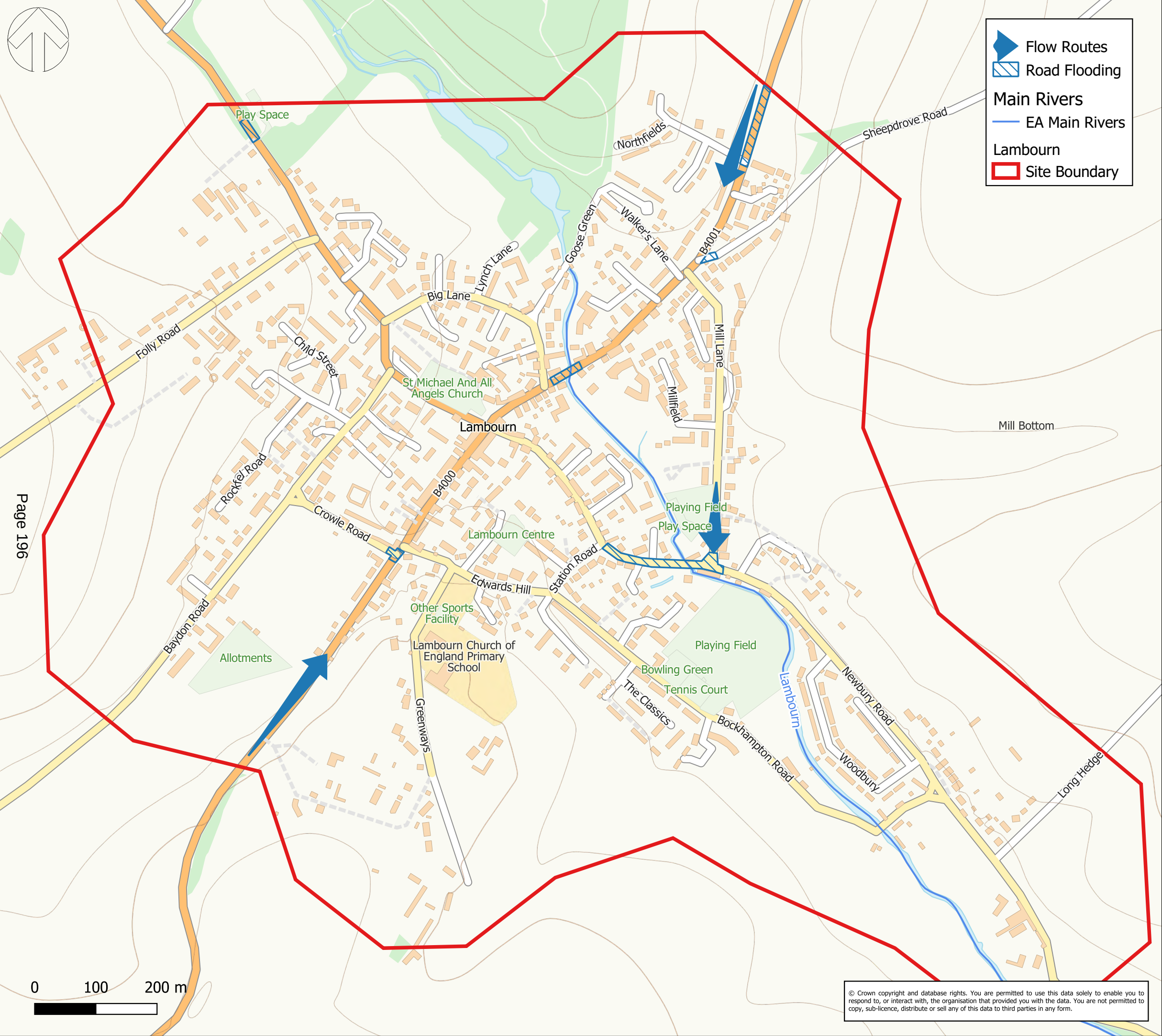
Appendix A.6

LAMBOURN



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Appendix A.7

NEWBURY SOUTH

Flow Routes
Road Flooding
Main Rivers
EA Main Rivers
Newbury (South)
Site Boundary
Speen Lane
Speen Lane
Playing Field
Other Sports Facility
Old Bath Road
Old Bath Road
Oxford Road
Speenhamland
Oxford Street
Hill Road
Croft Lane
Goldwell Drive
Jesmond Dene
Leys Gardens
Leys Gardens
Goldwell Park
Moor Lane
Strawberry Hill
Park Street
Albert Road
West Street
Play Space
Play Space
Cleveland Grove
Crawford Place
West Street
Northbrook Street
Northcroft Ditch
Northcroft Lane
Other Sports Facility
Kennet
Swan Court
Public Park Or Garden
Bridge Street
West Mills
West Mills
St Nicolas Church
Market Place
Allotments
Kimbers Close
Kennet Road
Oddfellows Road
Bartholomew Street
Russell Road
Berkeley Road
Gloucester Road
Blenheim Road
Clifton Road
Chalford Road
Craven Road
Rockingham Road
Market Street
0
100
200 m
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Appendix A.8

NEWBURY NORTH

Spout Ditch Blocked Trash Screen
Flow Routes
Road Flooding
Main Rivers
EA Main Rivers
Newbury (North)
Site Boundary
Allotments
Shaw-cum-Donnington Church of England Primary School
Love Lane
The Connection
Northern Avenue
Dene Way
Shaw
Shaw Farm Road
Kingsley Close
Lamp Acres
Cemetery
Trinity School
St Mary's Church
Other Sports Facility
Play Space
Tennis Court
Church Road
Well Meadow
B4009
Regnum Drive
Orchard Close
Branch End
Pear Tree Lane
Sycamore Rise
Spout Ditch
A339
Public Park Or Garden
Castle Grove
Almond Avenue
Rowan Drive
Maple Crescent
Cherry Close
The Winchcombe School
A4
Chestnut Crescent
Laburnum Grove
Hawthorn Road
Pelican Lane
London Road
Oxford Street
Park Street
Park End
St Mary's Road
Park Way
Northbrook Street
West Street
Playing Field
Hutton Close
Kiln Road
Riverside Lane
Lambourn
River Lambourn
Walton Way
Curling Way
Hedgeway
Doveton Way
Newport Road
St Joseph's Roman Catholic Primary School
St Joseph's Roman Catholic Church
Play Space
Martingale Chase
Skylings
Faraday Road
Fleming Road
Ampere Road
River Park
Tennis Court
Play Space
Page 200
0 100 200 m

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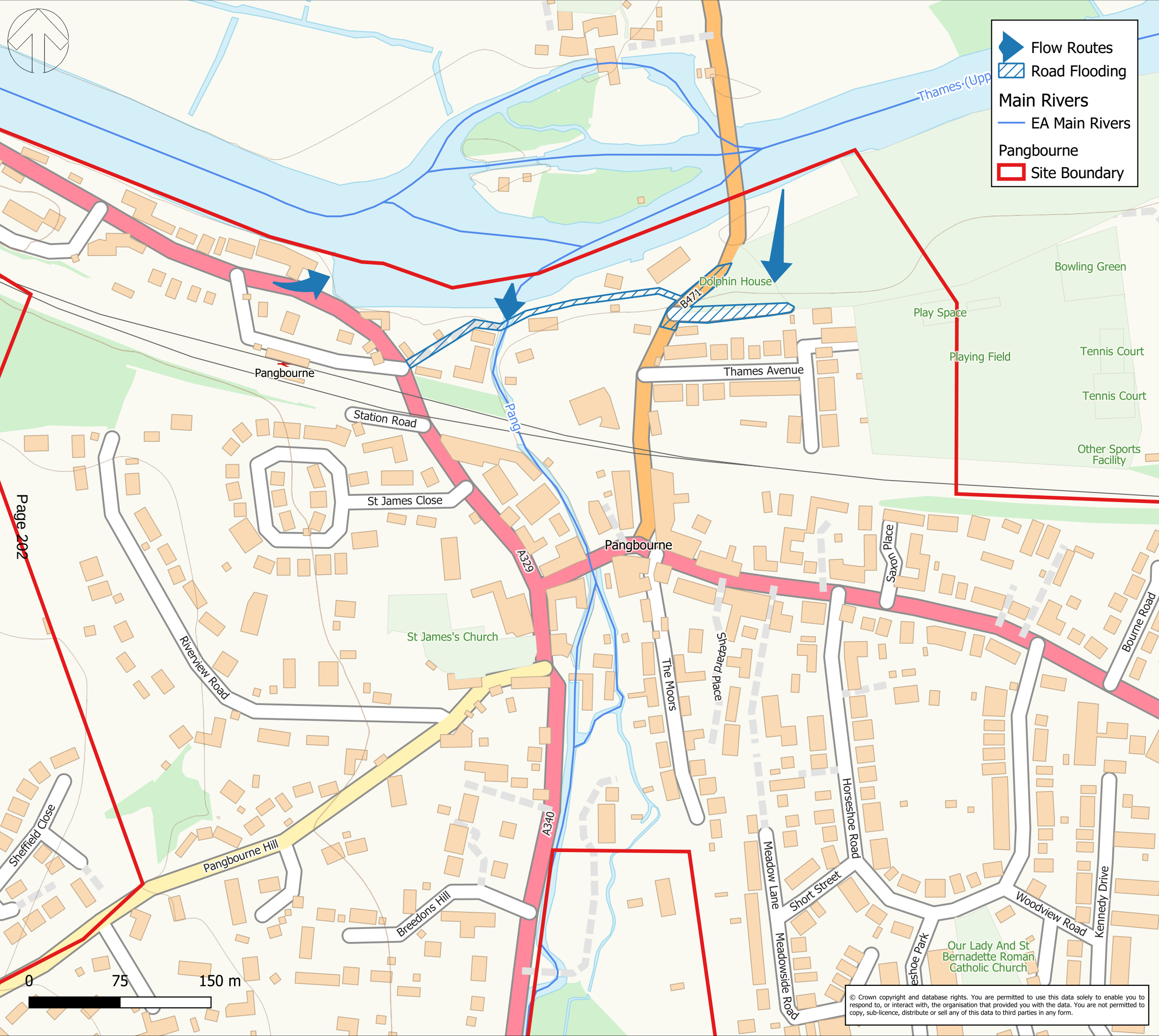
Appendix A.9

PANGBOURNE


Flow Routes
Road Flooding
Main Rivers
EA Main Rivers
Pangbourne
Site Boundary
Thames (Upp
Dolphin House
B471
Bowling Green
Play Space
Playing Field
Tennis Court
Tennis Court
Other Sports Facility
Thames Avenue
Pangbourne
Station Road
Pang
St James Close
A329
Pangbourne
Saxon Place
Bourne Road
St James's Church
Riverview Road
The Moors
Shepard Place
Horseshoe Road
Meadow Lane
Short Street
Woodview Road
Kennedy Drive
Meadowside Road
Our Lady And St Bernadette Roman Catholic Church
Sheffield Close
Pangbourne Hill
A340
Breedons Hill
0
75
150 m
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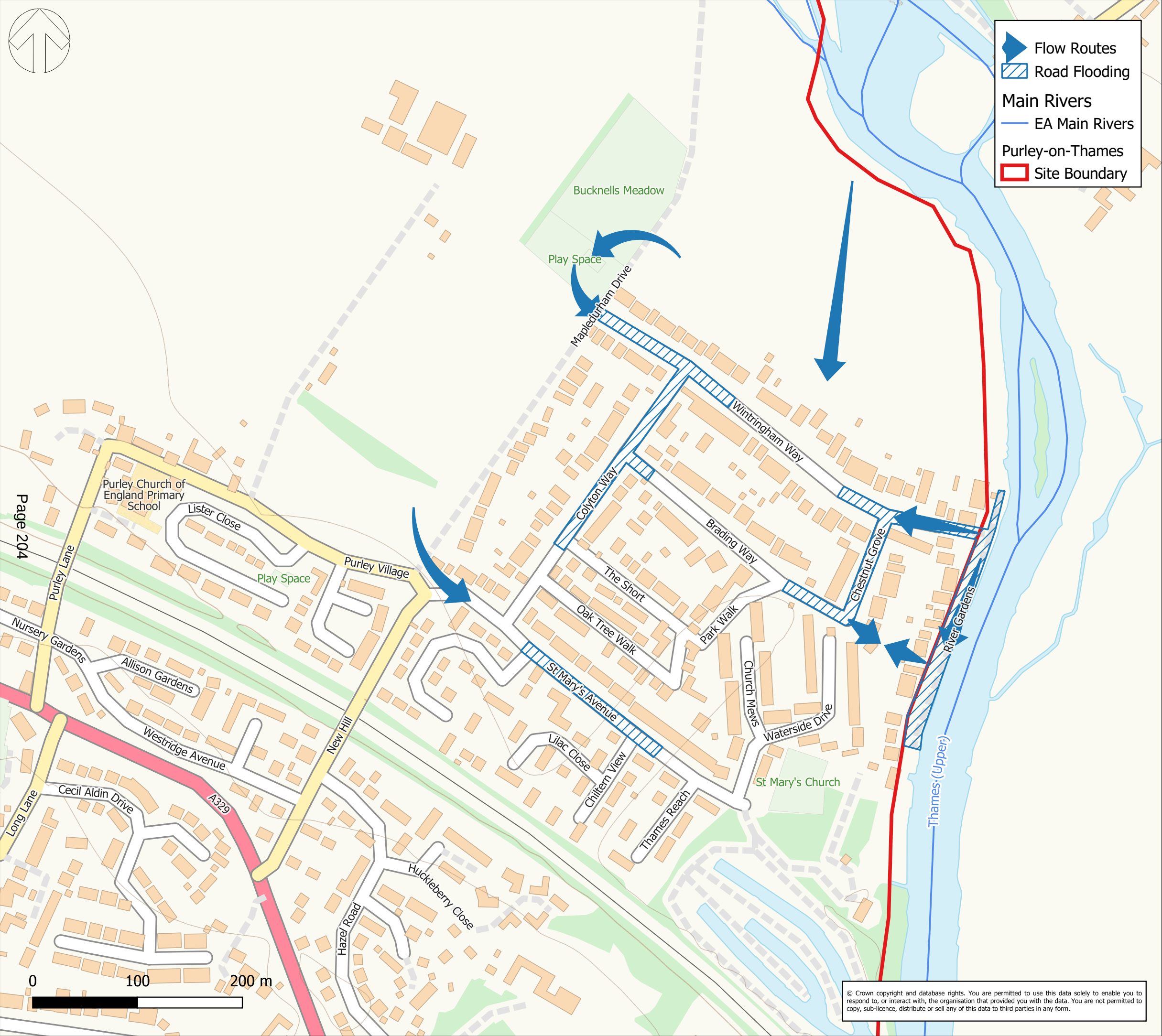
Appendix A.10

PURLEY ON THAMES



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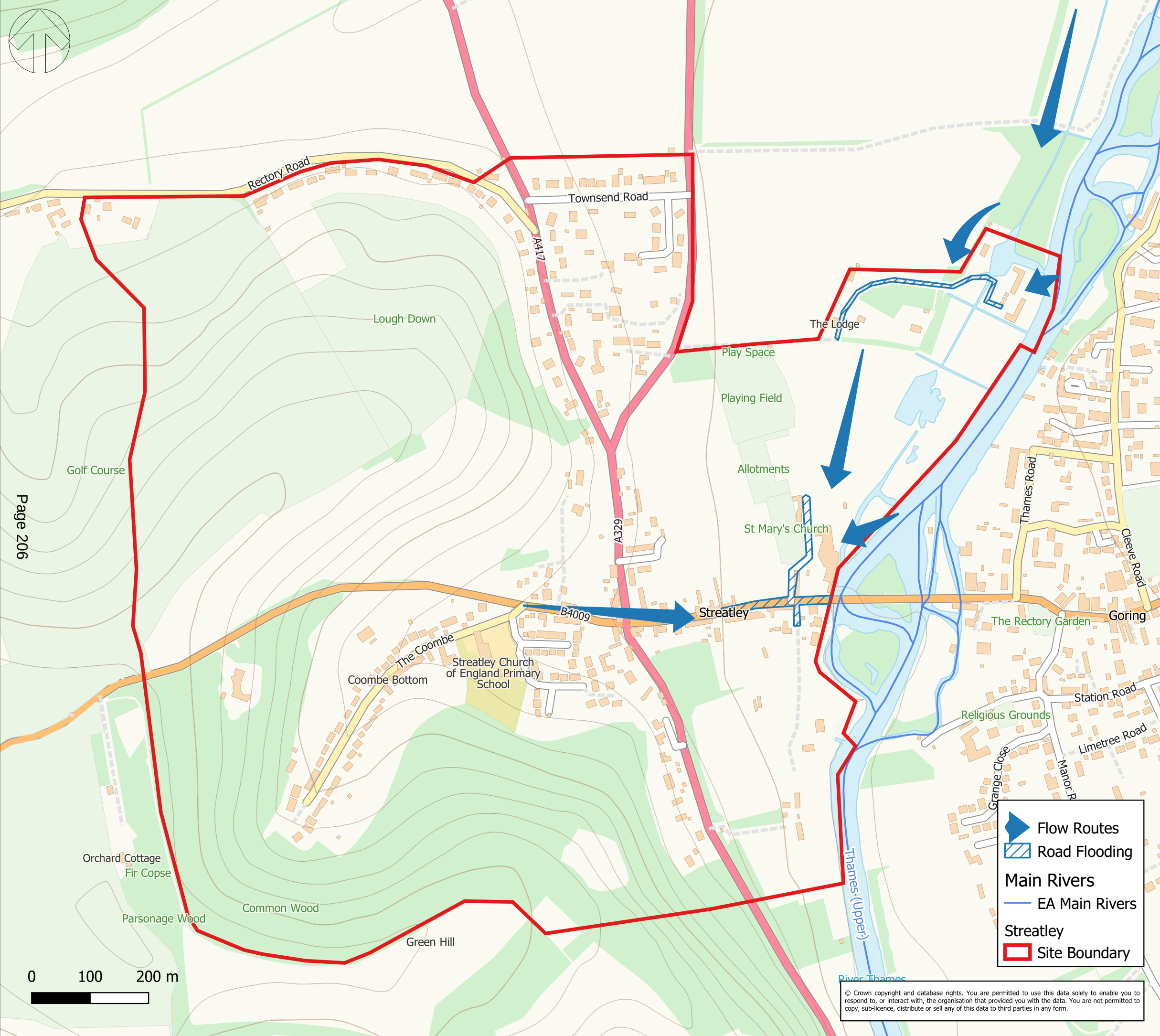
Appendix A.11

STREATLEY



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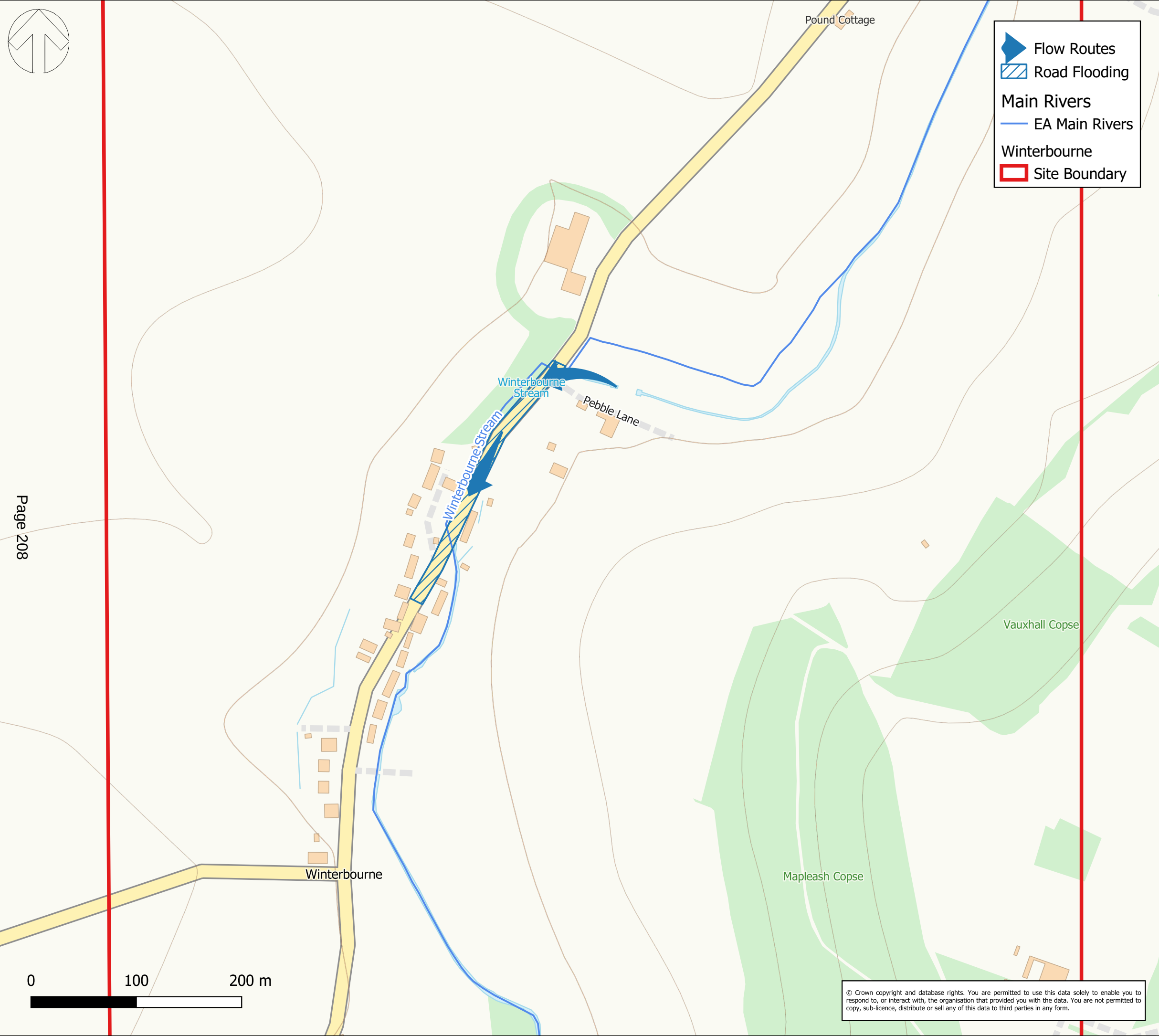
Appendix A.12

WINTERBOURNE


Pound Cottage
Flow Routes
Road Flooding
Main Rivers
EA Main Rivers
Winterbourne
Site Boundary
Winterbourne Stream
Winterbourne Stream
Pebble Lane
Winterbourne
Vauxhall Copse
Mapleash Copse
0
100
200 m
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Appendix B

QUESTIONNAIRE RESPONSES

Appendix B.1

BURGHFIELD

Appendix B.2

PINGEWOOD

Appendix B.3

EASTBURY

Appendix B.4

GREAT SHEFFORD

Appendix B.5

LAMBOURN

Appendix B.6

NEWBURY

Appendix B.7

PANGBOURNE

Appendix B.8

PURLEY ON THAMES

Appendix B.9

STREATLEY

Appendix B.10

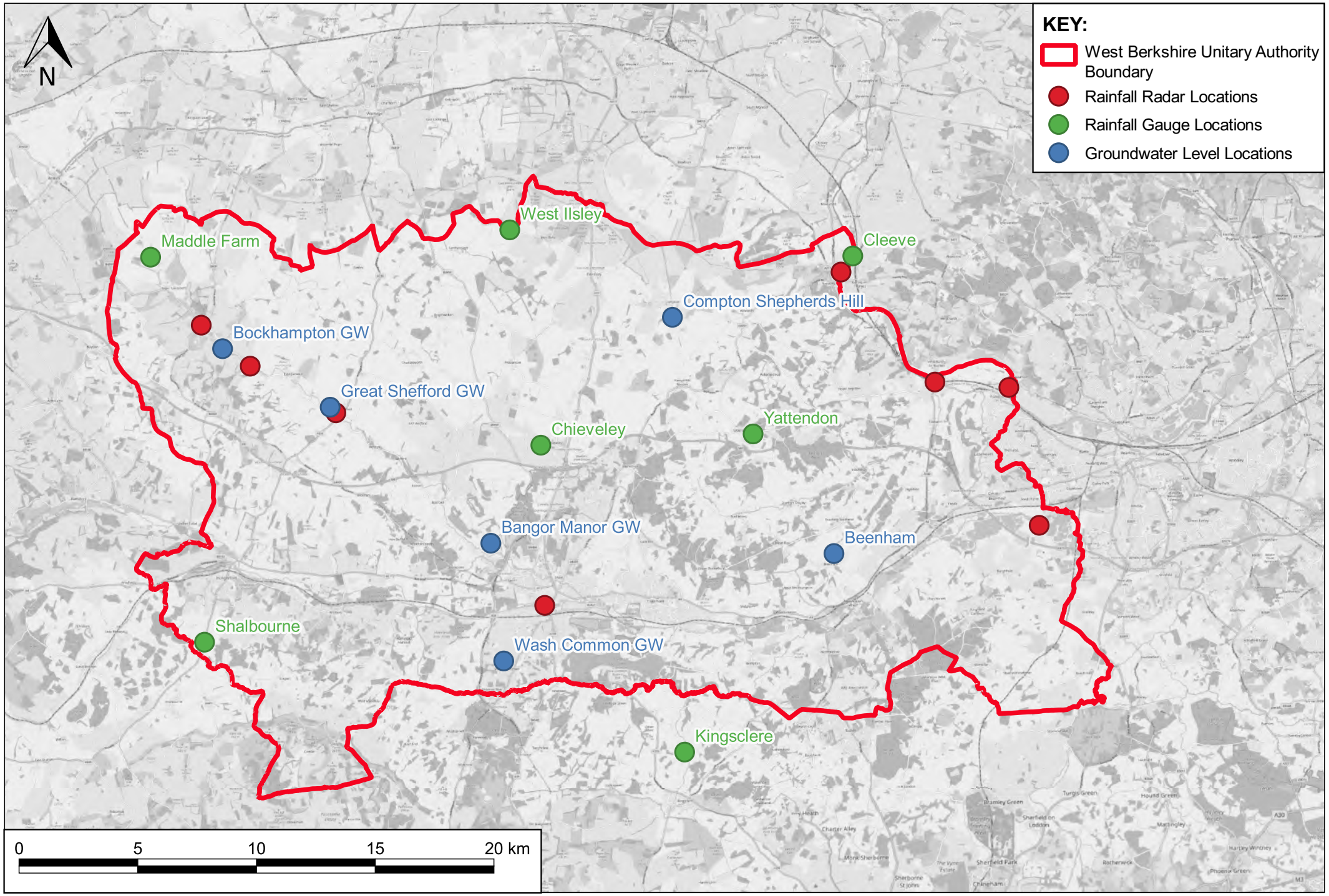
OTHER LOCATIONS

Appendix C

RAINFALL ANALYSIS

Appendix C.1

RAINFALL AND GROUNDWATER LOCATIONS



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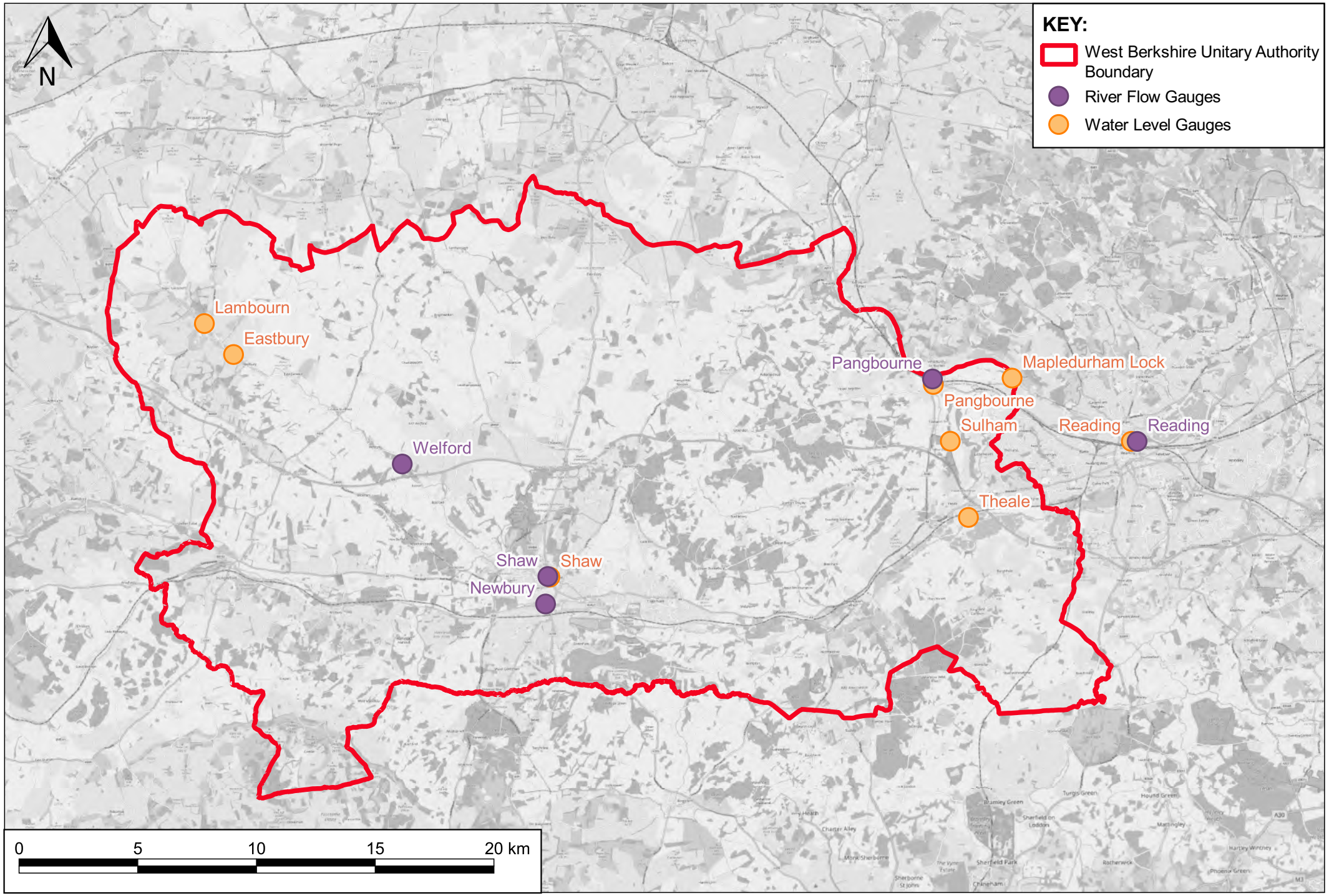
Appendix C.2

RIVER FLOW AND WATER LEVEL GAUGES



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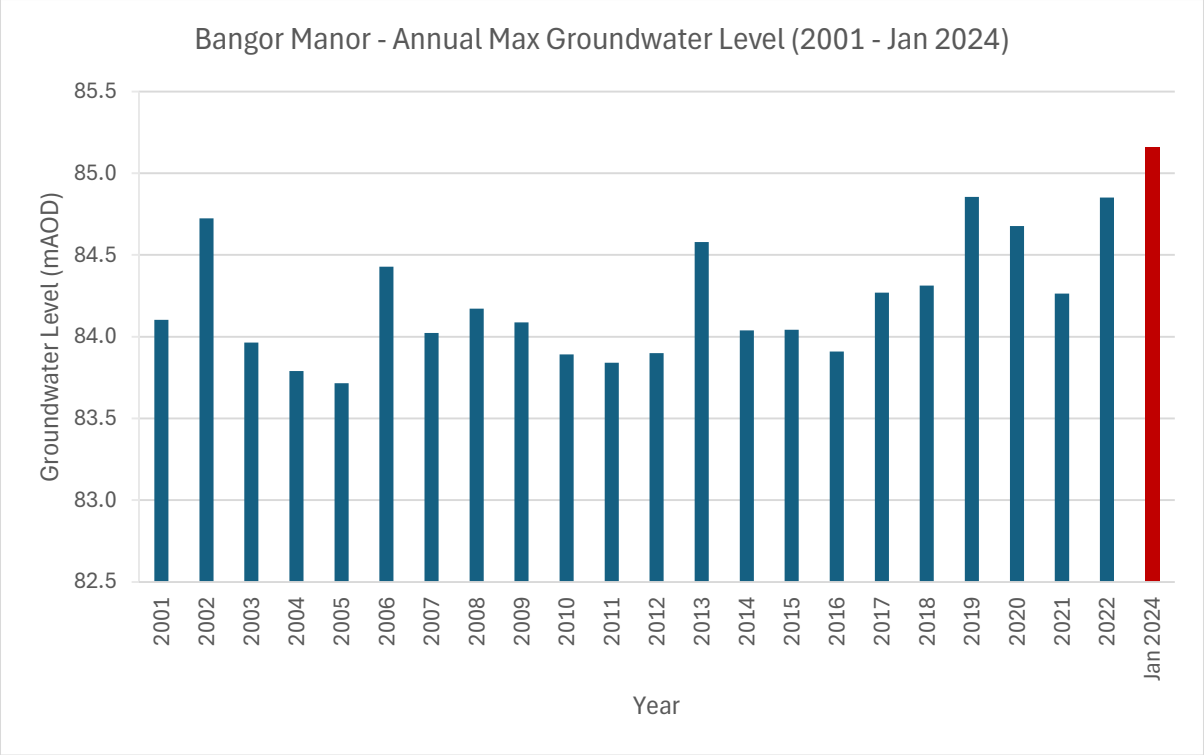
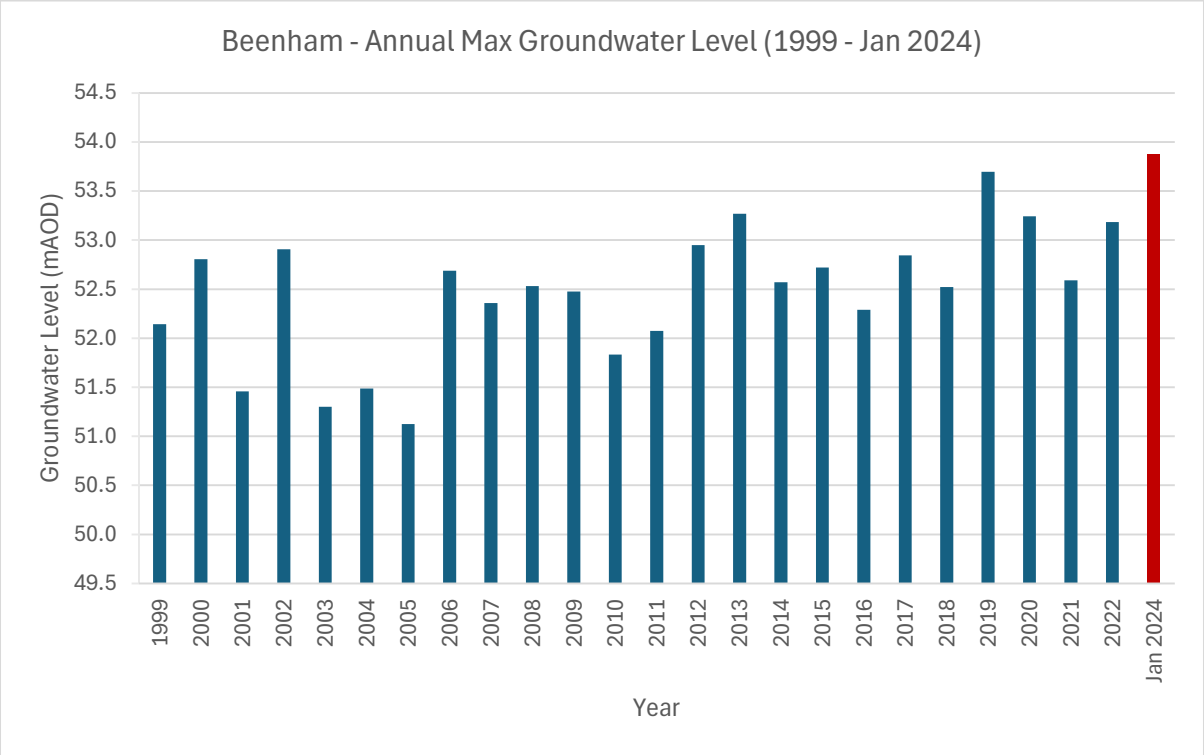
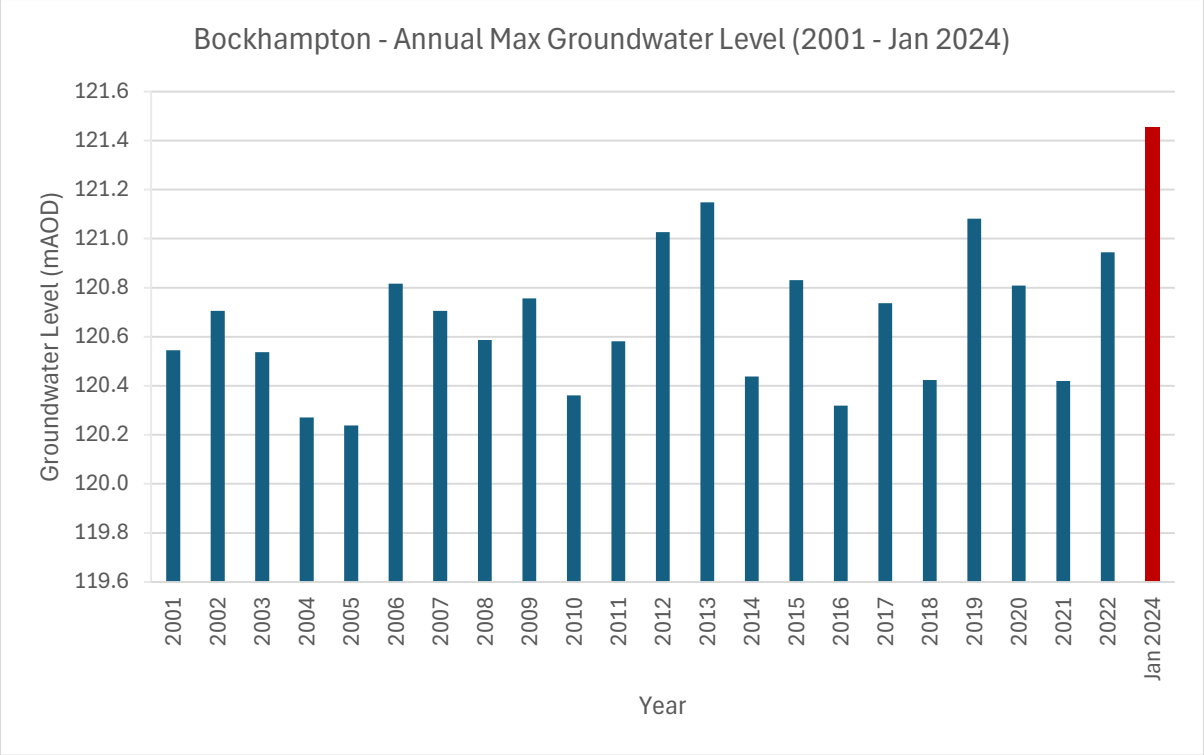
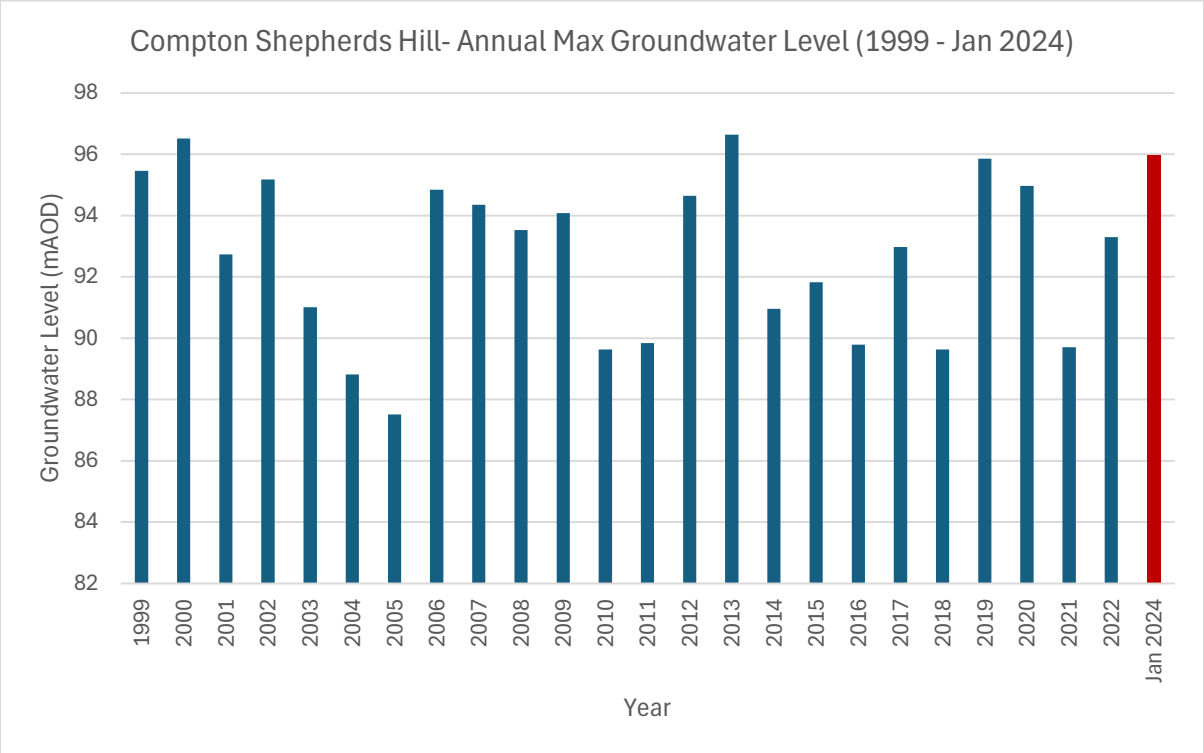
Appendix C.3

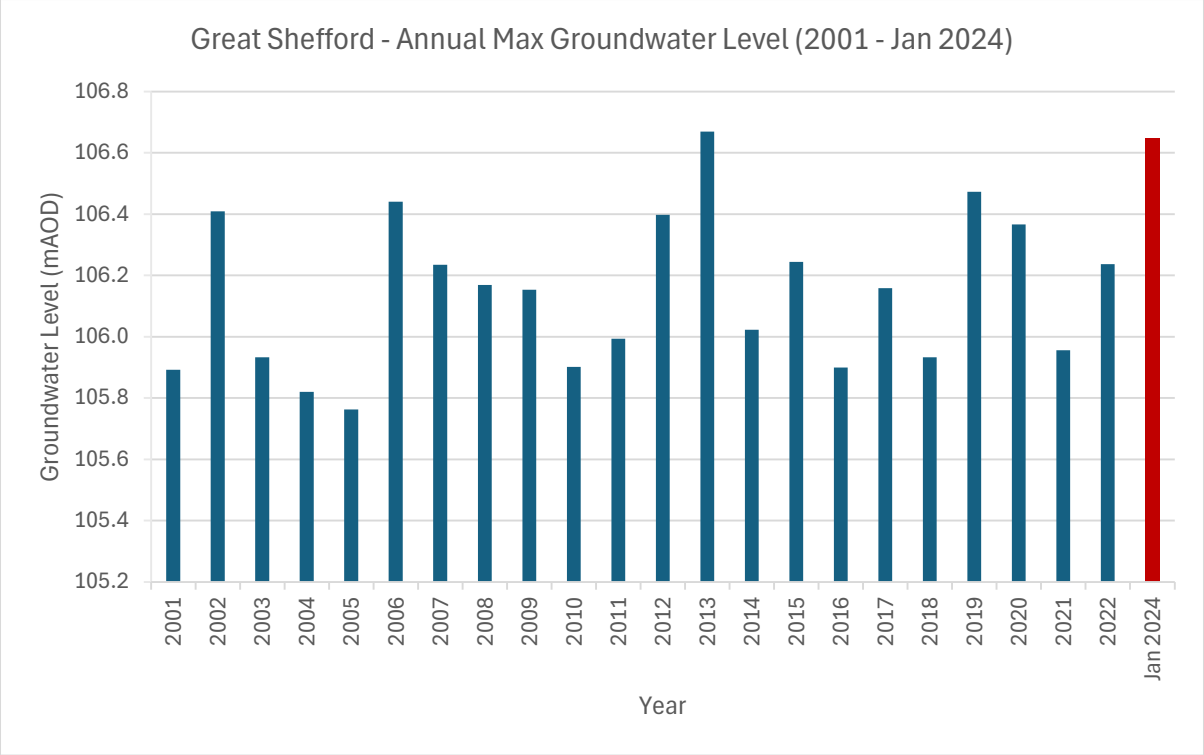
AMAX GROUNDWATER LEVELS

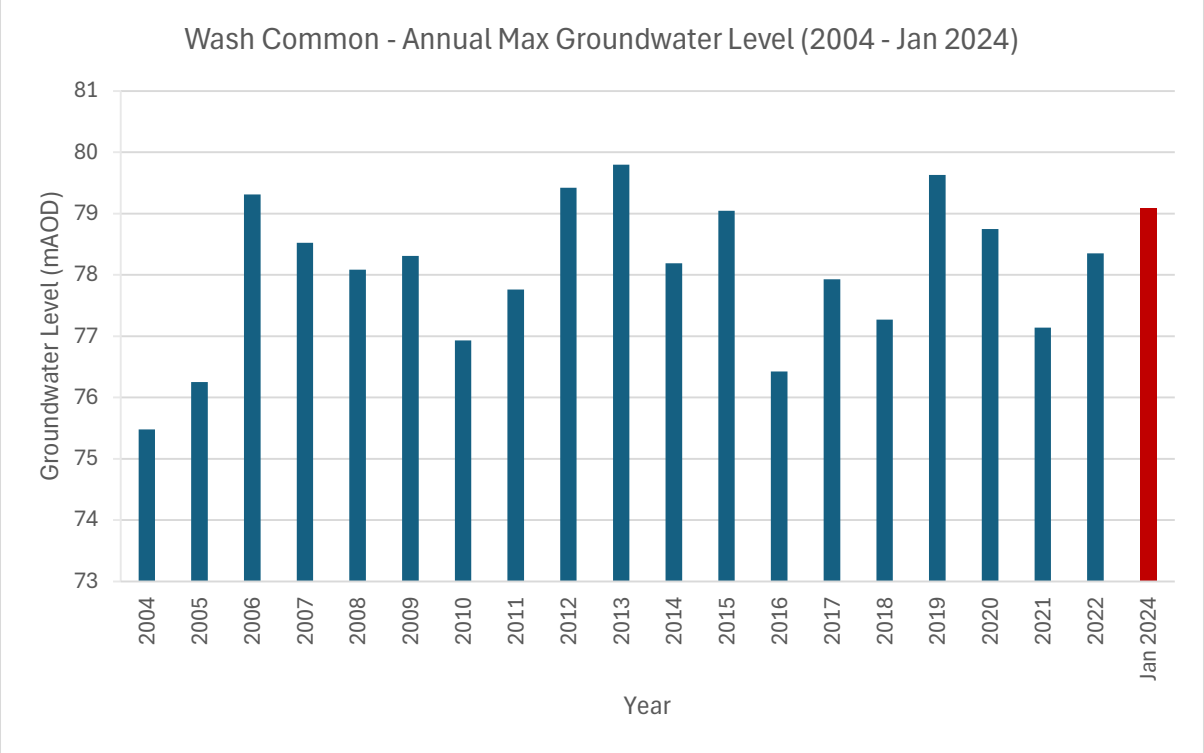

Bangor Manor - Annual Max Groundwater Level (2001 - Jan 2024)
Groundwater Level (mAOD)
85.5
85.0
84.5
84.0
83.5
83.0
82.5
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Jan 2024
Year


Beenham - Annual Max Groundwater Level (1999 - Jan 2024)
Groundwater Level (mAOD)
54.5
54.0
53.5
53.0
52.5
52.0
51.5
51.0
50.5
50.0
49.5
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Jan 2024
Year


Bockhampton - Annual Max Groundwater Level (2001 - Jan 2024)
Groundwater Level (mAOD)
121.6
121.4
121.2
121.0
120.8
120.6
120.4
120.2
120.0
119.8
119.6
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Jan 2024
Year


Compton Shepherds Hill- Annual Max Groundwater Level (1999 - Jan 2024)
Groundwater Level (mAOD)
98
96
94
92
90
88
86
84
82
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Jan 2024
Year


Great Shefford - Annual Max Groundwater Level (2001 - Jan 2024)
Groundwater Level (mAOD)
106.8
106.6
106.4
106.2
106.0
105.8
105.6
105.4
105.2
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Jan 2024
Year


Wash Common - Annual Max Groundwater Level (2004 - Jan 2024)
Groundwater Level (mAOD)
81
80
79
78
77
76
75
74
73
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
Jan 2024
Year

Appendix D

CONSULTATION CORRESPONDENCE

Appendix D.1

ENVIRONMENT AGENCY

Data Requester	
Data Requester Organisation	West Berkshire Council
EA enquiry reference number	GE30387
Location of Section 19	Burghfield
Time period	January 2024

Question 1

Details of any flood defences in the area that might influence flooding at the site / surrounding area.

Environment Agency Response

There are no flood defences in the area.
However, The EA do own the following assets in this area:

- Burghfield Weir (SU66883709380) and
- Burghfield Sluices (SU6700970873)

Question 2

Details of river flows during the above dates, specifically for the River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal where relevant at each site.

Environment Agency Response

There are no gauges in this location that measure either river flows or river levels.

We do have a groundwater levels gauge called 'Burghfield Water Tower' (Station ID: SU66_110). Please use this link Hydrology Data Explorer - Burghfield Water Tower to obtain the daily groundwater levels.

Question 3

Details of fluvial flood return periods for the above storms.

Environment Agency Response

The Environment Agency have not defined the return period of this flood event. We are in discussions internally to decide if we are able to do so.

Question 4

Details of any flood warnings in place during the above dates

Environment Agency Response

Please find summary below of all the relevant flood alerts/flood warnings we have at this location & dates requested:

Alerts

- River Kennet from Thatcham down to Reading (061WAF22LowerKen) –
  In force: 31/12/2023 – 04/02/2024
- River Enborne and Foudry Brook (061WAF22EnbnFdry)
  In force: 02/01/2024 – 07/01/2024

Warnings

- Properties closest to the River Kennet at the Burghfield, Southcote, Coley and Holybrook areas (061FWF22XThlRdg)
  In force: 02/01/2024 - 11/01/2024
- River Kennet from Theale down to Reading (061FWF22ThealRdg)
  Not in force during dates provided
- Foudry Brook from Stratfield Mortimer to Green Park (061FWF22FoudryBk)
  Not in force during dates provided
- River Kennet for Thatcham and Colthrop (061FWF22Thatcham)
  Not in force during dates provided

Question 5

Details of any historic flooding associated with River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal

Environment Agency Response

Please find attached details of historic flood data in this location associated with river Lambourn. This document shows that we have recorded flood outlines for this location which was in 1971,1992, 1993, 2002/3 and 2009. However, please note, that we do not produce a flood outline for every event that occurs. Therefore, it is likely that other instances of flooding have occurred that are not represented in this document.

Historic_flood_data_Burghfield.pdf

An extract of our “Properties affected” database for the Burghfield area is provided in the attached document below.

Properties_affected_Burghfield.zip

You must only use this information for the purposes laid out in the Flood and Water Management Act 2010 as part of your statutory duties relating to the management of flood risk. You may not include the details of individual properties within any published report and this data should not be accessible by any member of staff or the public who do not need access for the purposes laid out in the Flood and Water Management Act 2010.

Question 6

Was the flooding that occurred during Storms Henk, Isha, and Jocelyn reported to the Environment Agency? If the answer to the above question is yes, how did the Environment Agency respond to the incidents?

Environment Agency Response

I've attached the flood log document in the folder below. These are our official records of properties effected during this event. Only properties where we have an exact address and confirmation by either resident, EA staff, or professional partner, are listed in this document.

Flood_log_Burghfield_Jan_2024.zip

You must only use this information for the purposes laid out in the Flood and Water Management Act 2010 as part of your statutory duties relating to the management of flood risk. You may not include the details of individual properties within any published report and this data should not be accessible by any member of staff or the public who do not need access for the purposes laid out in the Flood and Water Management Act 2010.

We did not attend the location or deploy any of our resources in an operational capacity. However, we did send out Community Information Officers (CIOs) to the area on the 6th and 7th of January. The main focus of our CIOs is to provide information and advice to communities and gather intelligence about the latest flooding situation on the ground. They also capture information, such as property flooding information.

Question 7

Are there any known issues / constraints associated with the rivers listed above in terms of capacity?

Environment Agency Response

We can confirm that there are no specific issues/constraints with the river Kennet in this location. Any flooding in this area was a result of the saturated soils, the (repeat) deluges of rain we received (esp. Stork Henk) and high groundwater levels.

Question 8

Are there any plans to carry out improvement works to the rivers within the local vicinity?

Environment Agency Response

There are no planned schemes in this exact area.

The Environment Agency have been investigating a wider Thames scheme called the Thames Valley Flood Scheme.

The Thames Valley Flood Scheme, led by the Environment Agency, is investigating slowing and storing water in across the River Thames catchment to reduce flood risk in the Thames Valley. The River Thames catchment is a large area, which includes the whole of the River Thames upstream of London and all the rivers that flow into it. It is likely to include a combination of flood storage and natural flood management. We have identified 17 locations that could work to store flood water and we continue to investigate these to establish if they provide the flood risk benefits needed. It could be that all, some or none of these sites continue to be of interest to us. You can see maps showing approximate locations of areas we are investigating on our website. The scheme is in the early stages and as with any large project it needs to follow a series of approvals and gain funding to continue.

Thames Valley Flood Scheme is looking to complement existing and planned flood schemes. With the expected impacts of climate change, it will be needed as well as local flood schemes. The scheme also seeks to reduce flood risk for many communities where it has not been possible to have a local flood scheme.
We will continue to engage with those who work, live and visit the Thames Valley as the project evolves. If you would like to find out more, please visit our website, where you can watch our videos explaining what the scheme is and how we have identified flood storage areas for further investigation. You can sign up to our newsletter to find out about our latest work by emailing tvfs@environment-agency.gov.uk.

Data Requester	
Data Requester Organisation	West Berkshire Council
EA enquiry reference number	GE30387
Location of Section 19	Eastbury
Time period	January 2024

Question 1

Details of any flood defences in the area that might influence flooding at the site / surrounding area.

Environment Agency Response

At this location the EA own and operate the Eastbury Flood Alleviation Scheme.

The scheme was built to reduce flooding from the river Lambourn at Eastbury. It is a weir and dam structure and is located just above Eastbury. A regulated amount of water is allowed to flow downstream. As water flow increases some water is held back by the weir and dam, reducing flows downstream. The amount of flow that passes through the structure down to Eastbury can be adjusted. The scheme prevents flash flooding and gives residents notice of flood conditions so that preventative measures can be taken. The scheme opened in 2015.

Question 2

Details of river flows during the above dates, specifically for the River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal where relevant at each site.

Environment Agency Response

There is no gauge in this location that measure river flows.

We do, however, have the Eastbury gauge (Station ID: 2254TH) which measures river levels.

Please use this link Hydrology Data Explorer - Eastbury to obtain the data for daily or sub-daily water levels.

We have checked this data and can confirm that:

Upstream data

- For all the events (Storm Henk, Isha and Jocelyn) is reliable and good quality.

Downstream data

- Only the data during Storm Henk is reliable.
- During the events of storm Isha and Jocelyn, there were lots of spikes in the data which we believe was due to interference to our measuring equipment. This therefore makes the data less reliable and should not be considered.

Question 3

Details of fluvial flood return periods for the above storms.

Environment Agency Response

The Environment Agency have not defined the return period of this flood event. We are in discussions internally to decide if we are able to do so.

Question 4

Details of any flood warnings in place during the above dates

Environment Agency Response

Please find summary below of all the relevant flood alerts/flood warnings we have at this location & dates requested:

Alert:

- River Lambourn and its tributaries from Upper Lambourn down to Newbury (061WAF22Lambourn)
  In force (04/01/2024 – 05/06/2024)

Warning

- River Lambourn from Upper Lambourn to Great Shefford (061FWF22UpLamGSh)
  In force (04/01/2024 – 11/02/2024)

Question 5

Details of any historic flooding associated with River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal

Environment Agency Response

Please find attached details of historic flood data in this location associated with river Lambourn. This document shows that we only have a recorded flood outline for this location which was in 1992. However, please note, that we do not produce a flood outline for every event that occurs. Therefore, it is likely that other instances of flooding have occurred that are not represented in this document.

Historic_flood_data_Eastbury.pdf

An extract of our "Properties affected database" for 2000 until 2014 for the Eastbury area is provided in the attached document below.

You must only use this information for the purposes laid out in the Flood and Water Management Act 2010 as part of your statutory duties relating to the management of flood risk. You may not include the details of individual properties within any published report and this data should not be accessible by any member of staff or the public who do not need access for the purposes laid out in the Flood and Water Management Act 2010.

Properties_affected_Eastbury.zip

Question 6

Was the flooding that occurred during Storms Henk, Isha, and Jocelyn reported to the Environment Agency? If the answer to the above question is yes, how did the Environment Agency respond to the incidents?

Environment Agency Response

I've attached the 'Property flooding log' document in the folder below. These are our official records of properties effected during this event. Only properties where we have an exact address and confirmation by either resident, EA staff, or professional partner, are listed in this document.

Property flooding log_Eastbury.zip

You must only use this information for the purposes laid out in the Flood and Water Management Act 2010 as part of your statutory duties relating to the management of flood risk. You may not include the details of individual properties within any published report and this data should not be accessible by any member of staff or the public who do not need access for the purposes laid out in the Flood and Water Management Act 2010.

We did not attend the location or deploy any of our resources in an operational capacity. However, we did send out Community Information Officers (CIOs) to the area on the 11th and 16th of January. The main focus of our CIOs is to provide information and advice to communities and gather intelligence about the latest flooding situation on the ground. They also capture information, such as property flooding information.

Question 7

Are there any known issues / constraints associated with the rivers listed above in terms of capacity?

Environment Agency Response

We can confirm that there are no specific issues/constraints with the river Lambourn in this location. Any flooding in this area was a result of the saturated soils, the (repeat) deluges of rain we received (esp. Stork Henk) and high groundwater levels.

Question 8

Are there any plans to carry out improvement works to the rivers within the local vicinity?

Environment Agency Response

We can confirm that the Eastbury location is not covered by any planned or active schemes and there are no plans to carry out improvement works to the river Lambourn in this location.

Data Requester	
Data Requester Organisation	West Berkshire Council
EA enquiry reference number	GE30387
Location of Section 19	Great Shefford
Time period	January 2024

Question 1

Details of any flood defences in the area that might influence flooding at the site / surrounding area.

Environment Agency Response

Permanent assets

There currently no permanent flood defence assets (see below about building works).

Temporary/mobile assets

In Great Shefford we had a planned temporary flood barrier deployment. However through a national review we have concluded that the current plan is not viable or safe for the public, our partners and our staff, and therefore cannot be deployed. Our review highlighted safety and feasibility concerns due to the alignment of the barrier on the main A338 Wantage Road.

Instead, we have a pumping plan in place which aims to reduce flood risk for those properties that would have benefitted from the temporary barrier plan. This is an interim position in advance of the permanent Great Shefford flood alleviation scheme. This pumping plan was deployed in winter 2023/2024.

Question 2

Details of river flows during the above dates, specifically for the River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal where relevant at each site.

Environment Agency Response

There are no river level or flow monitoring gauges along the Great Shefford Stream.

We do have a groundwater level measuring site: Great Shefford (station ID no: SU37_1) in this location. Please use this link Hydrology Data Explorer - Great Shefford to obtain the data for daily or at 15-minute intervals.

We have checked this data and can confirm that the data is reliable and accurate.

Question 3

Details of fluvial flood return periods for the above storms.

Environment Agency Response

The Environment Agency have not defined the return period of this flood event. We are in discussions internally to decide if we are able to do so.

Question 4

Details of any flood warnings in place during the above dates

Environment Agency Response

Please find below the details regarding the flood warning that was issued during this flood event:

Flood warning code:	061FWF22UpLamGSh	
Flood Warning Area Name:	River Lambourn from Upper Lambourn to Great Shefford	
River Gauge:	Eastbury FCS FD Lambourn	
Time and Date issued:	04/01/2024	20:50
Time and date FW was removed:	11/02/2024	11:43

Question 5

Details of any historic flooding associated with River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal

Environment Agency Response

We have no historic flood outlines for this area. However, please note, that we do not produce a flood outline for every event that occurs. Therefore, it is likely that other instances of flooding have occurred that are not represented in this document.

An extract of our “Properties affected database” for the Great Shefford area is provided in the attached document below.

You must only use this information for the purposes laid out in the Flood and Water Management Act 2010 as part of your statutory duties relating to the management of flood risk. You may not include the details of individual properties within any published report and this data

should not be accessible by any member of staff or the public who do not need access for the purposes laid out in the Flood and Water Management Act 2010.

Properties_affected_Great_Shefford.zip

Question 6

Was the flooding that occurred during Storms Henk, Isha, and Jocelyn reported to the Environment Agency? If the answer to the above question is yes, how did the Environment Agency respond to the incidents?

Environment Agency Response

We received the one report of flooding that occurred during Storms Henk, Isha, and Jocelyn in this location.
From January 10th, we mobilised pumps and pipes in the village to reduce the risk of property flooding from the watercourse. We also sent out our staff to check water levels. The pumps remained in place for several weeks. We highlighted that the pumping was there to control groundwater flowing through the stream and prevent overflowing from the stream down the road and into properties. The pumping will not reduce overall groundwater levels below the surface and this flooding may still impact cellars and properties.

Reports of flooding_Great_Shefford.zip

Question 7

Are there any known issues / constraints associated with the rivers listed above in terms of capacity?

Environment Agency Response

There are no specific known issues or constraints (in terms of capacity) associated with the Great Shefford Stream in this location beyond what is normal. We are aware that this location can often flood due to high groundwater levels and we are currently constructing a scheme to reduce the risk of fluvial flooding from the Great Shefford Stream caused by high groundwater levels. Any flooding in this area was a result of the saturated soils, the repeat and deluges of rain we received and high groundwater levels in the area.

Question 8

Are there any plans to carry out improvement works to the rivers within the local vicinity?

Environment Agency Response

As previously mentioned in the response to question 1, construction of the Great Shefford Flood Alleviation Scheme is currently underway. When completed, it will provide the community with a more sustainable solution and far greater resilience than a temporary barrier plan.

Data Requester	
Data Requester Organisation	West Berkshire Council
EA enquiry reference number	GE30387
Location of Section 19	Lambourn
Time period	January 2024

Question 1

Details of any flood defences in the area that might influence flooding at the site / surrounding area.

Environment Agency Response

There are currently no flood defences in this area.

The geology of the Lambourn Valley is predominately chalk, which heavily influences the susceptibility of the area to ground water flooding and from high ground water levels raising water levels in rivers.

Question 2

Details of river flows during the above dates, specifically for the River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal where relevant at each site.

Environment Agency Response

There is no gauge in this location that measure river flows.

We de however, have the Lambourn gauge (Station ID: 2251TH) which measures measure river levels.

Please use this link Hydrology Data Explorer - Lambourn to obtain the data for daily or at 15-minute intervals river levels. We have checked this data and can confirm that the data is reliable and of good quality.

Question 3

Details of fluvial flood return periods for the above storms.

Environment Agency Response

The Environment Agency have not defined the return period of this flood event. We are in discussions internally to decide if we are able to do so.

Question 4

Details of any flood warnings in place during the above dates

Environment Agency Response

Please find summary below of all the relevant flood alerts/flood warnings we have at this location & dates requested:

Alert

- River Lambourn and its tributaries from Upper Lambourn down to Newbury (061WAF22Lambourn)
  In force: 04/01/2024 – 05/06/2024

Warning

- River Lambourn from Upper Lambourn to Great Shefford (061FWF22UpLamGSh)
  In force: 04/01/2024 – 11/02/2024

Question 5

Details of any historic flooding associated with River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal

Environment Agency Response

Please find attached details of historic flood data in this location associated with river Lambourn. This document shows that we only have a recorded flood outline for this location which was in 1992. However, please note, that we do not produce a flood outline for every event that occurs. Therefore, it is likely that other instances of flooding have occurred that are not represented in this document.

Historic_flood_data_Lambourn.pdf

An extract of our “Properties affected database” for 2007 until 2023 for the Lambourn area is provided in the attached document below.

Properties_affected_Lambourn.zip

You must only use this information for the purposes laid out in the Flood and Water Management Act 2010 as part of your statutory duties relating to the management of flood risk. You may not include the details of individual properties within any published report and this data should not be accessible by any member of staff or the public who do not need access for the purposes laid out in the Flood and Water Management Act 2010.

Question 6

Was the flooding that occurred during Storms Henk, Isha, and Jocelyn reported to the Environment Agency? If the answer to the above question is yes, how did the Environment Agency respond to the incidents?

Environment Agency Response

Our records show that we did not receive any reports of flooding in this location.

We did however send out Community Information Officers (CIOs) to the area on January 11th 2024. The main focus of our CIOs is to provide information and advice to communities and gather intelligence about the latest flooding situation on the ground. They also capture information, such as property flooding information.

Question 7

Are there any known issues / constraints associated with the rivers listed above in terms of capacity?

Environment Agency Response

There are no specific known issues or constraints (in terms of capacity) associated with the River Lambourn in this location. Any flooding in this area was a result of the saturated soils, the repeat and deluges of rain we received and high groundwater levels in the area.

Question 8

Are there any plans to carry out improvement works to the rivers within the local vicinity?

Environment Agency Response

There are currently no plans to carry out improvement works to the rivers within the local vicinity. However, we are working in partnership with West Berkshire Council to raise community awareness and to help provide homeowners with advice on individual property level flood protection measures such as installation and deployment of a range of flood resistance and flood resilience measures.

Data Requester	
Data Requester Organisation	West Berkshire Council
EA enquiry reference number	GE30387
Location of Section 19	Newbury
Time period	January 2024

Question 1

Details of any flood defences in the area that might influence flooding at the site / surrounding area.

Environment Agency Response

There are currently no flood defences in this area.

Question 2

Details of river flows during the above dates, specifically for the River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal where relevant at each site.

Environment Agency Response

There is the Newbury gauge (Station ID: 2250 TH) on the River Kennet and the Shaw Gauge (Station ID: 2270_w1TH) on the River Lambourn in this location that measure river flows.

Please use these links Hydrology Data Explorer - Newbury and Hydrology Data Explorer - Shaw to obtain the data for daily or 15min river flow.

We have checked this data and can confirm:

Newbury

Due to an error with our equipment, the Newbury gauge was overreading by more than 10% during this event and is therefore not accurate.

Shaw

This data is considered to be reliable during all the events

Question 3

Details of fluvial flood return periods for the above storms.

Environment Agency Response

The Environment Agency have not defined the return period of this flood event. We are in discussions internally to decide if we are able to do so.

Question 4

Details of any flood warnings in place during the above dates

Environment Agency Response

Please find summary below of all the relevant flood alerts/flood warnings we have at this location & dates requested:

Alert

- River Lambourn and its tributaries from Upper Lambourn down to Newbury
  061WAF22Lambourn
  In force: 04/01/2024 – 05/06/2024
- River Kennet and its tributaries from Berwick Bassett down to Newbury
  061WAF22UpperKen
  In force: 02/01/2024 - 07/03/2024

Warning

- Kennet at Newbury
  061FWF22Newbury
  Not in force during dates provided
- River Lambourn from Donnington to Newbury
  (061FWF22LowLamb)
  In force: 07/01/2024 – 30/01/2024

Question 5

Details of any historic flooding associated with River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal

Environment Agency Response

Please find attached details of historic flood data in this location associated with river Lambourn. This document shows that we only have a recorded flood outline for this location which was in 1971, 1979 and 2007. However, please note, that we do not produce a flood outline for every event that occurs. Therefore, it is likely that other instances of flooding have occurred that are not represented in this document.

Historic_flood_data_
Newbury.pdf

An extract of our "Properties affected database" for 2007 until 2023 for the Newbury area is provided in the attached document below.

You must only use this information for the purposes laid out in the Flood and Water Management Act 2010 as part of your statutory duties relating to the management of flood risk. You may not include the details of individual properties within any published report and this data should not be accessible by any member of staff or the public who do not need access for the purposes laid out in the Flood and Water Management Act 2010.

Properties_affected_Newbury.zip

Question 6

Was the flooding that occurred during Storms Henk, Isha, and Jocelyn reported to the Environment Agency? If the answer to the above question is yes, how did the Environment Agency respond to the incidents?

Environment Agency Response

I've attached the 'Property_flooding_log_Newbury' document in the folder below. These are our official records of properties effected during this event. Only properties where we have an exact address and confirmation by either resident, EA staff, or professional partner, are listed in this document.

You must only use this information for the purposes laid out in the Flood and Water Management Act 2010 as part of your statutory duties relating to the management of flood risk. You may not include the details of individual properties within any published report and this data should not be accessible by any member of staff or the public who do not need access for the purposes laid out in the Flood and Water Management Act 2010.

Property_flooding_log_Newbury.zip

We did not attend the location or deploy any of our resources in an operational capacity. However, we did send out Community Information Officers (CIOs) to the area on various days in January. The main focus of our CIOs is to provide information and advice to communities and gather intelligence about the latest flooding situation on the ground. They capture information, such as property flooding information. According to the CIO plans for each day, our officers attended the Newbury and Shaw area from the 4th of January to the 12th of January. However, please note that they may have missed some locations due to incident response constraints.

Question 7

Are there any known issues / constraints associated with the rivers listed above in terms of capacity?

Environment Agency Response

We can confirm that there are no specific issues/constraints with the river Lambourn or the river Kennet in this location. Any flooding in this area was a result of the saturated soils, the (repeat) deluges of rain we received (esp. Stork Henk) and high groundwater levels.

Question 8

Are there any plans to carry out improvement works to the rivers within the local vicinity?

Environment Agency Response

There are currently two plans for improvement works to the rivers within the local vicinity. Firstly, the funding provided by us towards the study carried out by Berkshire County council in the Clay Hill area of Newbury. This is something that the West Berkshire County Council is aware of and something that the Environment Agency is not involved in.

Secondly, the wider Thames Valley Flood Scheme:

The Environment Agency have been investigating a wider Thames scheme called the Thames Valley Flood Scheme.

The Thames Valley Flood Scheme, led by the Environment Agency, is investigating slowing and storing water in across the River Thames catchment to reduce flood risk in the Thames Valley. The River Thames catchment is a large area, which includes the whole of the River Thames upstream of London and all the rivers that flow into it. The scheme is investigating a combination of flood storage and natural flood management. We have identified 17 locations that could work to store flood water and we continue to investigate these to establish if they provide the flood risk benefits needed. It could be that all, some, or none of these sites continue to be of interest to us. You can see maps showing approximate locations of areas we are investigating on our website. The scheme is in the early stages and as with any large project it needs to follow a series of approvals and gain funding to continue.
Thames Valley Flood Scheme is looking to complement existing and planned flood schemes. With the expected impacts of climate change, it will be needed as well as local flood schemes. The scheme also seeks to reduce flood risk for many communities where it has not been possible to have a local flood scheme.
We will continue to engage with those who work, live and visit the Thames Valley as the project evolves. If you would like to find out more please visit our website, where you can watch our videos explaining what the scheme is and how we have identified flood storage areas for further investigation. You can sign up to our newsletter to find out about our latest work by emailing tvfs@environment-agency.gov.uk.

Data Requester	
Data Requester Organisation	West Berkshire Council
EA enquiry reference number	GE30387
Location of Section 19	Pangbourne
Time period	January 2024

Question 1

Details of any flood defences in the area that might influence flooding at the site / surrounding area.

Environment Agency Response

The flood defences in this area are mainly in the form of river control measures (weirs) which are primarily navigation assets.

These would have been operated responsibly by our trained lock and weir keepers and would have been open in accordance with our procedures to maintain water levels in the Thames for Navigation purposes.

Although they are primarily navigation assets at some point in their operation, it is recognised that the local weirs do also have a small impact on mitigating flood risk (estimated at 10-20% in real terms).

Question 2

Details of river flows during the above dates, specifically for the River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal where relevant at each site.

Environment Agency Response

There is the Pangbourne gauge (Station ID: 2190TH) that measure river flows on the River Pang and the Whitchurch lock (Station ID: 2004TH) in this location on the River Thames that measures river levels.

Please use this link Hydrology Data Explorer - Pangbourne to obtain the data for daily or 15min river flow data and this link Hydrology Data Explorer - Whitchurch Lock to obtain the river level data.

We have checked this data and can confirm:

Pangbourne gauge station

This data is considered to be reliable during all the events

Whitchurch Lock gauge station

Due to a large reset on site visit in March, this data is estimated. This data is therefore unreliable and should not be considered.

Question 3

Details of fluvial flood return periods for the above storms.

Environment Agency Response

The Environment Agency have not defined the return period of this flood event. We are in discussions internally to decide if we are able to do so.

Question 4

Details of any flood warnings in place during the above dates

Environment Agency Response

Please find summary below of all the relevant flood alerts/flood warnings we have at this location & dates requested:

- Alert:
  - River Pang from East Ilsley to Pangbourne and Sulham Brook (061WAF21PangSulm)
    - In force: 04/01/2024 – 18/02/2024 in force between 31/12/2023 – 02/06/2024
  - River Thames from Pangbourne to Purley (061WAF23PrlyPang)
    - In force: 01/01/2024 – **14**/01/2024
- Warning:
  - River Thames at Pangbourne and Whitchurch (061FWF23PngWitch)
    - In force: 05/01/2024 – **14**/01/2024
  - Sulham Brook at Pangbourne *(061FWF21SulmPang)*
    - Not issued during the timeframe
  - River Pang at Pangbourne *(061FWF21Pangbrne)*
    - Not issued during the timeframe

Question 5

Details of any historic flooding associated with River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal

Environment Agency Response

Regarding details of historic flooding associated with the area, we have checked our properties affected database and found 265 records of property flooding around Pangbourne.

Additionally, we have checked our other database where we hold further reports of groundwater flooding, and there are 34 records of groundwater flooding around the location of interest.

Please note that these records are not all confirmed instances of property flooding.

Pang Historical Flooding Records.zip

Please also find attached historic flood map data for this location. This document shows that we have recorded flood outlines for this location for years which range from 1947 all the way through to 2009. However, please note, that we do not produce a flood outline for every event that occurs. Therefore, it is likely that other instances of flooding have occurred that are not represented in this document.

Historic_flood_data_Pangbourne.pdf

You must only use this information for the purposes laid out in the Flood and Water Management Act 2010 as part of your statutory duties relating to the management of flood risk. You may not include the details of individual properties within any published report and this data should not be accessible by any member of staff or the public who do not need access for the purposes laid out in the Flood and Water Management Act 2010.

Question 6

Was the flooding that occurred during Storms Henk, Isha, and Jocelyn reported to the Environment Agency? If the answer to the above question is yes, how did the Environment Agency respond to the incidents?

Environment Agency Response

I've attached the 'Property_flooding_log_panbourne document in the folder below. These are our official records of properties effected during this event. Only properties where we have an exact address and confirmation by either resident, EA staff, or professional partner, are listed in this document.

You must only use this information for the purposes laid out in the Flood and Water Management Act 2010 as part of your statutory duties relating to the management of flood risk. You may not include the details of individual properties within any published report and this data

should not be accessible by any member of staff or the public who do not need access for the purposes laid out in the Flood and Water Management Act 2010.

Property_flooding_log_Pangbourne.zip

We did not attend the location or deploy any of our resources in an operational capacity. However, we did send out Community Information Officers (CIOs) to the area on the 4th and 5th of January. The main focus of our CIOs is to provide information and advice to communities and gather intelligence about the latest flooding situation on the ground. They capture information, such as property flooding information.

Question 7

Are there any known issues / constraints associated with the rivers listed above in terms of capacity?

Environment Agency Response

We can confirm that there are no specific issues/constraints with the river Pang and the River Thames in this location. Any flooding in this area was a result of the saturated soils, the (repeat) deluges of rain we received (esp. Stork Henk) and high groundwater levels.

Question 8

Are there any plans to carry out improvement works to the rivers within the local vicinity?

Environment Agency Response

There are no planned schemes in this exact area.

The Environment Agency have been investigating a wider Thames scheme called the Thames Valley Flood Scheme.

The Thames Valley Flood Scheme, led by the Environment Agency, is investigating slowing and storing water in across the River Thames catchment to reduce flood risk in the Thames Valley. The River Thames catchment is a large area, which includes the whole of the River Thames upstream of London and all the rivers that flow into it. The scheme are investigating a combination of flood storage and natural flood management. We have identified 17 locations that could work to store flood water and we continue to investigate these to establish if they provide the flood risk benefits needed. It could be that all, some or none of these sites continue to be of interest to us. You can see maps showing approximate locations of areas we are investigating on our website. The scheme is in the early stages and as with any large project it needs to follow a series of approvals and gain funding to continue.

Thames Valley Flood Scheme is looking to complement existing and planned flood schemes. With the expected impacts of climate change, it will be needed as well as local flood schemes. The scheme also seeks to reduce flood risk for many communities where it has not been possible to have a local flood scheme.
We will continue to engage with those who work, live and visit the Thames Valley as the project evolves. If you would like to find out more please visit our website, where you can watch our videos explaining what the scheme is and how we have identified flood storage areas for further investigation. You can sign up to our newsletter to find out about our latest work by emailing tvfs@environment-agency.gov.uk.

Data Requester	
Data Requester Organisation	West Berkshire Council
EA enquiry reference number	GE30387
Location of Section 19	Purley
Time period	January 2024

Question 1

Details of any flood defences in the area that might influence flooding at the site / surrounding area.

Environment Agency Response

Purley has a long history of flooding. The mechanisms here are complicated as it is a combination of fluvial, surface and groundwater flooding.

There is a flood bund behind Wintringham Way (approx. SU6684976381), which was put in place after the 2013/2014 flooding. In response to rising water levels in January 2024 we deployed 3 pumps in Purley. These continued to operate until the risk of property flooding was reduced.

Question 2

Details of river flows during the above dates, specifically for the River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal where relevant at each site.

Environment Agency Response

There is no gauge in this location that measure river flows.

We do, however, have the Mapledurham Lock (Station ID: 2199TH) which measures river levels.

Please use this link Hydrology Data Explorer - Mapledurham Lock to obtain the daily river levels.

We have checked this data and can confirm that the data is reliable.

Question 3

Details of fluvial flood return periods for the above storms.

Environment Agency Response

The Environment Agency have not defined the return period of this flood event. We are in discussions internally to decide if we are able to do so.

Question 4

Details of any flood warnings in place during the above dates

Environment Agency Response

Please find summary below of all the relevant flood alerts/flood warnings we have at this location & dates requested:

Alert

- River Thames from Pangbourne to Purley (061WAF23PrlyPang)
  In force: 01/01/2024 – 14/01/2024

Warning:

- River Thames at Purley Village (061FWF23Purley)
  In force: 03/01/2024 – 13/01/2024

Question 5

Details of any historic flooding associated with River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal

Environment Agency Response

Please find attached details of historic flood data in this location associated with river Thames. This document shows that we have recorded flood outlines for this location which was in 1947,1977, 2000, 2002/3, 2007 and 2008. However, please note, that we do not produce a flood outline for every event that occurs. Therefore, it is likely that other instances of flooding have occurred that are not represented in this document.

Historic_flood_data_Purley.pdf

An extract of our “Properties affected” database for the Purley on Thames area is provided in the attached document below.

Properties_affected_Purley.zip

You must only use this information for the purposes laid out in the Flood and Water Management Act 2010 as part of your statutory duties relating to the management of flood risk. You may not include the details of individual properties within any published report and this data should not be accessible by any member of staff or the public who do not need access for the purposes laid out in the Flood and Water Management Act 2010.

Question 6

Was the flooding that occurred during Storms Henk, Isha, and Jocelyn reported to the Environment Agency? If the answer to the above question is yes, how did the Environment Agency respond to the incidents?

Environment Agency Response

I've attached the 'flood log' document in the folder below. These are our official records of properties effected during this event. Only properties where we have an exact address and confirmation by either resident, EA staff, or professional partner, are listed in this document.

Flood_log_Purley.zip

You must only use this information for the purposes laid out in the Flood and Water Management Act 2010 as part of your statutory duties relating to the management of flood risk. You may not include the details of individual properties within any published report and this data should not be accessible by any member of staff or the public who do not need access for the purposes laid out in the Flood and Water Management Act 2010.

High-volume pumps were in operation at Purley-on-Thames to reduce flood risk to local communities. We also send out Community Information Officers (CIOs) to the area on various days in January. The main focus of our CIOs is to provide information and advice to communities and gather intelligence about the latest flooding situation on the ground. They capture information, such as property flooding information.

Question 7

Are there any known issues / constraints associated with the rivers listed above in terms of capacity?

Environment Agency Response

We can confirm that there are no specific issues/constraints with the river Thames in this location. The Thames weirs are adjusted gradually in response to changes in flows, to maintain levels within a range that allows for navigation. In periods of high river flow, and in advance of any significant flooding, the weirs are fully opened so that water is not held unnecessarily.

This winter has been the wettest on record across England, which resulted in widespread and prolonged flooding in the Thames floodplain.

Question 8

Are there any plans to carry out improvement works to the rivers within the local vicinity?

Environment Agency Response

There are no planned schemes in this exact area.

However, the Environment Agency have been investigating a wider Thames scheme called the Thames Valley Flood Scheme.

The Thames Valley Flood Scheme, led by the Environment Agency, is investigating slowing and storing water in across the River Thames catchment to reduce flood risk in the Thames Valley. The River Thames catchment is a large area, which includes the whole of the River Thames upstream of London and all the rivers that flow into it. The scheme are investigating a combination of flood storage and natural flood management. We have identified 17 locations that could work to store flood water and we continue to investigate these to establish if they provide the flood risk benefits needed. It could be that all, some or none of these sites continue to be of interest to us. You can see maps showing approximate locations of areas we are investigating on our website. The scheme is in the early stages and as with any large project it needs to follow a series of approvals and gain funding to continue.

Thames Valley Flood Scheme is looking to complement existing and planned flood schemes. With the expected impacts of climate change, it will be needed as well as local flood schemes. The scheme also seeks to reduce flood risk for many communities where it has not been possible to have a local flood scheme.
We will continue to engage with those who work, live and visit the Thames Valley as the project evolves. If you would like to find out more, please visit our website, where you can watch our videos explaining what the scheme is and how we have identified flood storage areas for further investigation. You can sign up to our newsletter to find out about our latest work by emailing tvfs@environment-agency.gov.uk.

Data Requester	
Data Requester Organisation	West Berkshire Council
EA enquiry reference number	GE30387
Location of Section 19	Streatley
Time period	January 2024

Question 1

Details of any flood defences in the area that might influence flooding at the site / surrounding area.

Environment Agency Response

The flood defences in the area of Streatley mainly come in the form of river control measures (weirs).

These would have been operated responsibly by our trained lock and weir keepers and would have been open in accordance with our procedures to maintain water levels in the Thames for navigation purposes.

At some point in their operation, it is recognised that the local weirs do have a small proportion of flood risk mitigation purpose (10-20% in real terms). If conditions allow, the lock keeper can adjust different weirs and maintain a head of water at a balanced level for a short time.

In some cases this is not possible as the river is rising too fast for any slight adjustments and normal operating regime will ensue. During the named storms of early 2024 the river had risen and the lock and weir keepers adjusted weirs appropriately until they were fully drawn, and closed back in when appropriate. On this occasion weirs were only able to be part way shut back in before the next storm arrived and weirs were reopened.

When a weir is fully drawn there is no further adjustments to be made and the Thames operates as a natural river in terms of water levels from that point.

Question 2

Details of river flows during the above dates, specifically for the River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal where relevant at each site.

Environment Agency Response

There is the Goring lock gauge (Station ID: 2003TH) on the River Thames and the Cleeve Lock Gauge (Station ID: 2002TH) on the River Thames in this location that measure river levels.

Please use these links Hydrology Data Explorer - Goring Lock and Hydrology Data Explorer - Cleeve Lock to obtain the data for daily or 15min river flow.

We have checked this data and can confirm:

Goring Lock

This data is considered to be reliable during all the events

Cleeve Lock

Due to a large reset on site visit in March, this data is estimated. This data is therefore unreliable and should not be considered.

Question 3

Details of fluvial flood return periods for the above storms.

Environment Agency Response

The Environment Agency have not defined the return period of this flood event. We are in discussions internally to decide if we are able to.

Question 4

Details of any flood warnings in place during the above dates

Environment Agency Response

Please find summary below of all the relevant flood alerts/flood warnings we have at this location & dates requested:

Alert

- River Thames and its tributaries from Days Lock to above Pangbourne (061WAF23WallGor)
  In force: 31/12/2023 – 15/01/2024

Warning

- River Thames at Goring and Streatley (061FWF23Goring)
  Not in force during dates provided

Question 5

Details of any historic flooding associated with River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal

Environment Agency Response

Please find attached details of historic flood data in this location associated with river Thames.

You must only use this information for the purposes laid out in the Flood and Water Management Act 2010 as part of your statutory duties relating to the management of flood risk. You may not include the details of individual properties within any published report and this data should not be accessible by any member of staff or the public who do not need access for the purposes laid out in the Flood and Water Management Act 2010.

Historic_flood_data_Streatley.pdf

An extract of our "Properties affected" database for 2007 until 2023 for the Streatley area is provided in the attached document below.

Properties_affected_Streatley.zip

Question 6

Was the flooding that occurred during Storms Henk, Isha, and Jocelyn reported to the Environment Agency? If the answer to the above question is yes, how did the Environment Agency respond to the incidents?

Environment Agency Response

Our records show that we received one report of flooding in this location. This was from the Goring Lock at the Paddle and Rymer weir, where there were reports of debris build up causing water to swirl into a residential property.

Due to relatively low impact of flooding in this area, limited number of resources were deployed in this incident. We shared any information about riparian owners' responsibility, and about EA's responsibility and resources, with any customers who did contact us.

Question 7

Are there any known issues / constraints associated with the rivers listed above in terms of capacity?

Environment Agency Response

There are no specific known issues or constraints (in terms of capacity) associated with the River Thames in this location. Any flooding in this area was a result of the saturated soils, the repeat and deluges of rain we received and high groundwater levels in the area.

Question 8

Are there any plans to carry out improvement works to the rivers within the local vicinity?

Environment Agency Response

Thames Valley Flood Scheme

The Environment Agency have been investigating a wider Thames scheme called the Thames Valley Flood Scheme.

The Thames Valley Flood Scheme, led by the Environment Agency, is investigating slowing and storing water in across the River Thames catchment to reduce flood risk in the Thames Valley. The River Thames catchment is a large area, which includes the whole of the River Thames upstream of London and all the rivers that flow into it. Scheme investigations include a combination of flood storage and natural flood management. We have identified 17 locations that could work to store flood water and we continue to investigate these to establish if they provide the flood risk benefits needed. It could be that all, some or none of these sites continue to be of interest to us. You can see maps showing approximate locations of areas we are investigating on our website. The scheme is in the early stages and as with any large project it needs to follow a series of approvals and gain funding to continue.

Thames Valley Flood Scheme is looking to complement existing and planned flood schemes. With the expected impacts of climate change, it will be needed as well as local flood schemes. The scheme also seeks to reduce flood risk for many communities where it has not been possible to have a local flood scheme.

We will continue to engage with those who work, live and visit the Thames Valley as the project evolves. If you would like to find out more please visit our website, where you can watch our videos explaining what the scheme is and how we have identified flood storage areas for further investigation. You can sign up to our newsletter to find out about our latest work by emailing tvfs@environment-agency.gov.uk.

Data Requester	
Data Requester Organisation	West Berkshire Council
EA enquiry reference number	GE30387
Location of Section 19	Winterbourne
Time period	January 2024

Question 1

Details of any flood defences in the area that might influence flooding at the site / surrounding area.

Environment Agency Response

The Winterbourne flood alleviation scheme is the only flood defence scheme in the area that might influence flooding at the site / surrounding area.
The scheme comprised of the realignment of the Winterbourne Stream and the construction of a 300m long, 2.4m high flood defence bund on the land to the north of Winterbourne village. The project also included the construction of associated control structures to form a flood storage reservoir with a capacity of approximately 22,000m^3. The aim of the scheme was to intercept fluvial and rainfall flows, and store and release them in a controlled manner.

Question 2

Details of river flows during the above dates, specifically for the River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal where relevant at each site.

Environment Agency Response

There are no river flow or level gauges on the Winterbourne.

There is the Winterbourne Farm gauge (station ID no: SU47_27) and the Winterbourne Manor gauge ((station ID no: SU47_8) in this location that measures groundwater levels only.

Please use these links Hydrology Data Explorer - Winterbourne Farm and Hydrology Data Explorer - Winterbourne Manor to obtain the data for daily groundwater levels.

We have checked this data and can confirm:

Winterbourne Farm gauge station

Due to a large reset on site visit in March, this data is estimated. This data is therefore unreliable and should not be considered.

Winterbourne Manor gauge station

This data is considered to be reliable during all the events

Question 3

Details of fluvial flood return periods for the above storms.

Environment Agency Response

The Environment Agency have not defined the return period of this flood event. We are in discussions internally to decide if we are able to.

Question 4

Details of any flood warnings in place during the above dates

Environment Agency Response

Please find summary below of all the relevant flood alerts/flood warnings we have at this location & dates requested:

Alert

- River Lambourn and its tributaries from Upper Lambourn down to Newbury (061WAF22Lambourn)
  In force: 04/01/2024 – 05/06/2024

Warning

- River Lambourn from Weston to Bagnor including Boxford (061FWF22MidLamb)
  In force: 04/01/2024 – 11/02/2024

Historic Severe Flood Warnings, Flood Warnings and Flood Alerts are all published online here: Historic Flood Warnings - data.gov.uk It may also be helpful to have further details of our Flood Alert and Flood Warning Areas (such as area code, and spatial extent). Our Flood Alert and Flood Warning Areas can be downloaded as shapefiles online. They will have additional information (such as Target Area name and code) in the metadata: Flood Alert Areas - data.gov.uk and Flood Warning Areas - data.gov.uk

Question 5

Details of any historic flooding associated with River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal.

Environment Agency Response

This location is not situated near the River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal. Therefore, we have no details of any historic flooding in the town of Winterbourne associated with the River Kennet, River Lambourn, River Thames, and the Kennet and Avon Canal

Question 6

Was the flooding that occurred during Storms Henk, Isha, and Jocelyn reported to the Environment Agency? If the answer to the above question is yes, how did the Environment Agency respond to the incidents?

Environment Agency Response

I've attached the 'Property_flooding_log_Winterbourne' document in the folder below. These are our official records of properties effected during this event. Only properties where we have an exact address and confirmation by either resident, EA staff, or professional partner, are listed in this document.

You must only use this information for the purposes laid out in the Flood and Water Management Act 2010 as part of your statutory duties relating to the management of flood risk. You may not include the details of individual properties within any published report and this data should not be accessible by any member of staff or the public who do not need access for the purposes laid out in the Flood and Water Management Act 2010.

Property_flooding_log_Winterbourne.zip

Due to the relatively low impact of flooding in this area, we did not attend the location or deploy any of our resources.

Question 7

Are there any known issues / constraints associated with the rivers listed above in terms of capacity?

Environment Agency Response

We can confirm that there are no specific issues/constraints with any watercourses in this location. Any flooding in this area was a result of the saturated soils, the (repeat) deluges of rain we received (esp. Stork Henk) and high groundwater levels.

Question 8

Are there any plans to carry out improvement works to the rivers within the local vicinity?

Environment Agency Response

There are currently no plans to carry out improvement works to the rivers within this location.

Appendix D.2

ROYAL BERKSHIRE FIRE & RESCUE SERVICE

From: FOIR <foir@RBFRS.co.uk>
Sent: 04 March 2024 14:29
To: [redacted]
Subject: RE: S19 Information Request [RBFRS Request for Information No.2023-0120]
Attachments: RBFRS 2023-120 - Photo 1.jpg; RBFRS 2023-120 - Photo 2.jpg; RBFRS 2023-120 - Photo 3.jpg; RBFRS 2023-120 - Photo 4.jpg; RBFRS 2023-120 - Photo 5.jpeg; RBFRS 2023-120 - Photo 6.jpeg; RBFRS 2023-120 - Photo 7.jpeg; Burghfield.PNG; Eastbury.PNG; Lambourn.PNG; Newbury.PNG; Purley-on-Thames.PNG; Streatley.PNG

Categories: To do

Dear [redacted]

I refer to your Request for Information of the12th February 2024 and my subsequent acknowledgment e-mail on this subject.

Following a response from the appropriate departments, I am pleased to be able to provide you with a response to your enquiry. Please see below.

1. **Any drone footage / photographs of the flooding that occurred as a result of the above storms.**
   We do not have any drone footage from the requested locations. We do however have several photos from an incident that occurred near Burghfield. Please see the attached.
2. **Details of staff recounts of the flooding and events occurring as a result of the above storms.**
   Our official statements are available on our website via Latest News | Royal Berkshire Fire and Rescue Service (rbfrs.co.uk) and Incidents | Royal Berkshire Fire and Rescue Service (rbfrs.co.uk).
3. **Details of any responses undertaken by RBFRS either during or following Storms Henk, Isha, and Jocelyn at the above locations.**
   We attended only one incident that would fall within the remit of your request (within target locations specified and during storm dates). The Incident occurred in Newbury, during Storm Henk. This is the only incident of flooding, in the locations specified, that was called in and responded to by Royal Berkshire Fire and Rescue Service (RBFRS).

   Additionally, Number of flooding incidents occurring in Newbury, Burghfield, Eastbury, Purley, Streatley during January 2024:

Newbury	8
Burghfield	2

   And number of Incidents occurring in Berkshire on dates of storms:

Storm Henk	4
Storm Isha	4
Storm Jocelyn	2

   Our official statements are available on our website via Latest News | Royal Berkshire Fire and Rescue Service (rbfrs.co.uk) and Incidents | Royal Berkshire Fire and Rescue Service (rbfrs.co.uk).

I hope this information will be of assistance to you, and should you have any further queries please do not hesitate to contact me.

In conclusion, I would like to take this opportunity to advise you that if, at any time, you are dissatisfied with the way in which we deal with your Request for Information, you can submit a request for an internal review. Having exhausted our process, you may ultimately refer your complaint to the Information Commissioner, whose website is www.ico.org.uk, for final determination.

Yours sincerely

Emily Houghton
Information Governance Officer
07795 302731 | houghtone@rbfrs.co.uk
Newsham Court, Pincents Kiln, Calcot, Reading, Berkshire, RG31 7SD

ROYAL BERKSHIRE FIRE AND RESCUE SERVICE

RoyalBerksFRS @RBFRSOfficial royalberkshirefire Royal Berkshire Fire and Rescue Service rbfrs.co.uk

Your privacy
Please refer to our privacy notice to understand what information we collect about you and your rights under Data Protection Legislation

From: FOIR <foir@RBFRS.co.uk>
Sent: Wednesday, February 14, 2024 11:12 AM
To: [redacted]
Cc: FOIR <foir@RBFRS.co.uk>
Subject: RE: S19 Information Request [RBFRS Request for Information No.2023-0120]

Dear [redacted]

I refer to your email of the 12th February 2024 which is being dealt with in accordance with the Environmental Information Regulations 2004 (the

Regulations).

Once I have confirmed that the information you have requested is available and can be disclosed in accordance with the Regulations, I will arrange for a "redacted" copy to be sent to you. With regard to any "redaction", this should only apply to Data Protected material in accordance with Regulations 12(3) and 13 of the Environmental Information Regulations 2004, as well as the Principles of Data Protection Legislation, however we will inform you whether any other exceptions apply.

I do not anticipate that a fee will be charged in this case, however, we will inform you should this position alter.

Should the information you have requested not be available I will notify you, that said, I expect to be able to give you a definitive response within 20 working days, that is to say, on or before the 11th March 2024.

Yours sincerely

Emily

Emily Houghton
Information Governance Officer
07795 302731 | houghtone@rbfrs.co.uk
Newsham Court, Pincents Kiln, Calcot, Reading, Berkshire, RG31 7SD

ROYAL BERKSHIRE
FIRE AND RESCUE SERVICE

RoyalBerksFRS @RBFRSOfficial royalberkshirefire Royal Berkshire Fire and Rescue Service rbfrs.co.uk

Your privacy
Please refer to our privacy notice to understand what information we collect about you and your rights under Data Protection Legislation

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From: [redacted]>
Sent: Monday, February 12, 2024 3:57 PM
To: Reception <Reception@RBFRS.co.uk>
Subject: S19 Information Request

You don't often get email from [redacted] Learn why this is important

Dear Sir / Madam,

Burghfield, West Berkshire
Eastbury, West Berkshire
Newbury, West Berkshire
Streatley, West Berkshire
Purley, West Berkshire
Section 19 Flood Investigation – Enquiry

We have been instructed by our client, West Berkshire Council, to carry out an investigation of flooding that occurred at the above sites around the below dates:

- 02/01/2024 – Storm Henk
- 21/01/2024 to 22/01/2024 – Storm Isha
- 23/01/2024 to 24/01/2024 – Storm Jocelyn

Please could the RBFRS provide the following information:

1. Any drone footage / photographs of the flooding that occurred as a result of the above storms.
2. Details of staff recounts of the flooding and events occurring as a result of the above storms.
3. Details of any responses undertaken by RBFRS either during or following Storms Henk, Isha, and Jocelyn at the above locations.

We trust the above is clear, however, should you have any queries or require any further information from WSP to be able to answer the above queries, please do not hesitate to get in contact.

Kind regards,

[redacted]
Graduate Consultant – Water Risk Management
BSc (Hons)
She/her

WSP in the UK
Matrix House, Basing View
Basingstoke
RG21 4FF

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-LAEmHhHzdJzBITWfa4Hgs7pbKI

Your privacy

Please refer to our privacy notice to understand what information we collect about you and your rights under Data Protection Legislation

Appendix D.3

THAMES WATER

From: EIR Requests <EIR.Requests@thameswater.co.uk>
Sent: 29 April 2024 19:04
To: [redacted]
Subject: RE: S19 Information Request - EIR-23-24-720

Filed: -1
Filed Location: C:\Users\uklet002\Documents\S19s\240429 190333 - EIR Requests - RE S19 Information Request - EIR-23-24-720(1).msg
Filed Location Folder: C:\Users\uklet002\Documents\S19s

Thames Water Utilities Limited
EIR Requests
Clearwater Court
Vastern Road
Reading
Berkshire
RG1 8DB

Email: EIR.Requests@thameswater.co.uk

29 April 2024

Our Ref: EIR-23-24-720

Environmental Information Regulation (EIR) Request

Dear [redacted]

Thank you for your e-mail dated 1 March 2024 which has been passed to me to respond to. Please see our response below to your request.

Your Request

Burghfield, West Berkshire
Eastbury, West Berkshire
Newbury, West Berkshire
Streatley, West Berkshire
Purley, West Berkshire
Section 19 Flood Investigation – Enquiry

We have been instructed by our client, West Berkshire Council, to carry out an investigation of flooding that occurred at the above sites around the below dates:

02/01/2024 – Storm Henk
21/01/2024 to 22/01/2024 – Storm Isha
23/01/2024 to 24/01/2024 – Storm Jocelyn
Please could Thames Water provide the following information:
1). Details of any works undertaken by Thames Water either during or following Storms Henk, Isha, and Jocelyn at the above locations.
2). Details of any works that are planned to be undertaken in response to the above storms.
3). Any Thames Water reports which may have already been produced for these flood events that cover the above location.

Clarification (01/04/2024)

I can confirm the information you have detailed below in red is what we are requesting. Essentially, any actions Thames Water have conducted in response to the flooding issues will be useful for us.

We are also now investigating flooding in Great Shefford, Pangbourne, and Lambourn, so please see the updated list of sites that we request this information for.

1. Details of any works undertaken by Thames Water either during or following Storms Henk, Isha, and Jocelyn at the above locations. Can you confirm that you mean activities completed in the aftermath of the storm events (such as line cleaning etc), and not normal, planned and day to day activities that still went on (where possible) during the storms.

2. Details of any works that are planned to be undertaken in response to the above storms. Again, can you confirm that you mean making good any damage to assets etc and NOT planned site upgrades, GISMPs etc.

3. Any Thames Water reports which may have already been produced for these flood events that cover the above location. Finally, can you confirm that you mean any Sewer Flooding Incident (SFI) reports that may have been generated.

Updated request (09/04/2024)

Our scope of works has once again been increased so please see below the updated list of sites that we request information for.

Winterbourne

Our Response

Thames Water have considered your request under the Environmental Information Regulations (2004) (EIR).

This winter has been one of the wettest on record. The six-month period up to the end of February 2024 recorded above average rainfall with February being the wettest February since records began, some 150 years ago. The Environment Agency's Water Situation Report for February 2024 reports that the rainfall over the preceding 12 months has been exceptionally high. The Environment Agency advises that groundwater levels are similar to those last observed in 2014, which was the wettest winter on record at that point.

Network Overview

Proactive planned works – We carry out planned cleaning out each year and has become more tactical over the years as areas are targeted based on performance in areas e.g., blockages, floods, pollutions etc. The programme does not tackle the whole catchment but is specifically targeted on lengths which are either repeatedly generating reactive activity or have a history and have been shown to need regular intervention. Proactive work is also undertaken as we have increased the number of sewer depth monitors across the network which can indicate when levels rise, and which has led to many blockages or potential blockages being cleared before there is any impact to customers such as blockages or the environment pollutions.

Pre-winter preparations – In the summer months the Network teams work hard to deliver any work which has been identified from the previous winter period which relate to groundwater infiltration, or surface water inundation related issues. In preparation for winter, we manage our workloads to enable us to enter the winter period with as little outstanding work as possible, as we know that the winter and associated storms and wet weather bring with it higher volumes of reactive work.

Proactive investigation – During autumn and into the winter the network team investigate catchments known to us as having issues caused by infiltration from groundwater and inundation from surface water or rivers breaking their banks. We carry out these investigations every year in a drive to enhance the network to protect from such water entering the system. We do not just carry out investigations following named storms we have been active since September when the region experienced the first storm of the season in the Swindon area.

Planned work following storms – We have and are continuing with our investigations of how water is entering the system from many different sources. We are collating the data and will look to prioritise based on likelihood of impact and potential consequence.

The areas listed below are affected by wet weather-related issues which impact assets through groundwater and for some where rivers burst their banks which are not a responsibility for Thames Water. As it stands, there are no assets which are broken or need making good in these areas. Our investigations in some of these areas are ongoing on a priority basis.

Burghfield (specifically Burghfield Bridge area)
Eastbury
Newbury
Streatley
Purley-on-Thames
Great Shefford
Pangbourne
Lambourn
Winterbourne

In response to Question 3, "Any Thames Water reports which may have already been produced for these flood events that cover the above location":

We are unable to provide the requested data under EIR due to GDPR. In order to provide the requested data, a Data Licensing Agreement (DLA) must be signed by the Local Authority (LA), or we must receive confirmation that the requesting party is working on behalf of the LA. In this case, please contact the West Berkshire Council to make a request to Thames Water for this data. The request will be dealt with by Thames Water, however outside of the EIR process.

This concludes our response to your request.

We do our best to provide you with the information you have requested. If you feel we have omitted any data or misunderstood your request in any way, then please let us know. If you expand your request this will be dealt with as a new enquiry.

Disclaimer
The information provided with this letter is taken from the information we hold on our records as at the date indicated. We cannot guarantee the accuracy of this information and it should not be relied on for any purpose.

Retention
Please note that we will retain a record of your request to allow us to evidence our compliance with the law relating to EIR.

Internal Review
If you are not satisfied with the handling of your request, you have the right to ask for an internal review where the response will be re-examined. Please include a reason for why you are dissatisfied with the response. Internal review requests should be submitted within 40 working days of the date of receipt of this response and emailed to EIR.Requests@thameswater.co.uk

If you are dissatisfied with the outcome of the internal review, you can apply directly to the Information Commissioner (ICO), who will consider whether Thames Water has complied with its obligations under the EIR. Generally, the ICO cannot make a decision unless you have already exhausted our internal review procedure.

The Information Commissioner can be contacted at: *The Information Commissioner's Office, Wycliffe House, Wycliffe Lane, Wilmslow, Cheshire, SK6 5AF*. More information can be found on their website: Information Commissioner's Office (ICO). There is no charge for making an appeal.

Yours sincerely

Paul

Paul Bridgens
Data Protection Advisor
Data Protection Investigations

From: [redacted]
Sent: Tuesday, April 9, 2024 11:24 AM
To: EIR Requests <EIR.Requests@thameswater.co.uk>
Subject: RE: S19 Information Request - EIR-23-24-720

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Dear Paul,

Our scope of works has once again been increased so please see below the updated list of sites that we request information for.

Burghfield (specifically Burghfield Bridge area)
Eastbury
Newbury
Streatley
Purley-on-Thames
Great Shefford
Pangbourne
Lambourn
Winterbourne

Many thanks,

[redacted]
Graduate Consultant – Water Risk Management
BSc (Hons)
She/her

WSP in the UK
Matrix House, Basing View
Basingstoke
RG21 4FF

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From: [redacted]
Sent: Monday, April 1, 2024 3:09 PM
To: EIR Requests <EIR.Requests@thameswater.co.uk>
Subject: RE: S19 Information Request - EIR-23-24-720

Dear Paul,

I can confirm the information you have detailed below in red is what we are requesting. Essentially, any actions Thames Water have conducted in response to the flooding issues will be useful for us.

We are also now investigating flooding in Great Shefford, Pangbourne, and Lambourn, so please see the updated list of sites that we request this information for.

Burghfield (specifically Burghfield Bridge area)
Eastbury
Newbury
Streatley
Purley-on-Thames
Great Shefford
Pangbourne
Lambourn

I look forward to hearing from you.

Many thanks,

[redacted]
Graduate Consultant – Water Risk Management
BSc (Hons)
She/her

WSP in the UK
Matrix House, Basing View
Basingstoke
RG21 4FF

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From: EIR Requests <EIR.Requests@thameswater.co.uk>
Sent: Wednesday, March 27, 2024 3:33 PM
To: [redacted]>
Subject: S19 Information Request - EIR-23-24-720

Dear [redacted]

Thank you for your recent request for information, re-produced below for ease.

Burghfield, West Berkshire
Eastbury, West Berkshire
Newbury, West Berkshire
Streatley, West Berkshire
Purley, West Berkshire

Section 19 Flood Investigation – Enquiry

We have been instructed by our client, West Berkshire Council, to carry out an investigation of flooding that occurred at the above sites around the below dates:
- *02/01/2024 – Storm Henk*
- *21/01/2024 to 22/01/2024 – Storm Isha*
- *23/01/2024 to 24/01/2024 – Storm Jocelyn*

Please could Thames Water provide the following information:
1. *Details of any works undertaken by Thames Water either during or following Storms Henk, Isha, and Jocelyn at the above locations.*
2. *Details of any works that are planned to be undertaken in response to the above storms.*
3. *Any Thames Water reports which may have already been produced for these flood events that cover the above location.*

In order for me to assist you further, some clarification is required. Namely:

1. Details of any works undertaken by Thames Water either during or following Storms Henk, Isha, and Jocelyn at the above locations. Can you confirm that you mean activities completed in the aftermath of the storm events (such as line cleaning etc), and not normal, planned and day to day activities that still went on (where possible) during the storms.
2. Details of any works that are planned to be undertaken in response to the above storms. Again, can you confirm that you mean making good any damage to assets etc and NOT planned site upgrades, GISMPs etc.
3. Any Thames Water reports which may have already been produced for these flood events that cover the above location. Finally, can you confirm that you mean any Sewer Flooding Incident (SFI) reports that may have been generated.

Please note that the 20 working days allowed under the regulations to process your request doesn't start until we have all of the information, we need in order to reply to you. Please note that your request is currently on hold.

I look forward to hearing from you at your earliest convenience.

Regards.

Paul Bridgens
Data Protection Advisor
Walnut Court, Kembrey Park, Swindon SN38 6TW

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Appendix D.4

WEST BERKSHIRE COUNCIL

Location	08/01/24	09/01/24	10/01/24	11/01/24	12/01/24
Newbury area		Clive Tombs	Clive Tombs & Ian Martinez		Ian Martinez
Lambourn Valley			Mike Dehonri		Peter, Andrew, Jon, Paul B.
Pang Valley		Jon Winstanley			Peter, Andrew, Jon, Paul B.
Purley				Paul Hendry	
Bughfield/Pingewood/Lower Kennet.		Neil Stacey		Neil Stacey	Neil Stacey
Coordinator		**Jon Winstanley**	**Andrew Reynolds**	**Paul Bacchus**	**Jon Winstanley**

Location	**15/01/24**	**16/01/24**	**17/01/24**	**18/01/24**	**19/01/24**
Newbury area	Clive Tombs		Ian Martinez		Clive Tombs/ Sasha Baklanova
Lambourn Valley		Jon Winstanley		Andrew Reynolds	
Pang Valley	Andrew Alty		Mike Dehonri		Jon Winstanley
Winterbourne/ Boxford		Dan Coe		Mike DeHonri	
Purley					
Bughfield/Pingewood/Lower Kennet/ Crookham Hill.		Neil Stacey			
Coordinator	**Jon Winstanley**	**Peter Walker**	**Andrew Reynolds**	**Paul Bacchus**	**Jon Winstanley**

Location	22/01/24	23/01/24	24/01/24	25/01/24	26/01/24
Newbury area		Clive Tombs	Sasha Baklanova		Ian Martinez
Lambourn Valley		Mike Dehonri		Dan Coe	
Pang Valley		Jon Winstanley		Andrew Alty	
Winterbourne/ Boxford				Mike DeHonri	
Bughfield/Pingewood/Lower Kennet/ Crookham Hill.		Neil Stacey			
Coordinator	**Jon Winstanley**	**Peter Walker**	**Andrew Reynolds**	**Paul Bacchus**	**Jon Winstanley**

Road name	Date closed	Reason for closure	Date reopened	Comments
Burys Bank Road, Greenham	05/01/2024	Flooding	10/01/2024	
Carbinswood Lane, Woolhampton	05/01/2024	Flooding	05/01/2024	
Station Road, Woolhampton	05/01/2024	Flooding	18/01/2024	
Bucklebury Ford, Bucklebury	05/01/2024	Flooding	still closed	
Deans Copse Road, Burghfield	05/01/2024	Flooding	12/01/2024	
Padworth Road, Burghfield	05/01/2024	Flooding	08/01/2024	
Wantage Road, Lambourn	05/01/2024	Flooding	02/02/2024	
Winterbourne Road, Winterbourne	05/01/2024	Flooding	19/04/2024	
St Marys Avenue, Purley on Thames	05/01/2024	Flooding	13/01/2024	
Wintringham Way, Purley on Thames	05/01/2024	Flooding	13/01/2024	
Chestnut Grove, Purley on Thames	05/01/2024	Flooding	13/01/2024	
Sulhamstead Hill, Sulhamtead	05/01/2024	Flooding	08/01/2024	
Crookham Hill, Thatcham	05/01/2024	Flooding	23/01/2024	
Ufton Lane, Ufton Nervet	05/01/2024	Flooding	03/03/2024	
Reading Road, Burghfield	05/01/2024	Flooding	08/01/2024	
Two Rivers Way, Newbury	05/01/2024	Flooding	24/01/2024	
Back Road, Eastbury	05/01/2024	Flooding	19/01/2024	
Newbury Road, Eastbury	05/01/2024	Flooding	?	
Hangar Road, Burghfield	08/01/2024	Flooding	12/01/2024	
Amers Farm Road, Burghfield	08/01/2024	Flooding	10/01/2024	
Kirtons Farm Road, Burghfield	08/01/2024	Flooding	14/01/2024	
Pingewood, Burghfield	08/01/2024	Flooding	10/01/2024	
Northcroft Lane, Newbury	10/01/2024	Flooding	14/01/2024	
Berrys Lane, Burghfeld	10/01/2024	Flooding	14/01/2024	
Station Road, Kintbury	10/01/2024	Flooding	15/02/2024	
Milkhouse Road, Speen	10/01/2024	Flooding	23/01/2024	
Pike Street, Newbury	15/01/2024	Flooding	?	not sure of actual closure date. Only made aware on 15/01/2024
Walton Way, Newbury	15/01/2024	Flooding	?	not sure of actual closure date. Only made aware on 15/01/2024
Hungerford Hill, Lambourn	23/02/2024	Flooding	23/02/2024	
Newport Road	23/02/2024	Flooding	14/03/2024	
Station Road, Woolhampton	08/03/2024	Flooding	23/04/2024	
B4494 Wantage Road Leckhampstead	06/03/2024	Flooding	on going	planned order in place for C/W and drainage repairs
Mill Lane, Tidmarsh	15/03/2024	Flooding	21 days	
Holtwood Road, Hamstead Marshall	12/04/2024	Flooding	21 days	
Unnamed Road from Upper Green to Spray Road, Upper Green in the Parish of Inkpen	12/04/2024	Flooding	12/04/2024 17:00	
Park Lane, Hamstead Marshall	22/04/2024	Drainage works due to flooding	22/04/2024 15:53	
Newbury Road, Lambourn and Great Shefford	25/04/2024	Flooding	25/04/2024 17:00	
Pingwood Road South, Burghfield	29/04/2024	Urgent drainage works due to continuous severe flooding	29/04/2024 15:30	Pingewood Road South closure has been cancelled. The crew have had a mechanical breakdown and will be unable to attend now.
Water Street, Hampstead Norreys	02/05/2024	This is an emergency due to flooding which has resulted in the damage to the carriageway.	21 days	

Appendix E

ENVIRONMENT AGENCY FLOOD MAPS

Appendix E.1

BURGHFIELD BRIDGE

Site Location

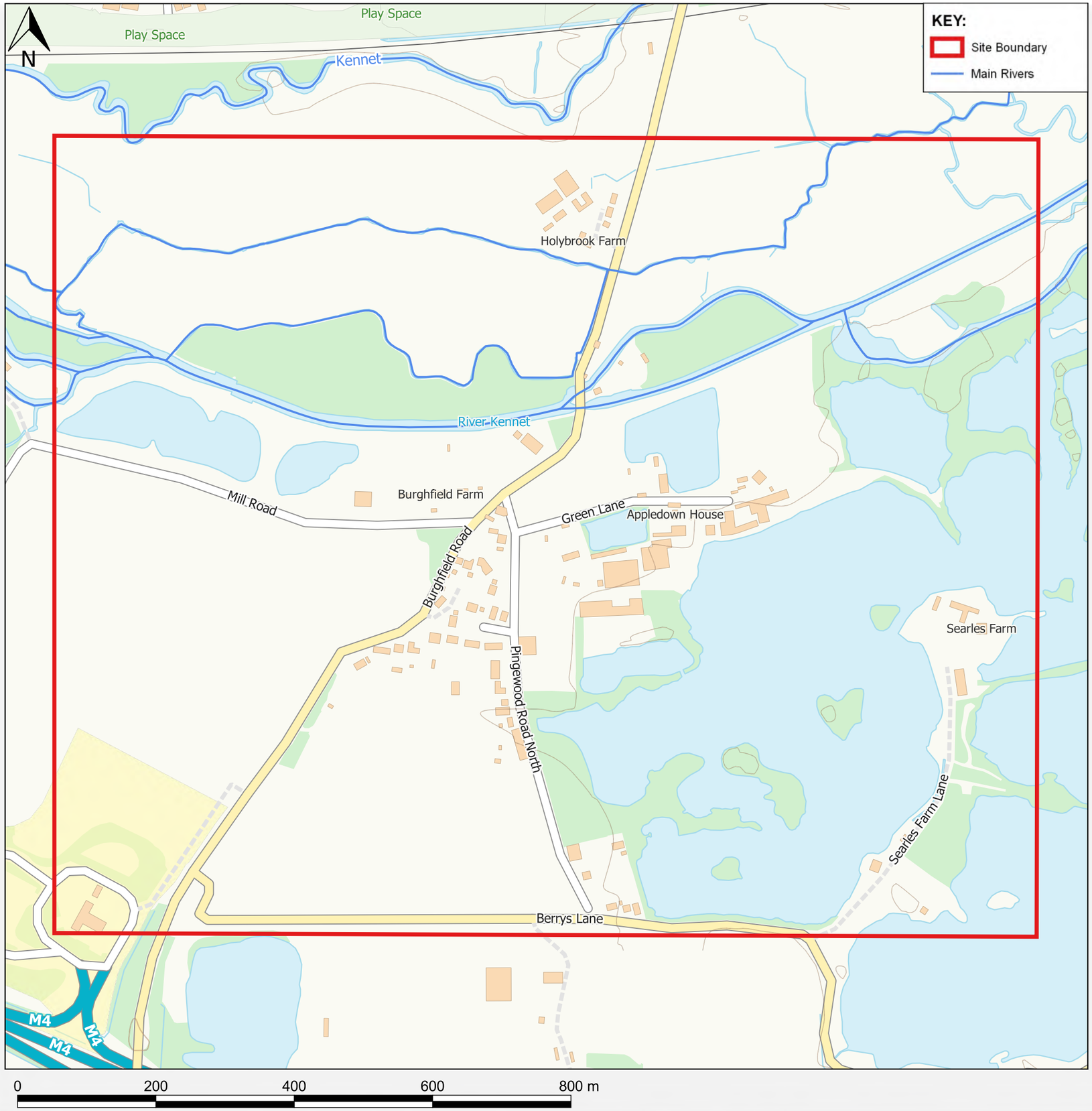
2

CLOSEST MAIN RIVER

Kennet

DISTANCE BETWEEN SITE AND CLOSEST MAIN RIVER

0m



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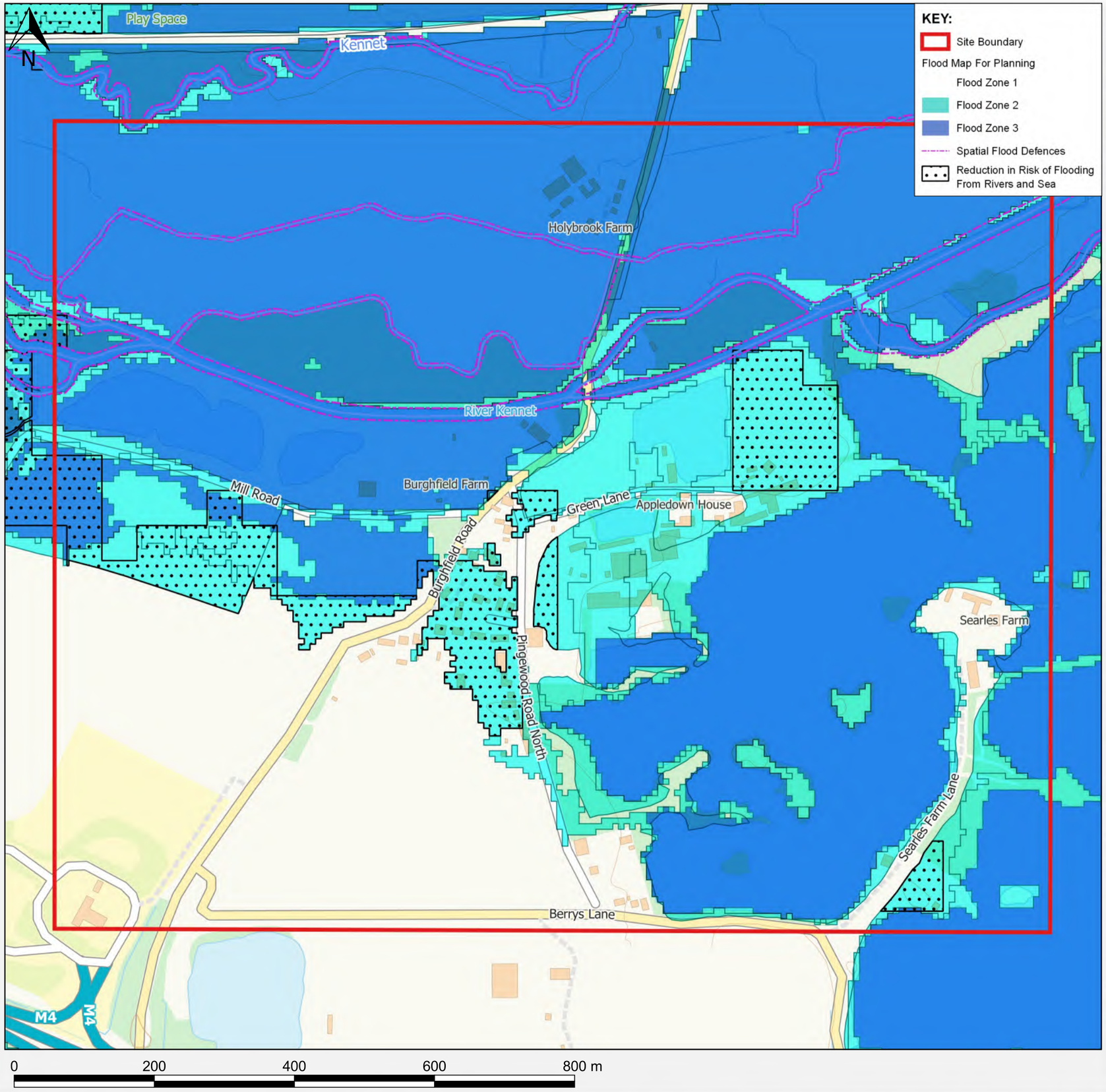
Flood Map for Planning

Flood zone maps are modelled using local and national river and sea data. This information provides an indication of the likelihood of flooding and is intended for planning use only.

- **Flood Zone 1 -** Land having a less than 1 in 1,000 annual probability (0.1% AEP) of river or sea flooding - all land outside Zones 2 and 3).
- **Flood Zone 2 -** Land having between a 1 in 100 and 1 in 1,000 annual probability (0.1% - 1.0% AEP) of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability (0.1% - 0.5% AEP) of sea flooding.
- **Flood Zone 3 -** Land having a 1 in 100 or greater annual probability (>1.0% AEP) of river flooding; or Land having a 1 in 200 or greater annual probability (>0.5% AEP) of sea flooding.

Reduction in Risk of Flooding from Rivers and Sea due to Defences -Reduction in Risk of Flooding from Rivers and Sea due to Defences is a spatial dataset that indicates where areas have reduced flood risk from rivers and sea due to the presence of flood defences. The dataset has been created to help initiate conversations about the impact our flood defences have on the risk of flooding from the rivers and sea,and as a prompt to find out more about the flood defences in a particular area of interest. It does not replace any local, more detailed information.



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Risk of Flooding from Rivers and Sea

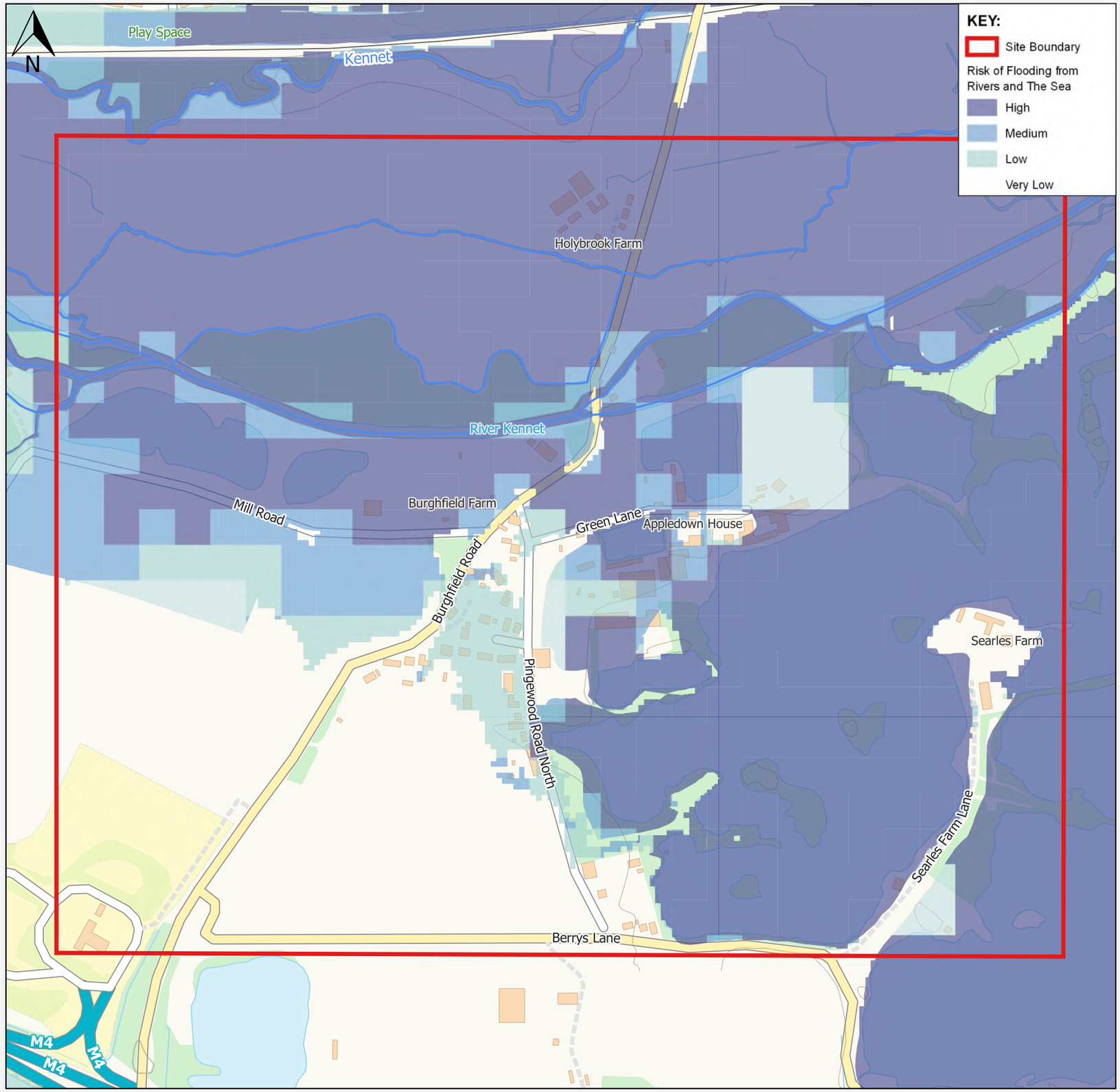
This map takes into account the effect of any flood defences in the area. These defences reduce but do not completely stop the chance of flooding as they can be overtopped, or fail.

High Risk - Land having a 1 in 30 or greater annual probability (>3.3% AEP) of flooding from rivers or the sea.

Medium Risk - Land having between a 1 in 30 and a 1 in 100 annual probability (1.0% - 3.3%) of flooding from rivers or the sea.

Low Risk - Land having between a 1 in 100 and a 1 in 1000 annual probability (0.1% - 1.0%) of flooding from rivers or the sea.

Very Low Risk - Land having a less than 1 in 1,000 annual probability (0.1% AEP) of flooding from rivers or the sea.



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Risk of Flooding from Surface Water

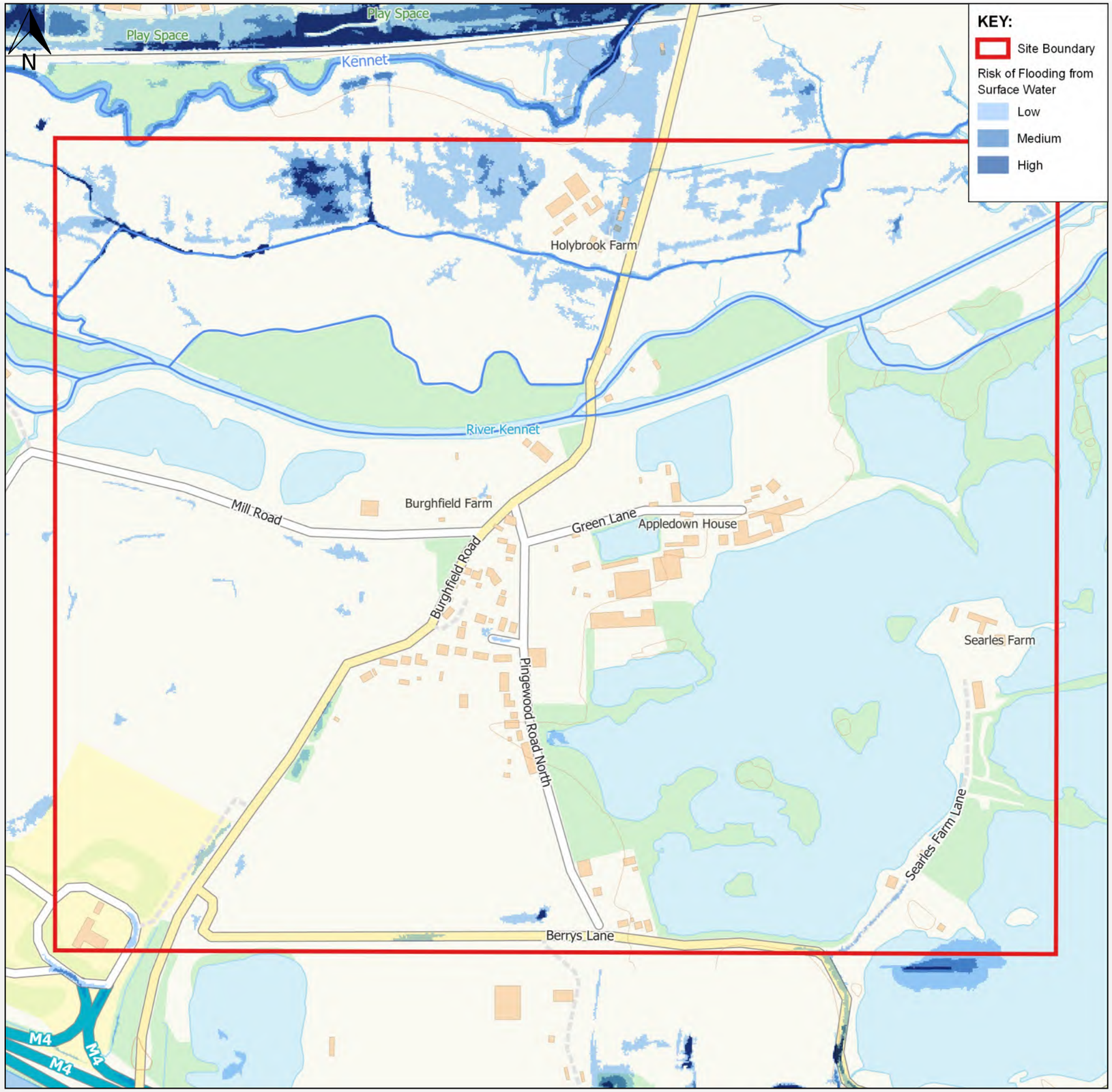
Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.

High Risk - Land having a 1 in 30 or greater annual probability (>3.3% AEP) of flooding from surface water.

Medium Risk - Land having between a 1 in 30 and a 1 in 100 annual probability (1.0% - 3.3%) of flooding from surface water.

Low Risk - Land having between a 1 in 100 and a 1 in 1000 annual probability (0.1% - 1.0%) of flooding from surface water.

Very Low Risk - Land having a less than 1 in 1,000 annual probability (0.1% AEP) of flooding from surface water.



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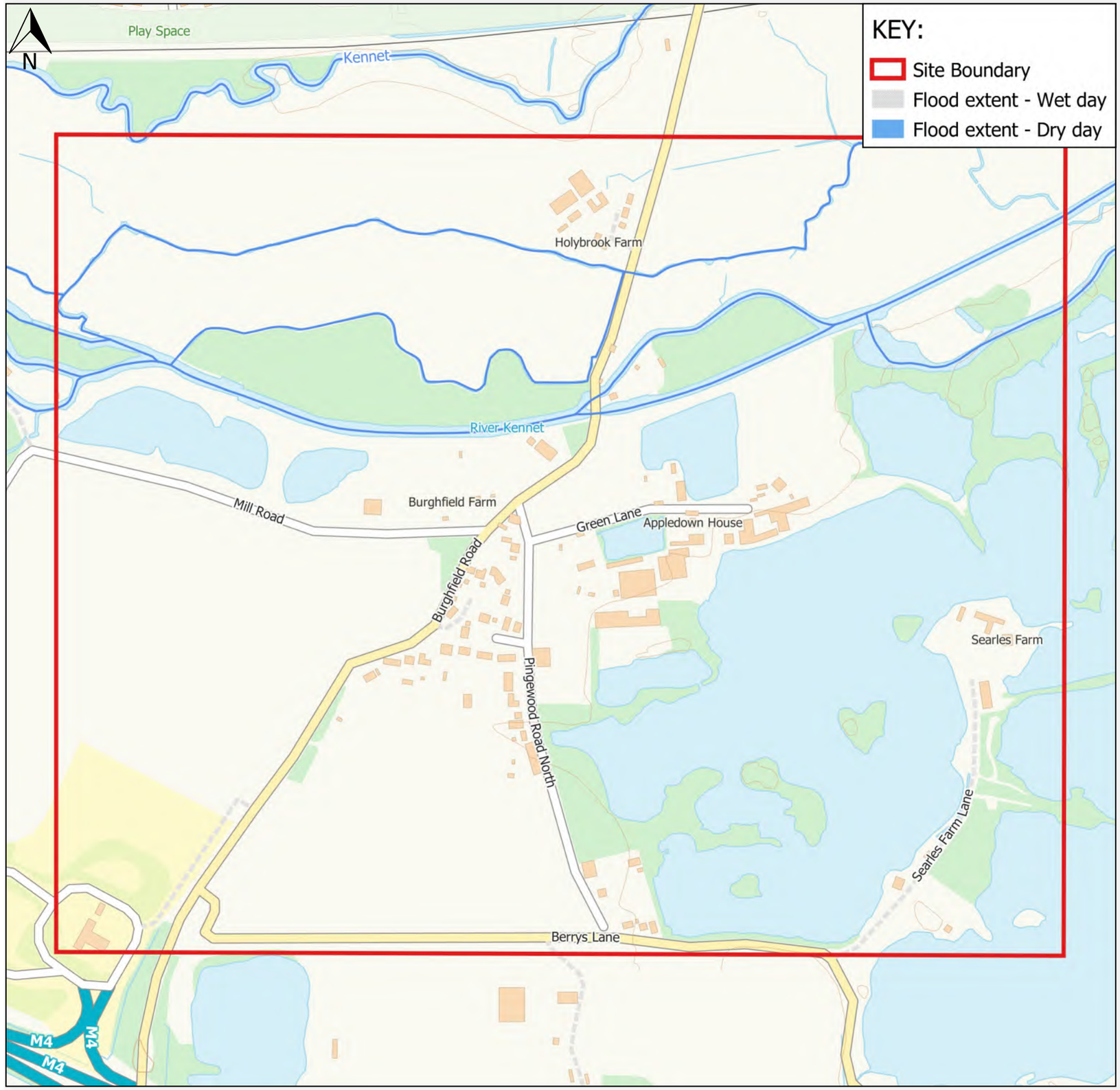
Risk of Flooding from Reservoirs

The Risk of Flooding from Reservoirs (wet day) layer shows the individual flood extents for all large raised reservoirs in the event that they were to fail and release the water held on a "wet day" when local rivers had already overflowed their banks.

It represents a prediction of a credible worst-case scenario, however it's unlikely that any actual flood would be this large. The data gives no indication of likelihood or probability of reservoir flooding.

The Risk of Flooding from Reservoirs (dry day) shows flood extents for all large raised reservoirs in the event that they were to fail and release the water held on a "dry day" when local rivers are at normal levels.

These national datasets are "indicative" not "definitive". Definitive information can only be provided by individual local authorities and you should refer directly to their information for all purposes that require the most up to date and complete dataset.



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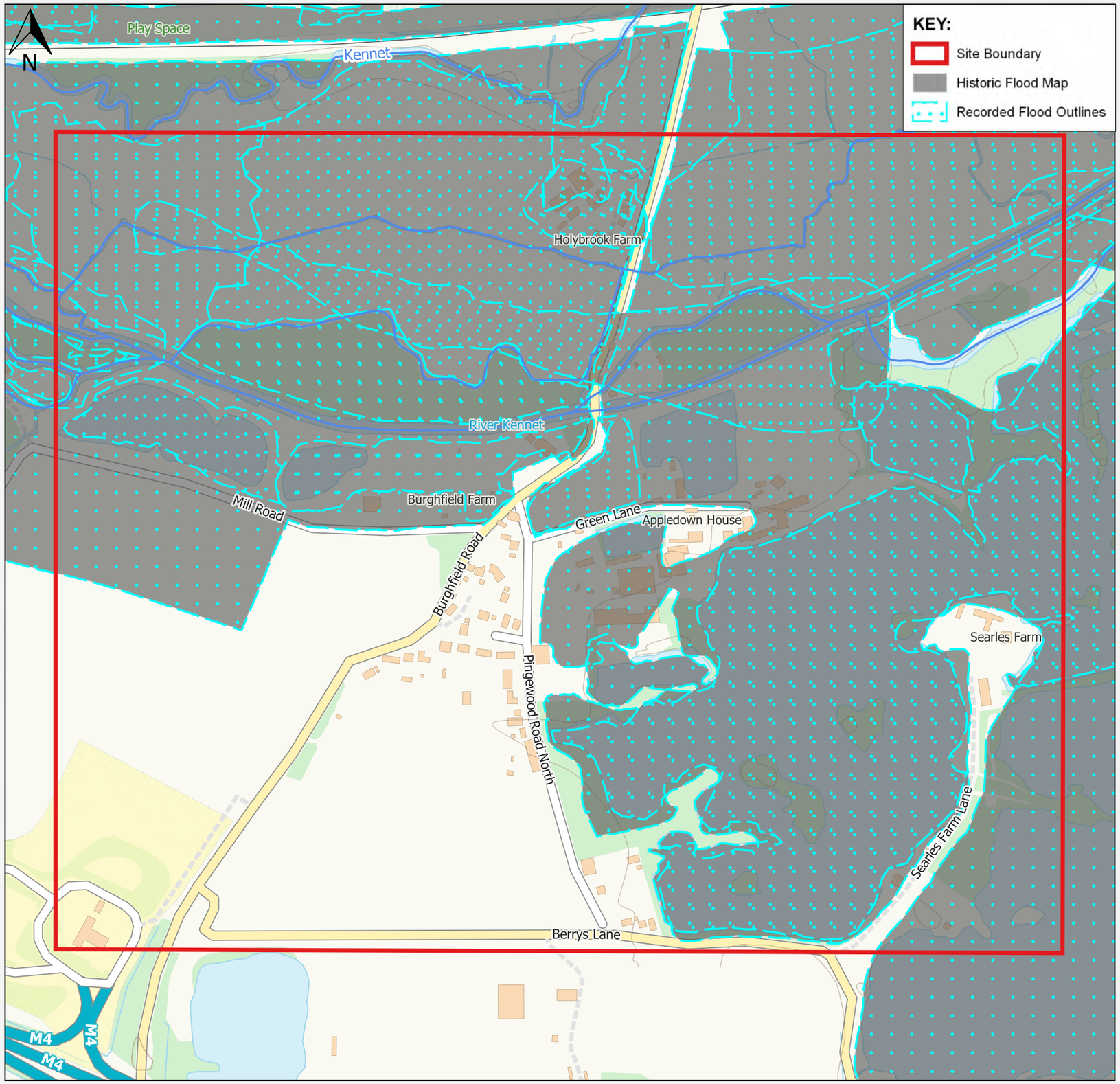
Previous Flooding

RECORDED FLOOD OUTLINES
Recorded Flood Outlines shows all records of historic flooding from rivers, the sea, groundwater and surface water. The absence of coverage by Recorded Flood Outlines for an area does not mean that the area has never flooded, only that there are currently no records of flooding in this area. It is also possible that the pattern of flooding in this area has changed and that this area would now flood or not flood under different circumstances. The Recorded Flood Outlines take into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding. It includes flood extents that may have been affected by overtopping, breaches or blockages. Any flood extents shown do not necessarily indicate that properties were flooded internally.

HISTORIC FLOOD MAP
The Historic Flooding shows the maximum extent of individual Recorded Flood Outlines from river, the sea and groundwater springs that meet a set criteria. It shows areas of land that has previously been subject to flooding. This excludes flooding from surface water, except in areas where it is impossible to determine whether the source is fluvial or surface water, but the dominant source is fluvial. If an area is not covered by the Historic Flood Map it does not mean that the area has never flooded, only that the EA do not currently have records of flooding in this area that meet the criteria for inclusion. It is also possible that the pattern of flooding in this area has changed and that this area would now flood or not flood under different circumstances. Outlines that don't meet these criteria are stored in the Recorded Flood Outlines dataset. The Historic Flood Map takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding. It will include flood extents that may have been affected by overtopping, breaches or blockages. Flooding is shown to the land and does not necessarily indicate that properties were flooded internally.

If an area is not covered by these layers, it does not mean that the area has never flooded, only that there are not currently records of flooding in the area.



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Flood Alert and Warning Areas

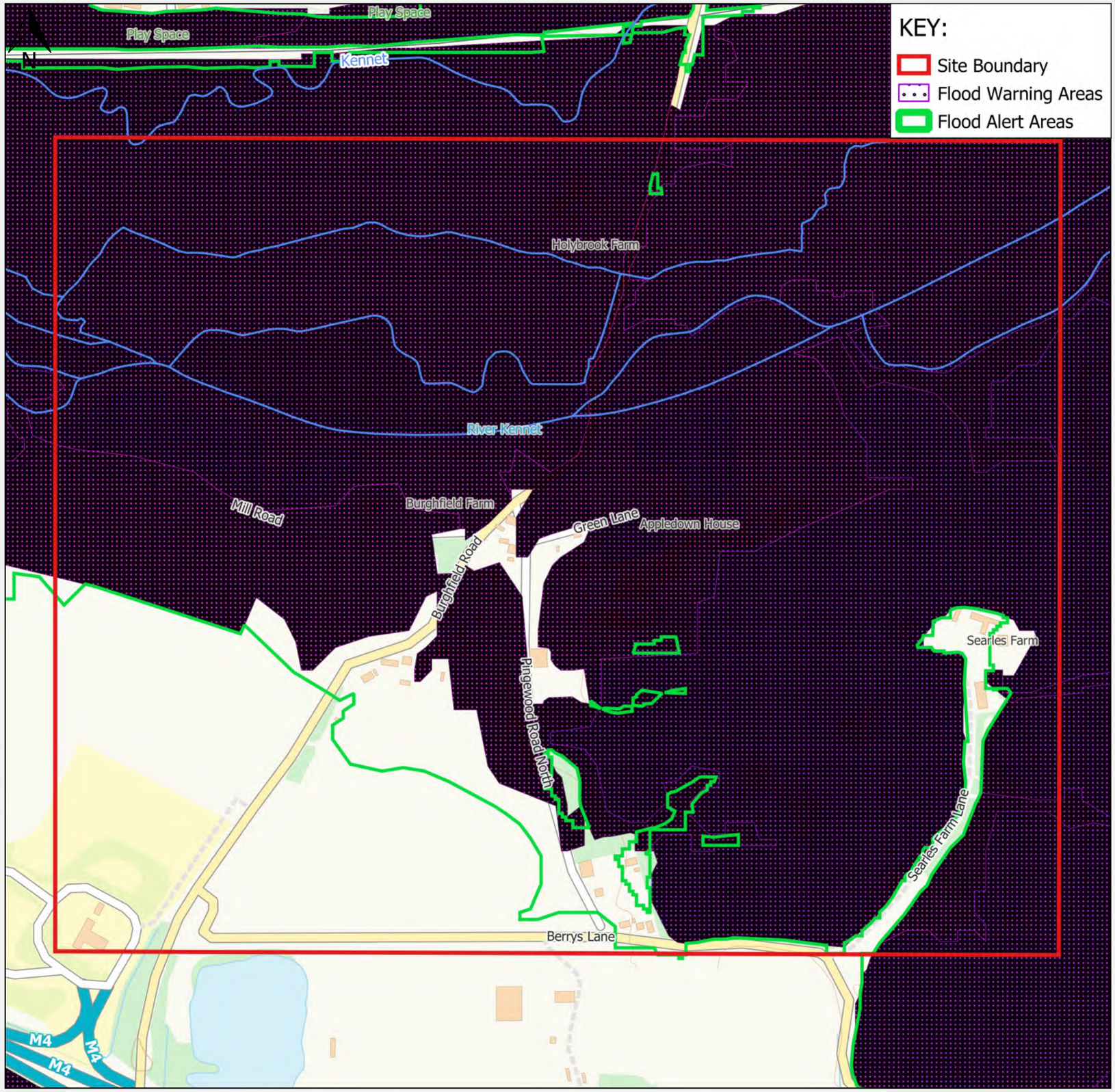
FLOOD ALERT AREAS

Flood Alert Areas are areas where it is possible for flooding to occur from rivers, sea and in some location's groundwater. A single Flood Alert Area may cover the floodplain within the Flood Warning Service Limit of multiple catchments of similar characteristics containing a number of Flood Warning Areas. A Flood Alert Area may also match that of a corresponding Flood Warning Area and warn for the possibility of flooding in that area. In some coastal locations a Flood Alert may be issued for spray or overtopping and be defined by a stretch of coastline. Practical and administrative factors may also influence the exact extent of a Flood Alert Area. A Flood Alert is issued to warn people of the possibility of flooding and encourage them to be alert stay vigilant and make early / low impact preparations for flooding. Flood Alerts are issued earlier than Flood Warnings to provide advance notice of the possibility of flooding and may be issued when there is less confidence that flooding will occur in a Food Warning Area.

FLOOD WARNING AREAS

Flood Warning Areas are areas where flooding is expected to occur and where a Flood Warning Service is provided. Areas generally contain properties that are expected to flood from rivers or the sea and in some areas, from groundwater. Specifically, Flood Warning Areas define locations within the Flood Warning Service Limit that represent a discrete community at risk of flooding. The purpose of Flood Warnings is to alert people that flooding is expected, and they should take action to protect themselves and their property. Flood Warnings are issued when flooding is expected to occur, Severe Flood Warnings are issued to similar areas when there is a danger to life or widespread disruption is expected.

If an area is not covered by these layers, it does not mean that the area has never flooded, only that there are not currently records of flooding in the area.



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Appendix E.2

PINGEWOOD

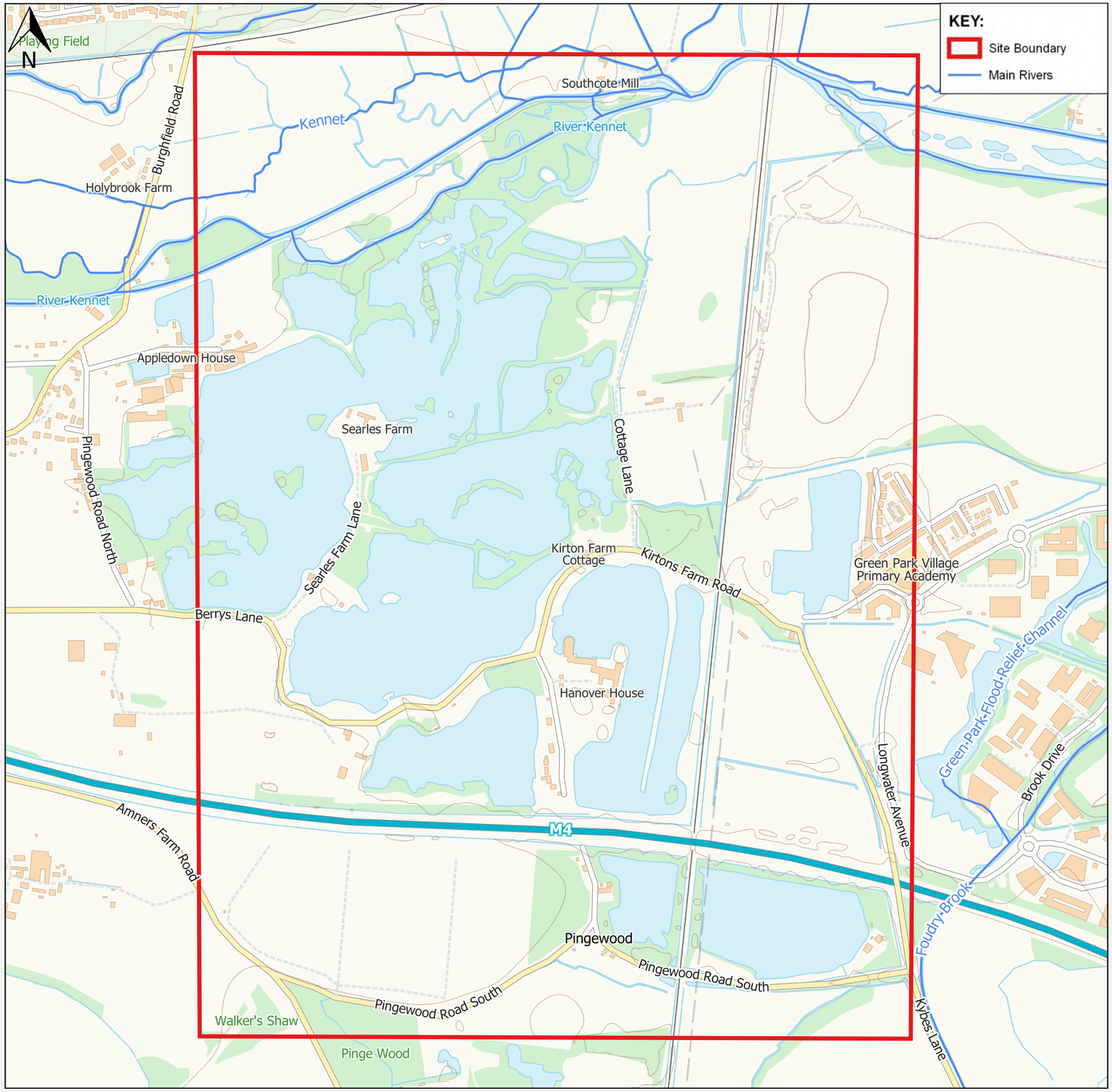
Site Location

CLOSEST MAIN RIVER

Kennet

DISTANCE BETWEEN SITE AND CLOSEST MAIN RIVER

0m



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Flood Map for Planning

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- **Flood Zone 1 -** Land having a less than 1 in 1,000 annual probability (0.1% AEP) of river or sea flooding - all land outside Zones 2 and 3).
- **Flood Zone 2 -** Land having between a 1 in 100 and 1 in 1,000 annual probability (0.1% - 1.0% AEP) of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability (0.1% - 0.5% AEP) of sea flooding.
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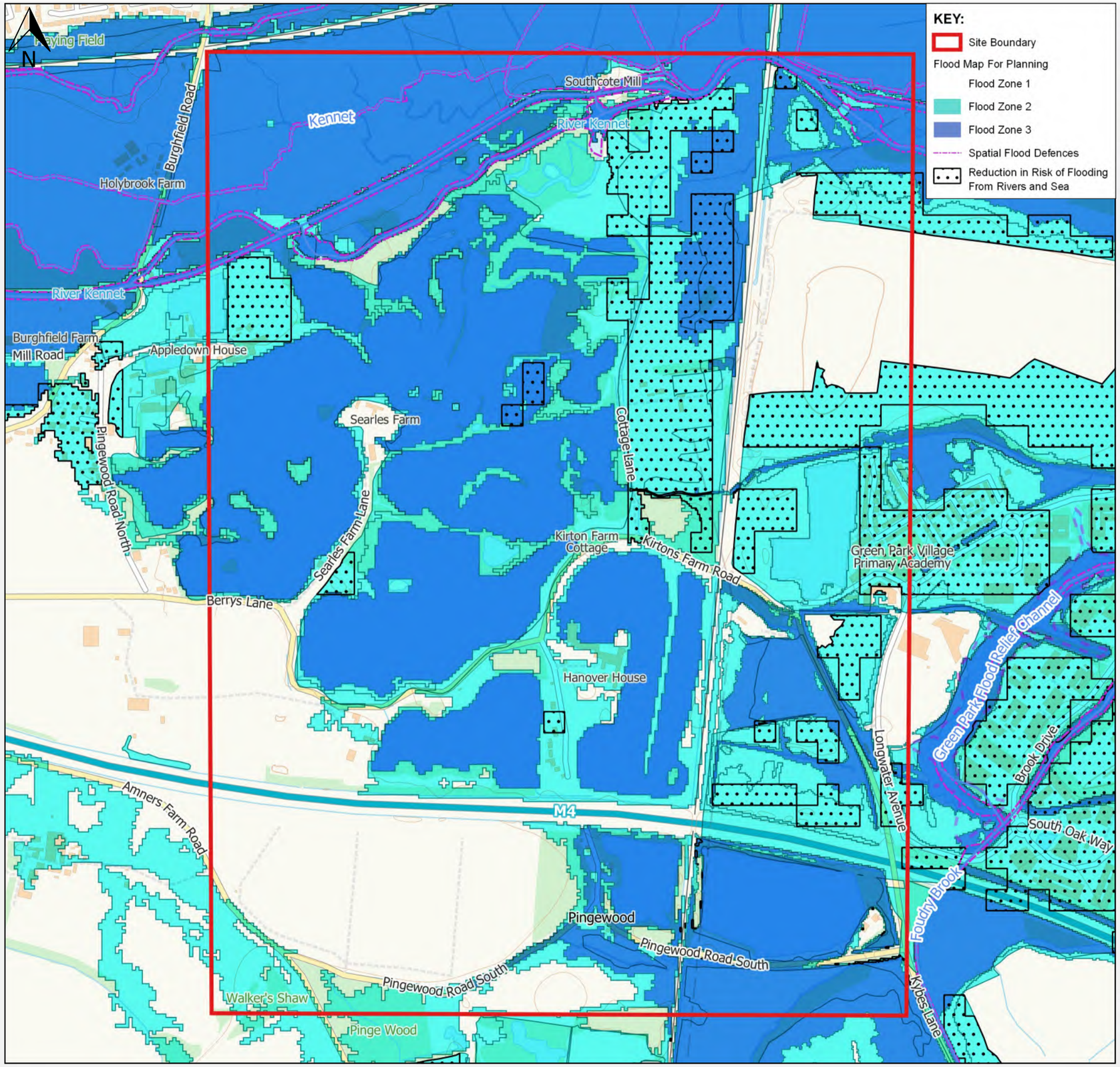
Reduction in Risk of Flooding from Rivers and Sea due to Defences -Reduction in Risk of Flooding from Rivers and Sea due to Defences is a spatial dataset that indicates where areas have reduced flood risk from rivers and sea due to the presence of flood defences. The dataset has been created to help initiate conversations about the impact our flood defences have on the risk of flooding from the rivers and sea,and as a prompt to find out more about the flood defences in a particular area of interest. It does not replace any local, more detailed information.



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Risk of Flooding from Rivers and Sea

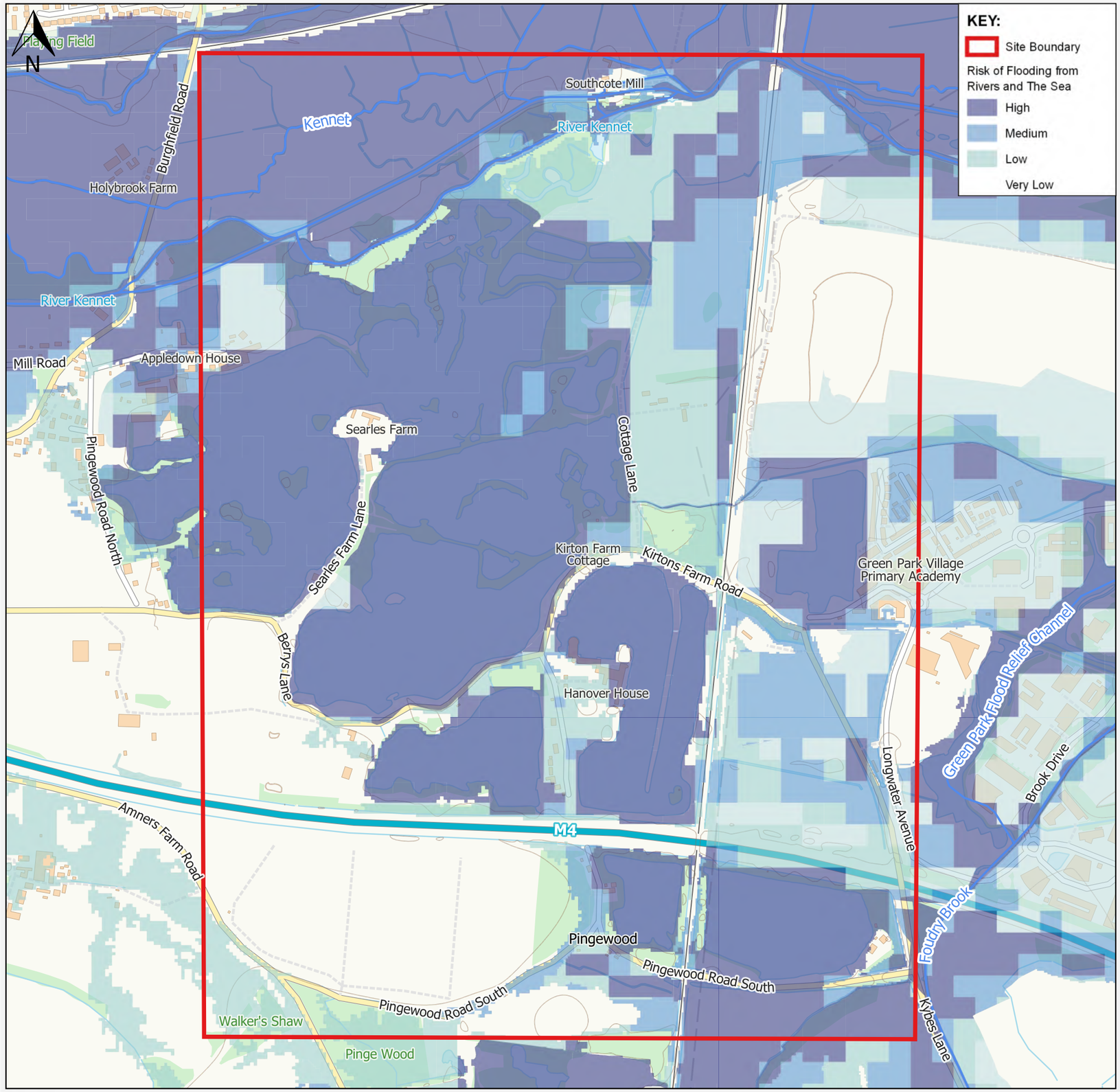
This map takes into account the effect of any flood defences in the area. These defences reduce but do not completely stop the chance of flooding as they can be overtopped, or fail.

High Risk - Land having a 1 in 30 or greater annual probability (>3.3% AEP) of flooding from rivers or the sea.

Medium Risk - Land having between a 1 in 30 and a 1 in 100 annual probability (1.0% - 3.3%) of flooding from rivers or the sea.

Low Risk - Land having between a 1 in 100 and a 1 in 1000 annual probability (0.1% - 1.0%) of flooding from rivers or the sea.

Very Low Risk - Land having a less than 1 in 1,000 annual probability (0.1% AEP) of flooding from rivers or the sea.



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Risk of Flooding from Surface Water

Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.

High Risk - Land having a 1 in 30 or greater annual probability (>3.3% AEP) of flooding from surface water.

Medium Risk - Land having between a 1 in 30 and a 1 in 100 annual probability (1.0% - 3.3%) of flooding from surface water.

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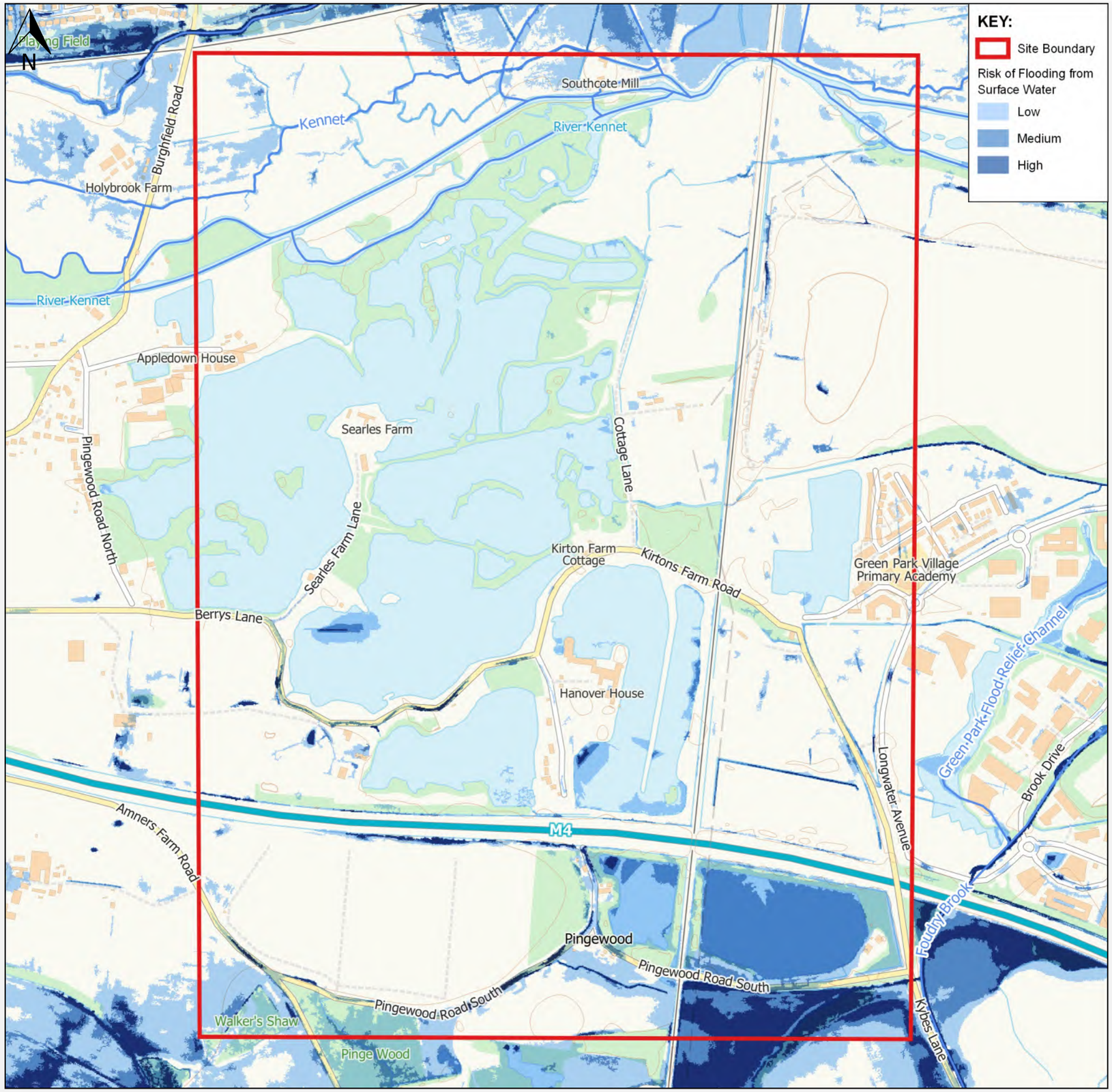

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Risk of Flooding from Reservoirs

The Risk of Flooding from Reservoirs (wet day) layer shows the individual flood extents for all large raised reservoirs in the event that they were to fail and release the water held on a "wet day" when local rivers had already overflowed their banks.

It represents a prediction of a credible worst-case scenario, however it's unlikely that any actual flood would be this large. The data gives no indication of likelihood or probability of reservoir flooding.

The Risk of Flooding from Reservoirs (dry day) shows flood extents for all large raised reservoirs in the event that they were to fail and release the water held on a "dry day" when local rivers are at normal levels.

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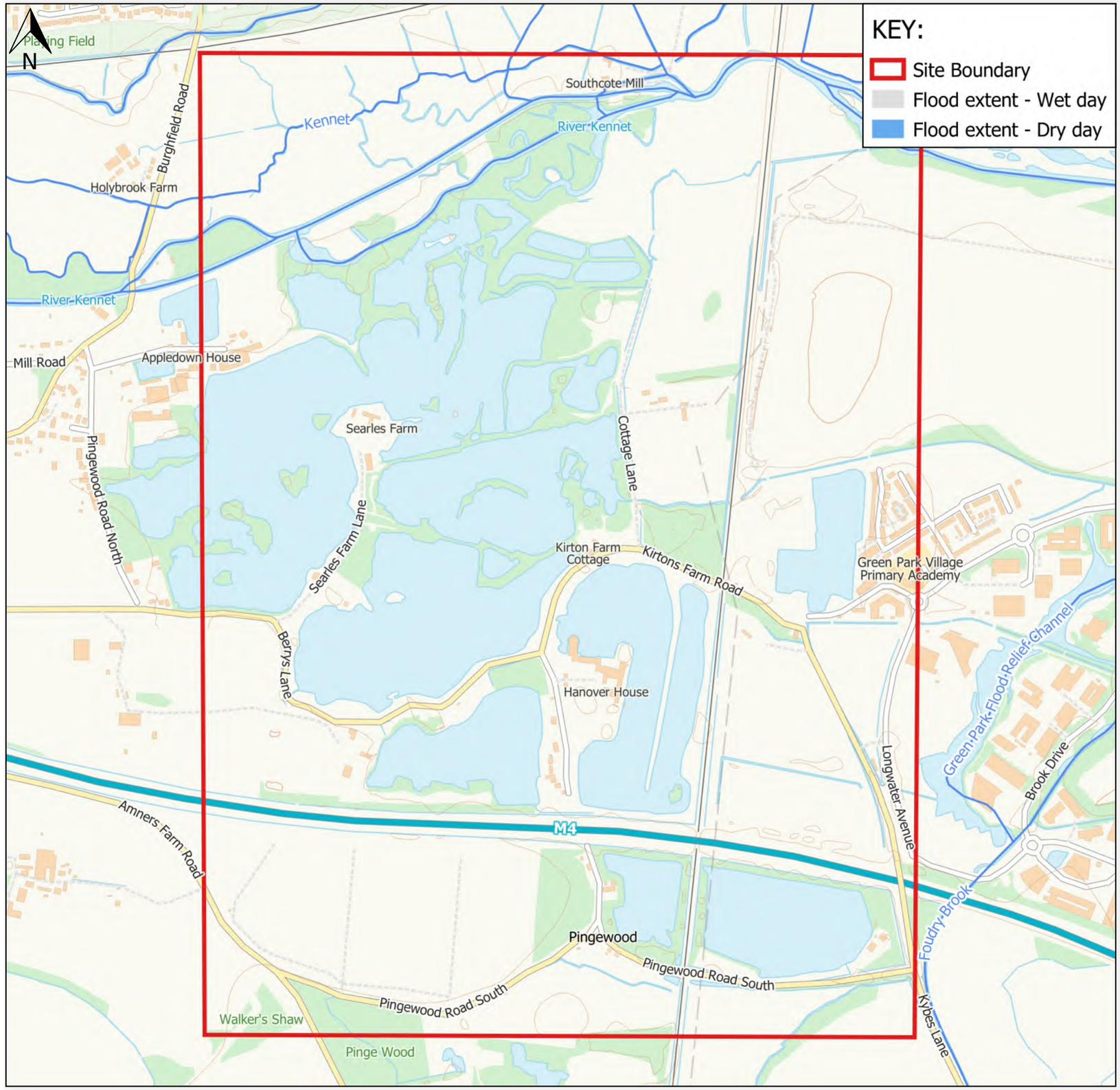

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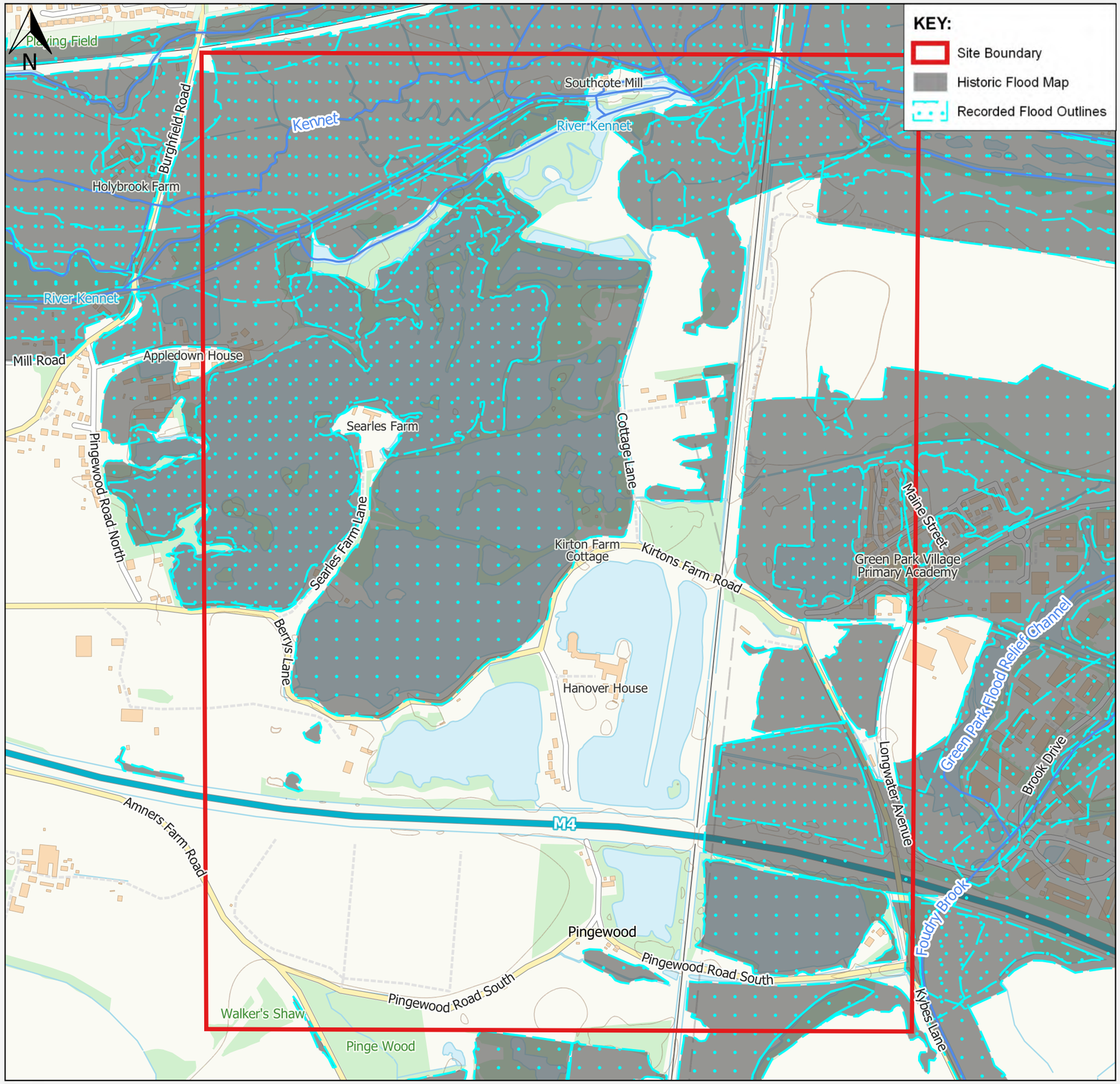
Previous Flooding

RECORDED FLOOD OUTLINES
Recorded Flood Outlines shows all records of historic flooding from rivers, the sea, groundwater and surface water. The absence of coverage by Recorded Flood Outlines for an area does not mean that the area has never flooded, only that there are currently no records of flooding in this area. It is also possible that the pattern of flooding in this area has changed and that this area would now flood or not flood under different circumstances. The Recorded Flood Outlines take into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding. It includes flood extents that may have been affected by overtopping, breaches or blockages. Any flood extents shown do not necessarily indicate that properties were flooded internally.

HISTORIC FLOOD MAP
The Historic Flooding shows the maximum extent of individual Recorded Flood Outlines from river, the sea and groundwater springs that meet a set criteria. It shows areas of land that has previously been subject to flooding. This excludes flooding from surface water, except in areas where it is impossible to determine whether the source is fluvial or surface water, but the dominant source is fluvial. If an area is not covered by the Historic Flood Map it does not mean that the area has never flooded, only that the EA do not currently have records of flooding in this area that meet the criteria for inclusion. It is also possible that the pattern of flooding in this area has changed and that this area would now flood or not flood under different circumstances. Outlines that don't meet these criteria are stored in the Recorded Flood Outlines dataset. The Historic Flood Map takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding. It will include flood extents that may have been affected by overtopping, breaches or blockages. Flooding is shown to the land and does not necessarily indicate that properties were flooded internally.

If an area is not covered by these layers, it does not mean that the area has never flooded, only that there are not currently records of flooding in the area.



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Flood Alert and Warning Areas

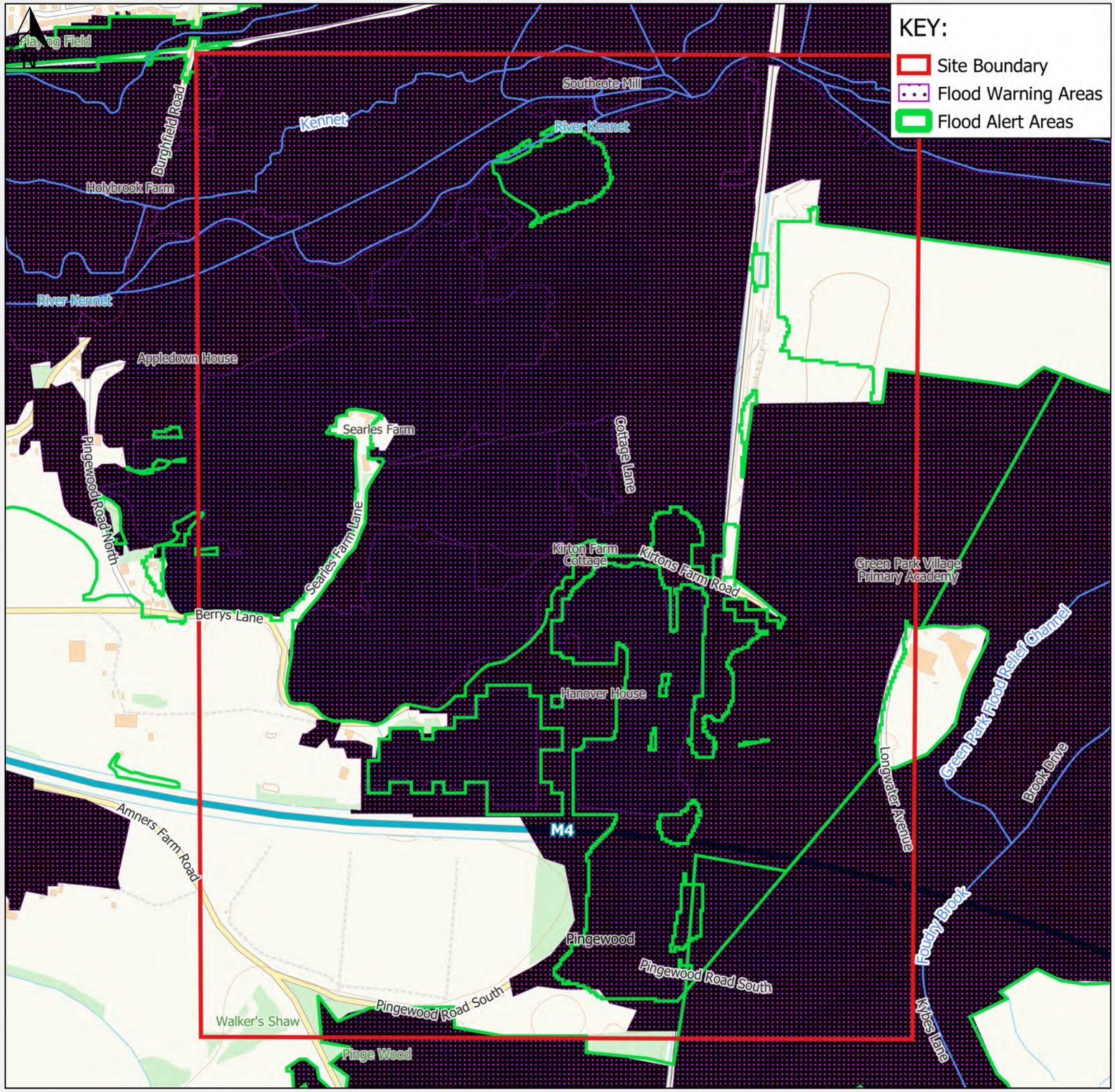
FLOOD ALERT AREAS

Flood Alert Areas are areas where it is possible for flooding to occur from rivers, sea and in some location's groundwater. A single Flood Alert Area may cover the floodplain within the Flood Warning Service Limit of multiple catchments of similar characteristics containing a number of Flood Warning Areas. A Flood Alert Area may also match that of a corresponding Flood Warning Area and warn for the possibility of flooding in that area. In some coastal locations a Flood Alert may be issued for spray or overtopping and be defined by a stretch of coastline. Practical and administrative factors may also influence the exact extent of a Flood Alert Area. A Flood Alert is issued to warn people of the possibility of flooding and encourage them to be alert stay vigilant and make early / low impact preparations for flooding. Flood Alerts are issued earlier than Flood Warnings to provide advance notice of the possibility of flooding and may be issued when there is less confidence that flooding will occur in a Food Warning Area.

FLOOD WARNING AREAS

Flood Warning Areas are areas where flooding is expected to occur and where a Flood Warning Service is provided. Areas generally contain properties that are expected to flood from rivers or the sea and in some areas, from groundwater. Specifically, Flood Warning Areas define locations within the Flood Warning Service Limit that represent a discrete community at risk of flooding. The purpose of Flood Warnings is to alert people that flooding is expected, and they should take action to protect themselves and their property. Flood Warnings are issued when flooding is expected to occur, Severe Flood Warnings are issued to similar areas when there is a danger to life or widespread disruption is expected.

If an area is not covered by these layers, it does not mean that the area has never flooded, only that there are not currently records of flooding in the area.



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Appendix E.3

SHEFFIELD BOTTOM

Site Location

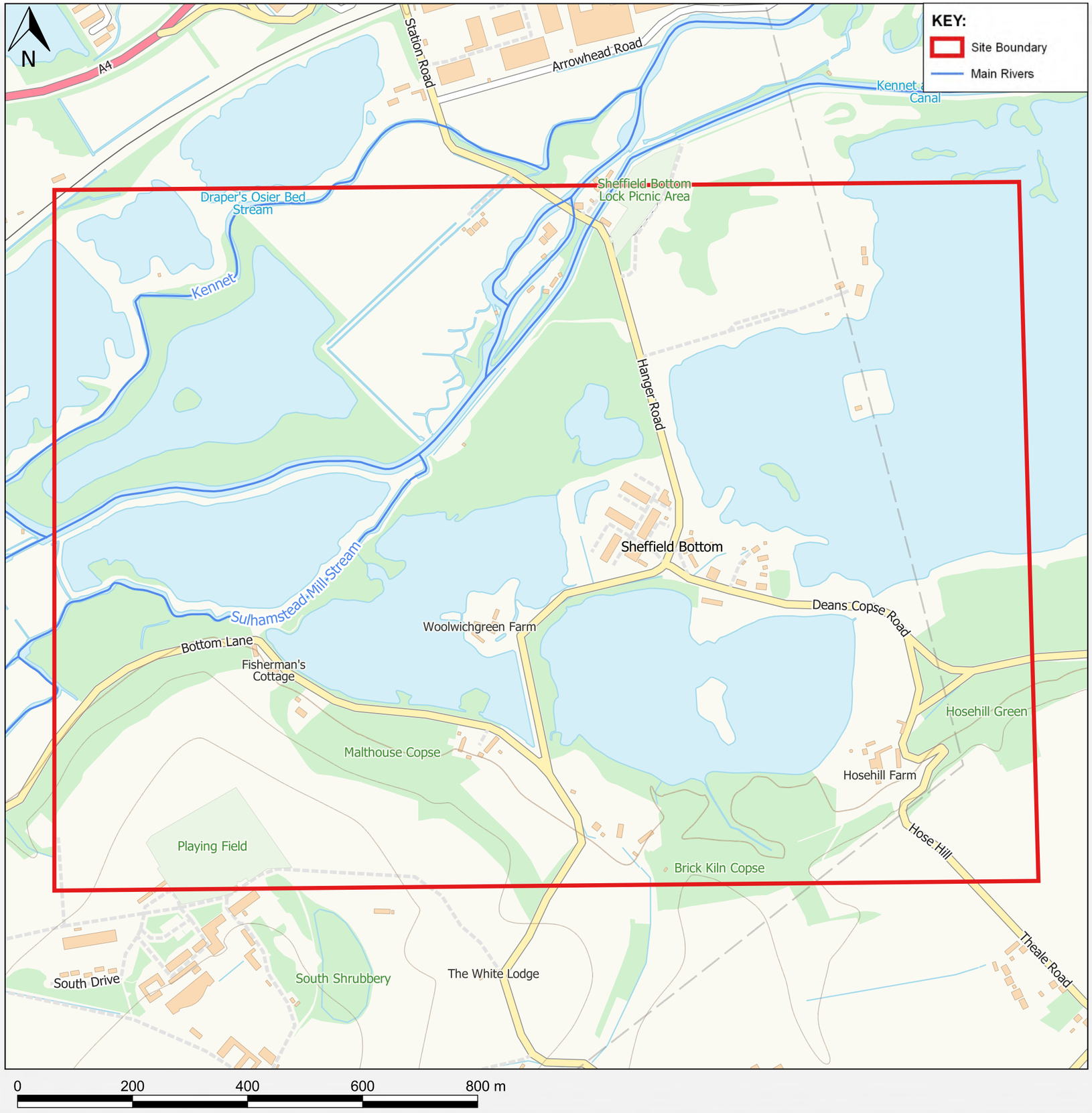
2

CLOSEST MAIN RIVER

Kennet

DISTANCE BETWEEN SITE AND CLOSEST MAIN RIVER

0m



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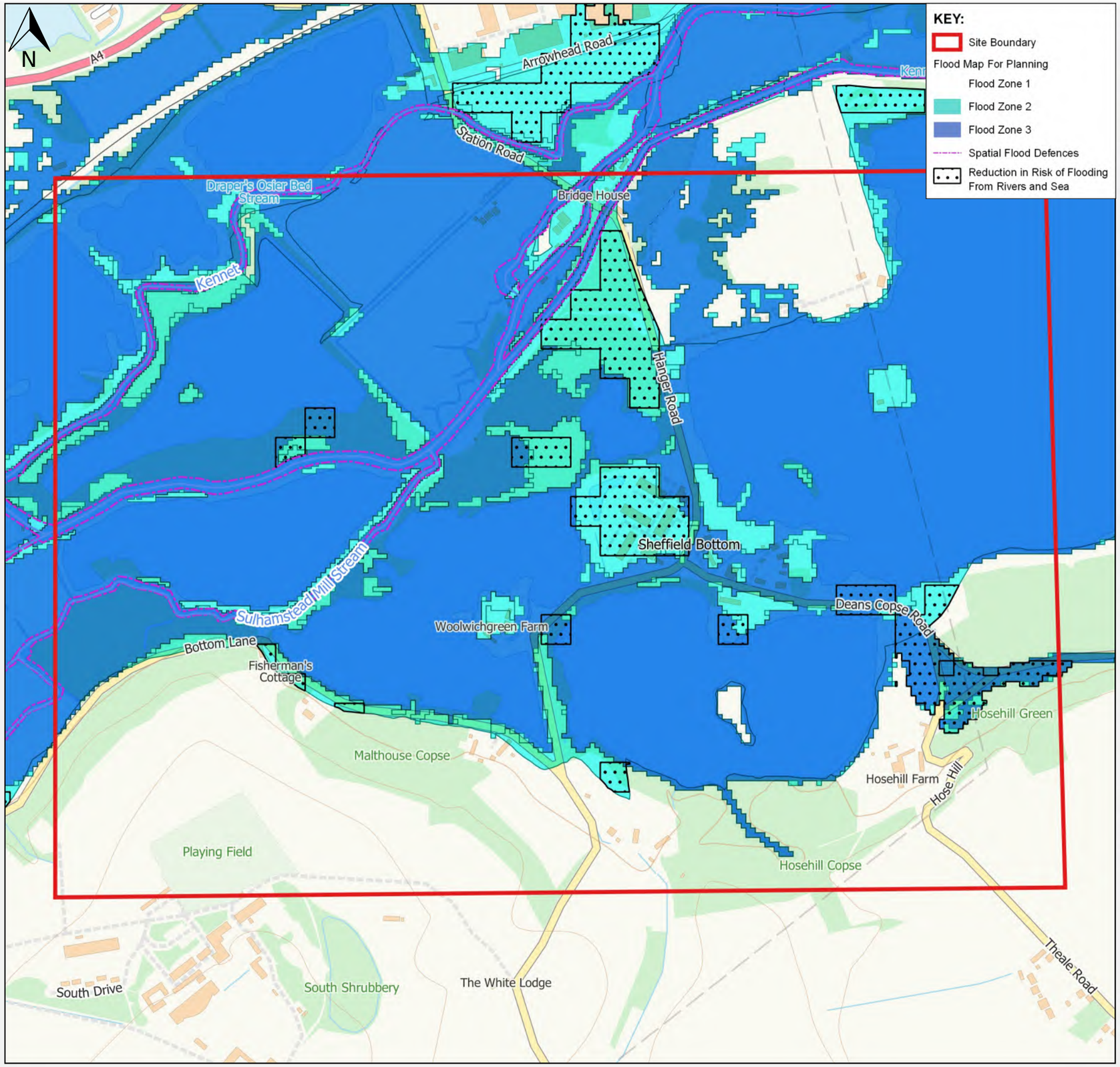
Flood Map for Planning

Flood zone maps are modelled using local and national river and sea data. This information provides an indication of the likelihood of flooding and is intended for planning use only.

- **Flood Zone 1 -** Land having a less than 1 in 1,000 annual probability (0.1% AEP) of river or sea flooding - all land outside Zones 2 and 3).
- **Flood Zone 2 -** Land having between a 1 in 100 and 1 in 1,000 annual probability (0.1% - 1.0% AEP) of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability (0.1% - 0.5% AEP) of sea flooding.
- **Flood Zone 3 -** Land having a 1 in 100 or greater annual probability (>1.0% AEP) of river flooding; or Land having a 1 in 200 or greater annual probability (>0.5% AEP) of sea flooding.

Reduction in Risk of Flooding from Rivers and Sea due to Defences -Reduction in Risk of Flooding from Rivers and Sea due to Defences is a spatial dataset that indicates where areas have reduced flood risk from rivers and sea due to the presence of flood defences. The dataset has been created to help initiate conversations about the impact our flood defences have on the risk of flooding from the rivers and sea,and as a prompt to find out more about the flood defences in a particular area of interest. It does not replace any local, more detailed information.



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Risk of Flooding from Rivers and Sea

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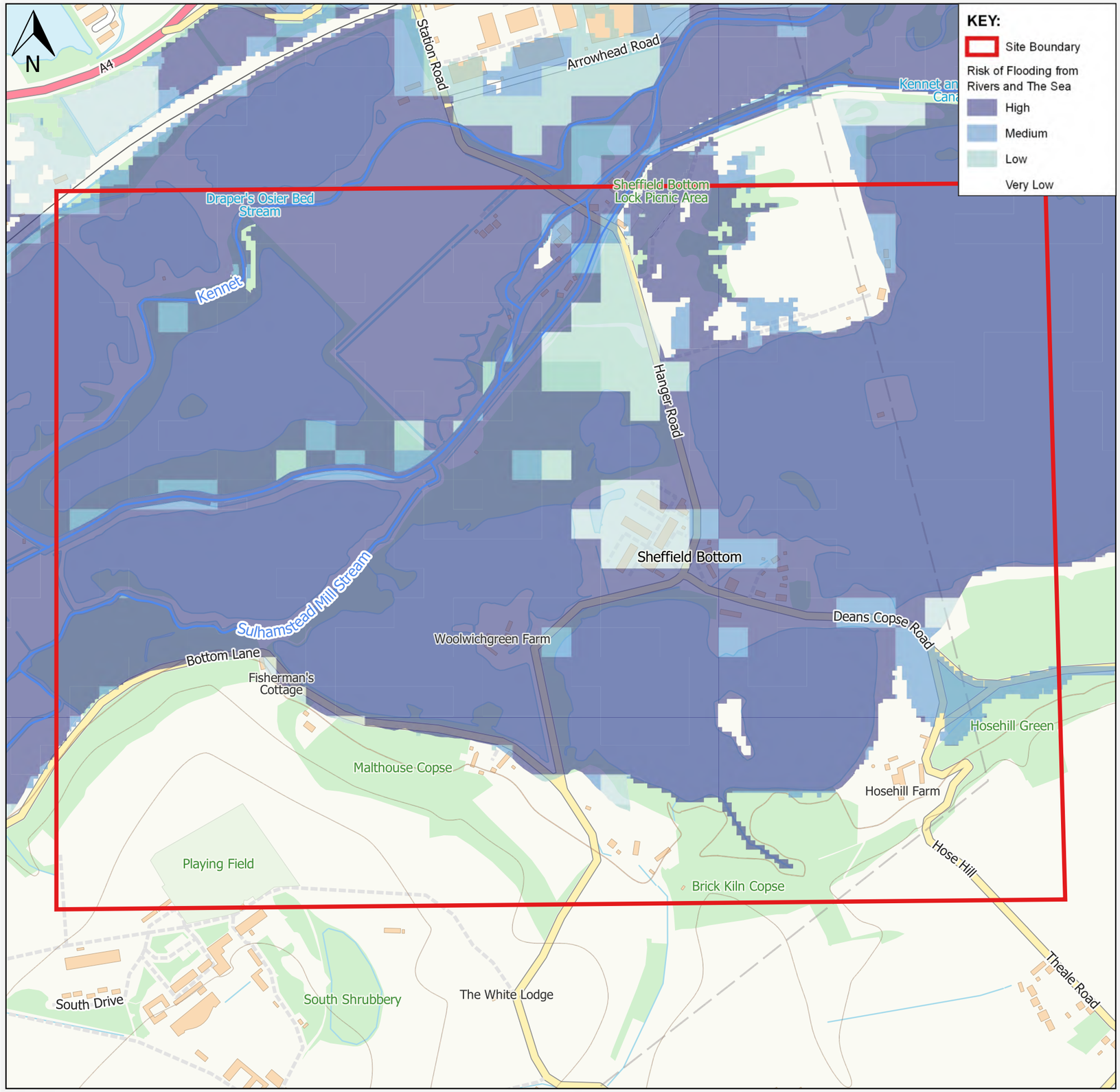

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Risk of Flooding from Surface Water

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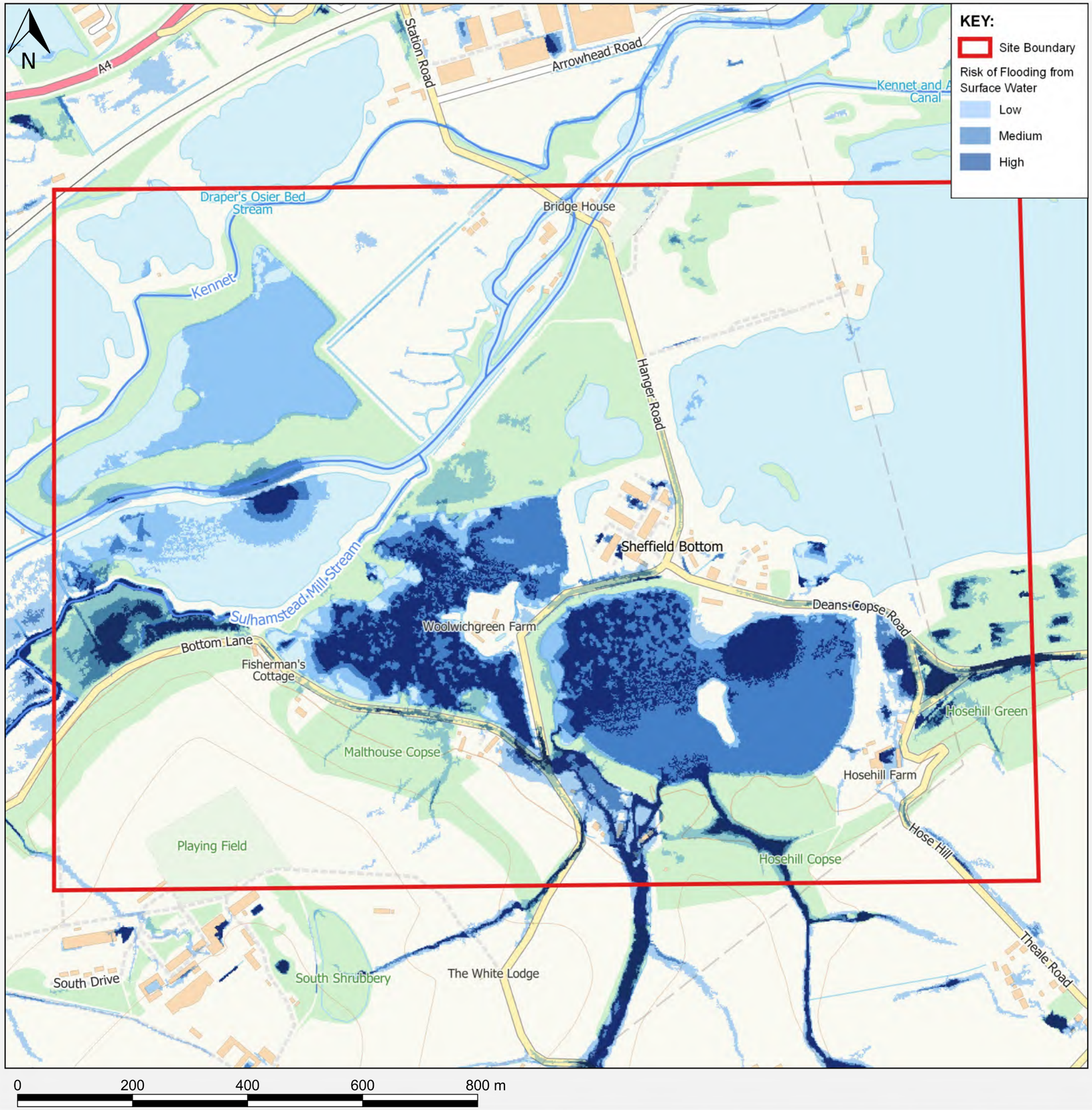

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Risk of Flooding from Reservoirs

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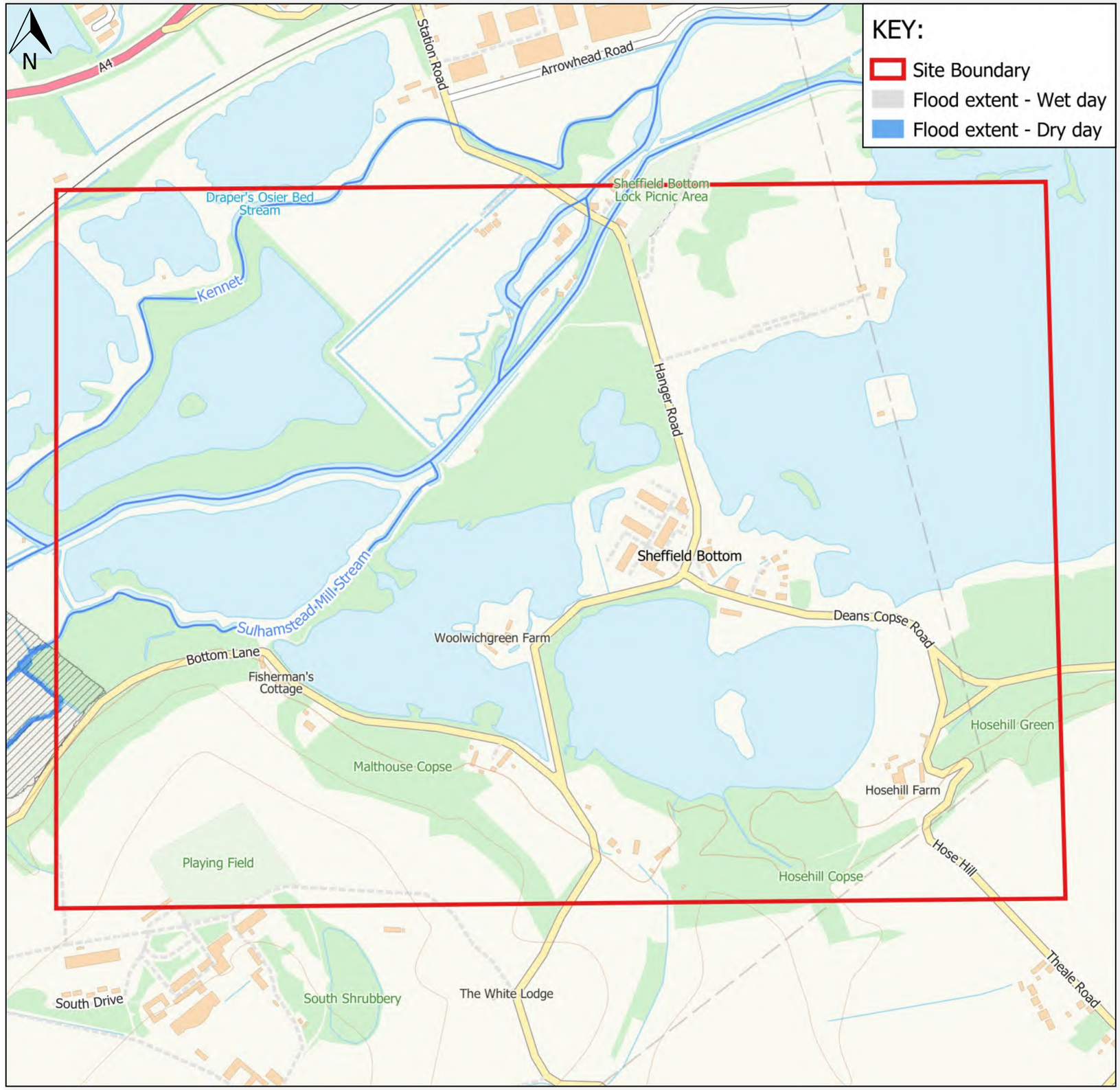

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Previous Flooding

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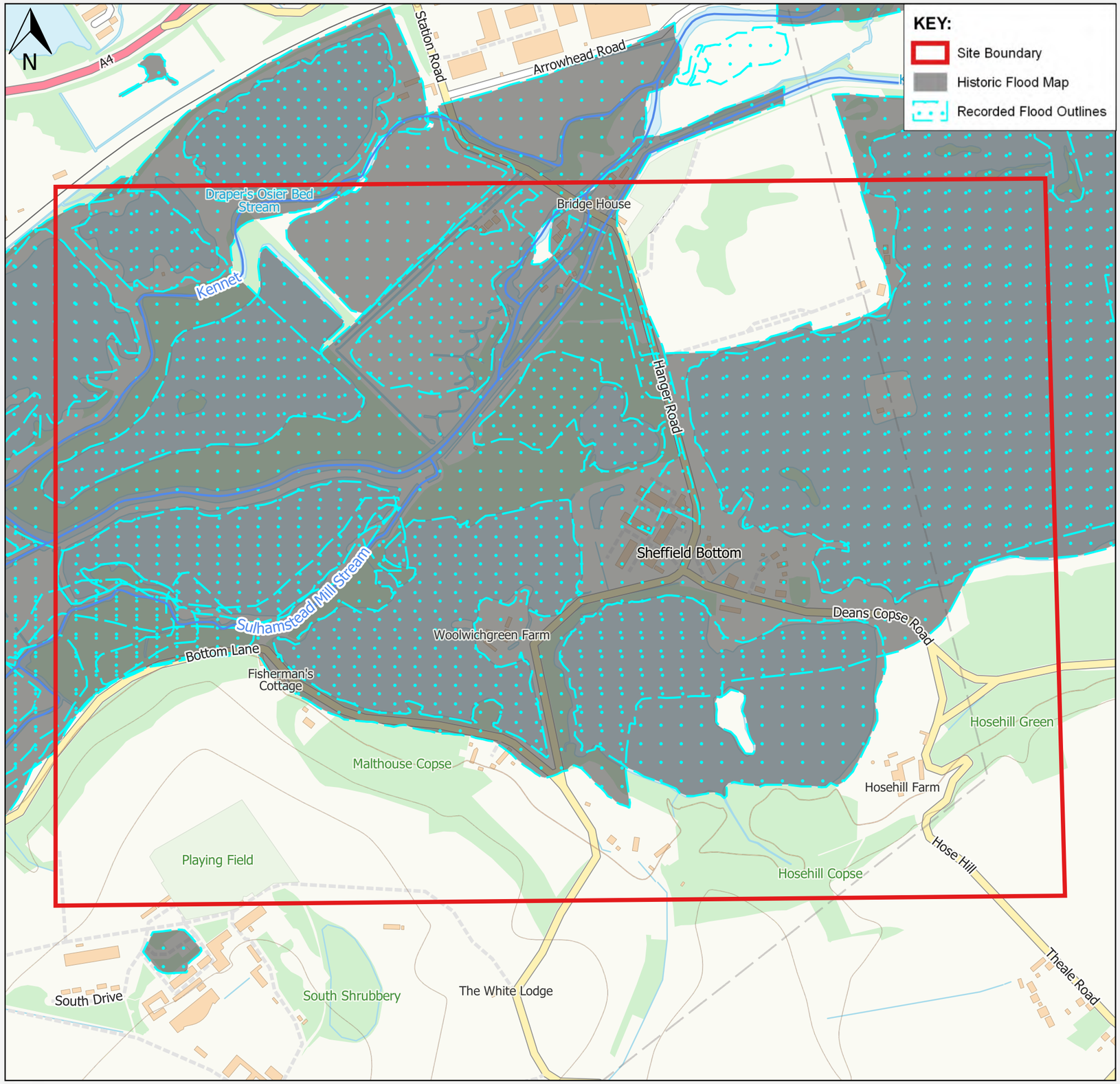

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Flood Alert and Warning Areas

FLOOD ALERT AREAS

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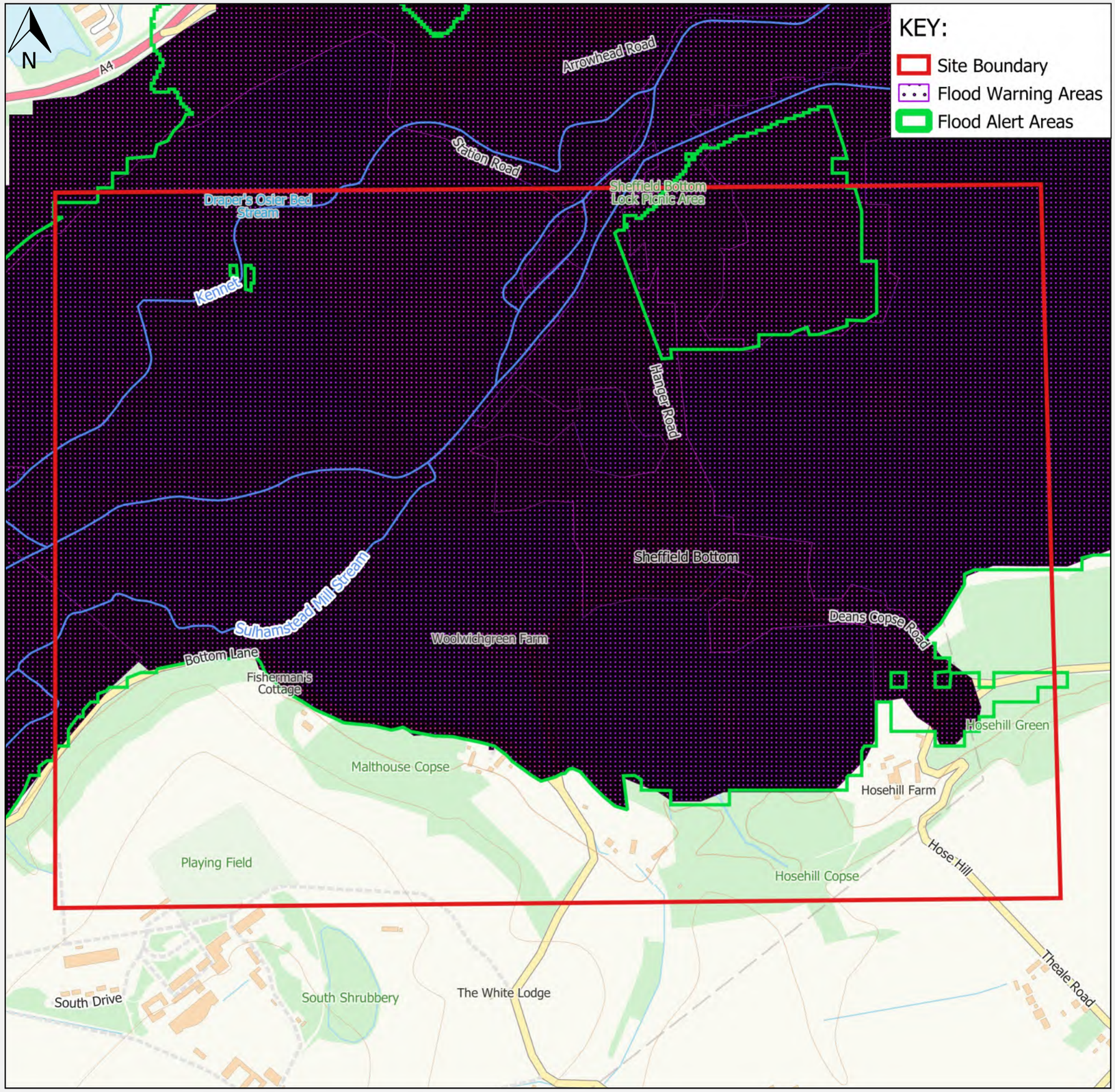

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Appendix E.4

EASTBURY

Site Location

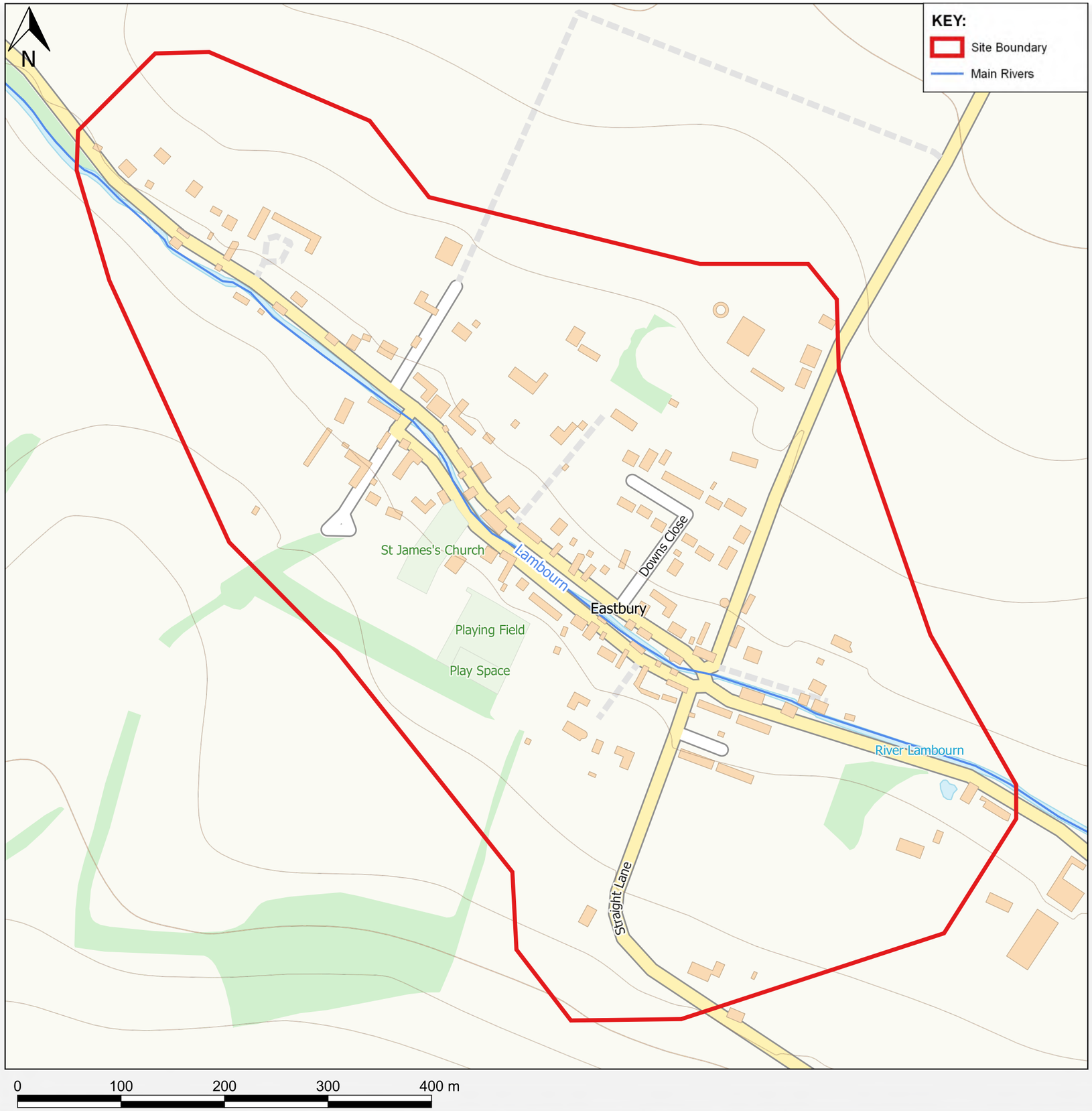
2

CLOSEST MAIN RIVER

Lambourn

DISTANCE BETWEEN SITE AND CLOSEST MAIN RIVER

0m



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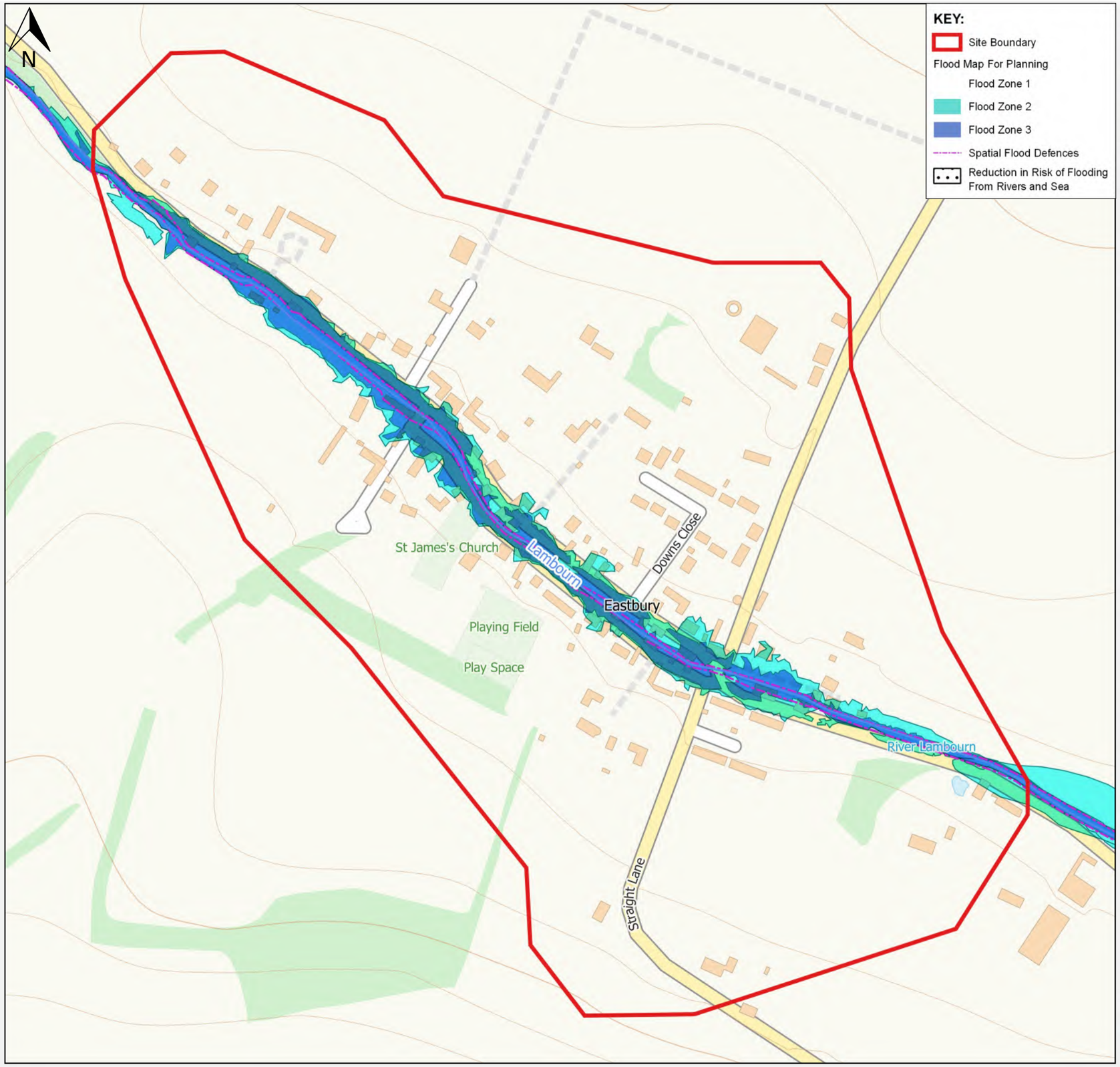

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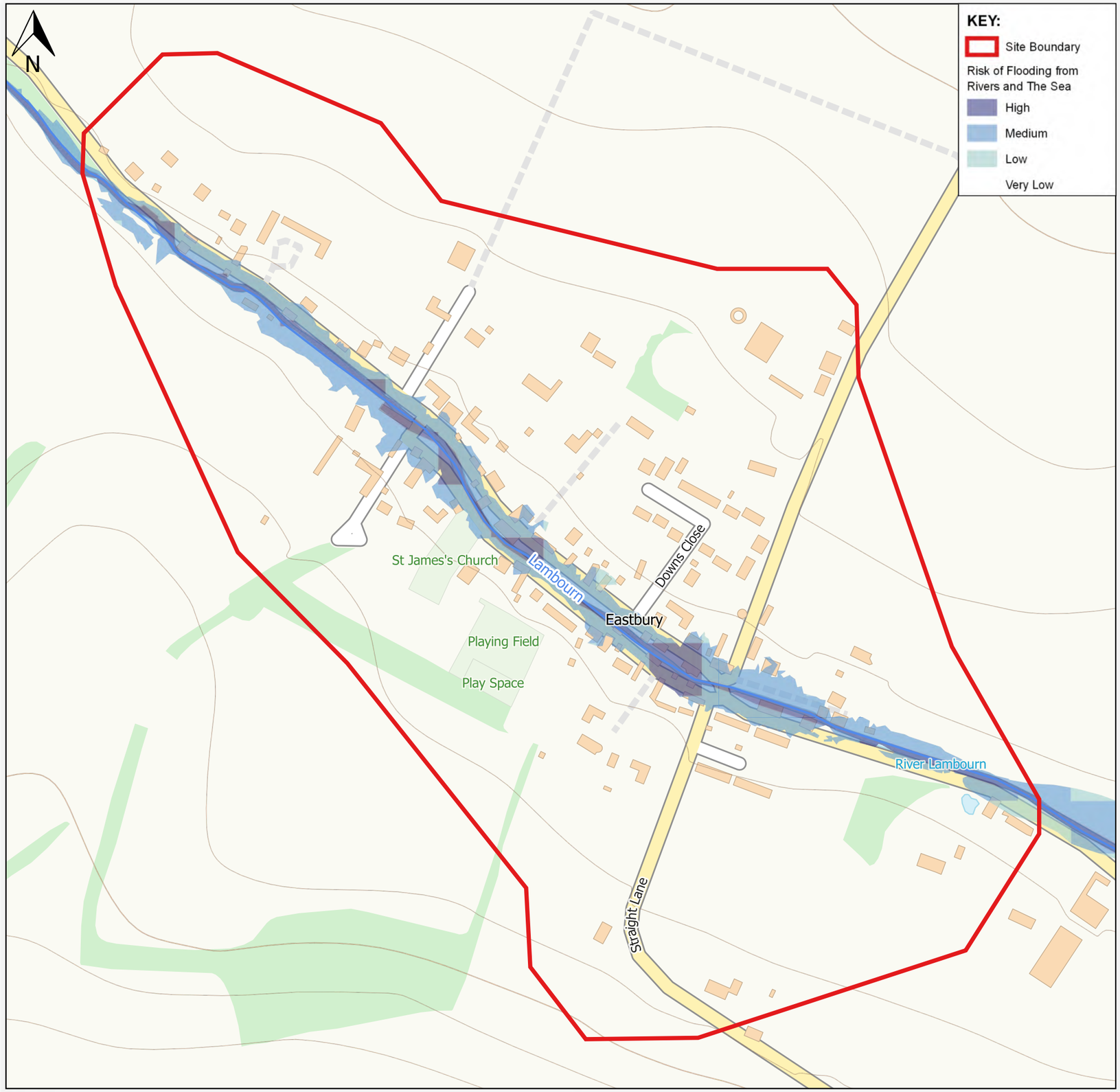

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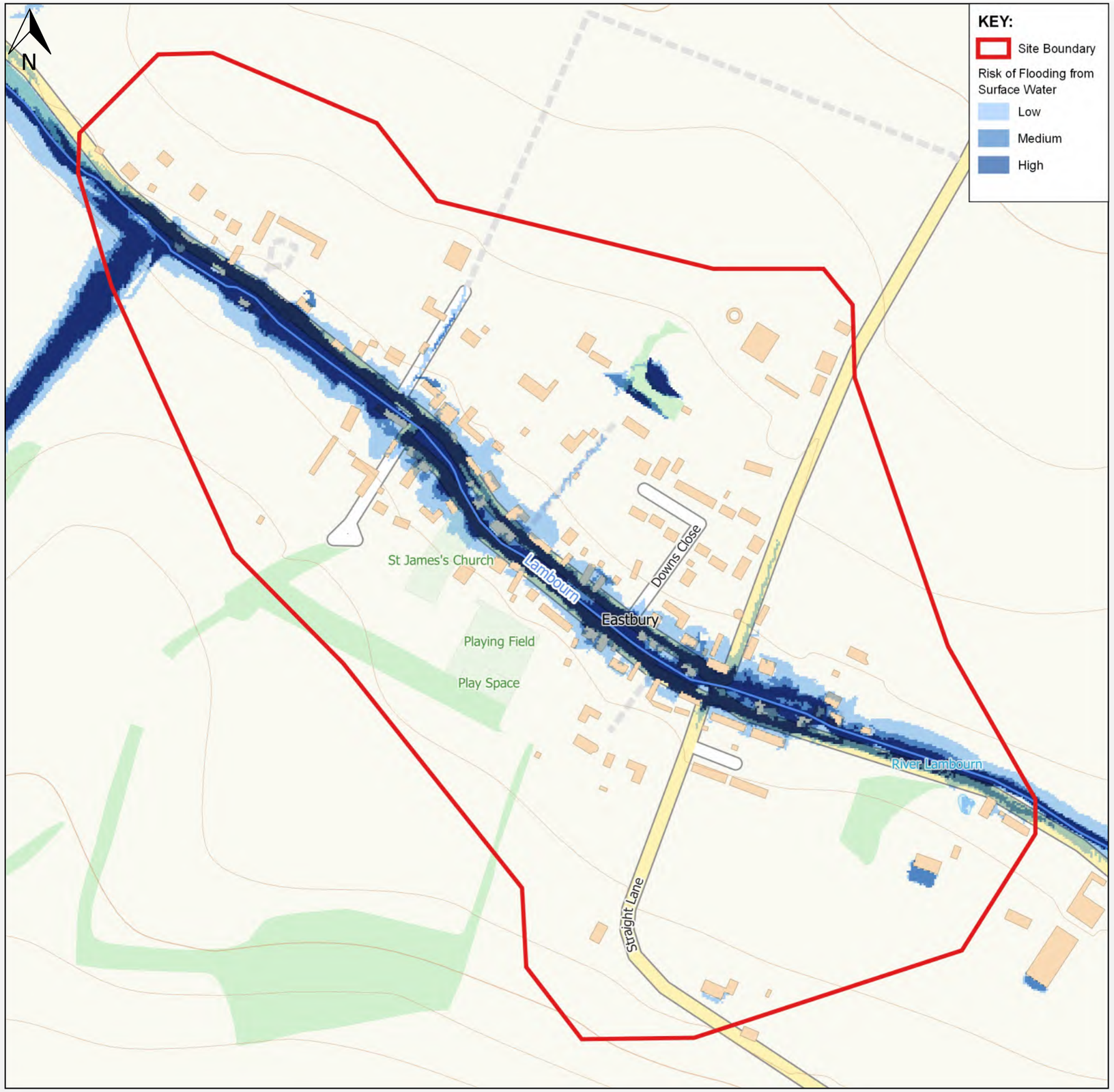

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Risk of Flooding from Reservoirs

The Risk of Flooding from Reservoirs (wet day) layer shows the individual flood extents for all large raised reservoirs in the event that they were to fail and release the water held on a "wet day" when local rivers had already overflowed their banks.

It represents a prediction of a credible worst-case scenario, however it's unlikely that any actual flood would be this large. The data gives no indication of likelihood or probability of reservoir flooding.

The Risk of Flooding from Reservoirs (dry day) shows flood extents for all large raised reservoirs in the event that they were to fail and release the water held on a "dry day" when local rivers are at normal levels.

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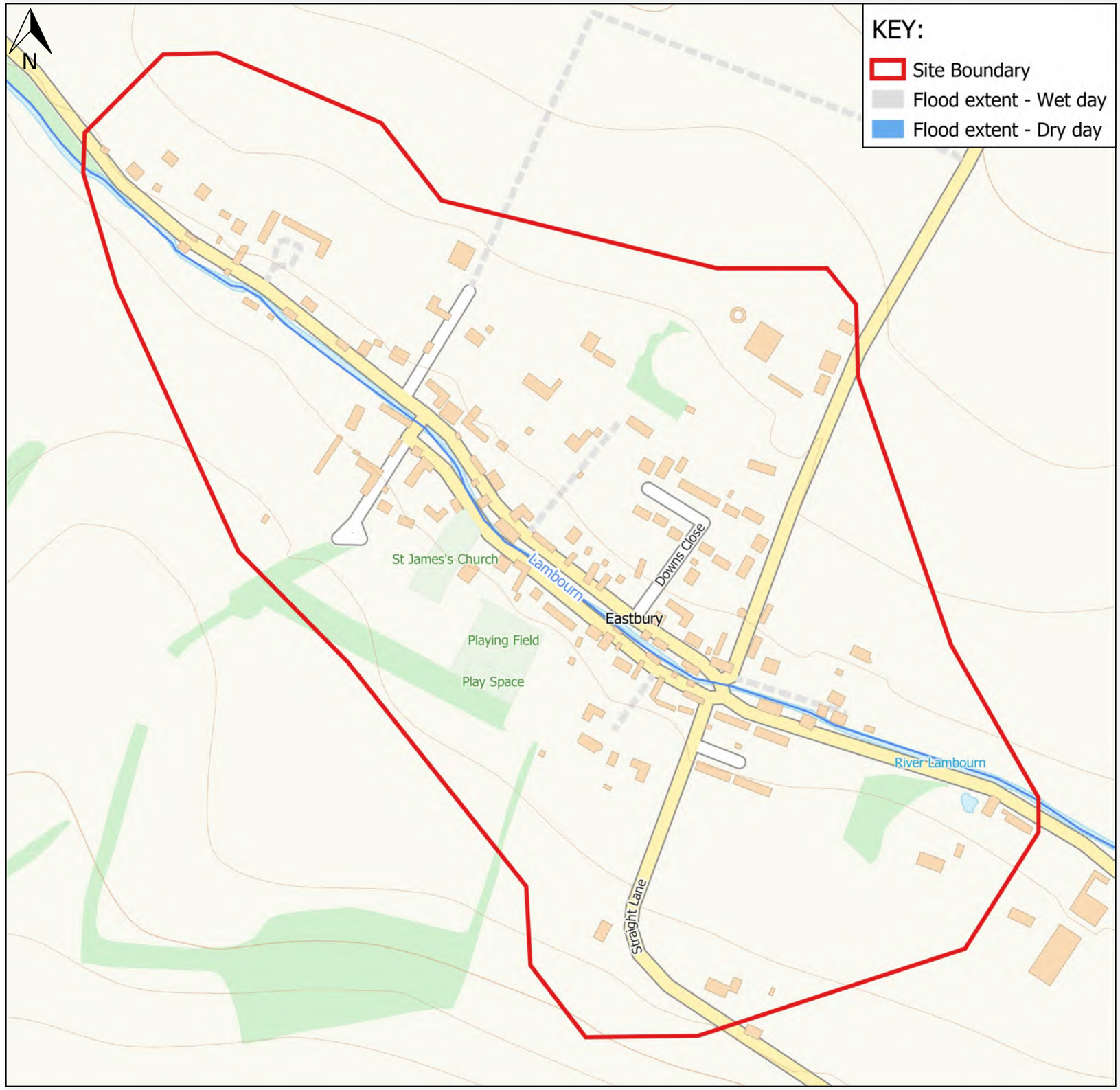

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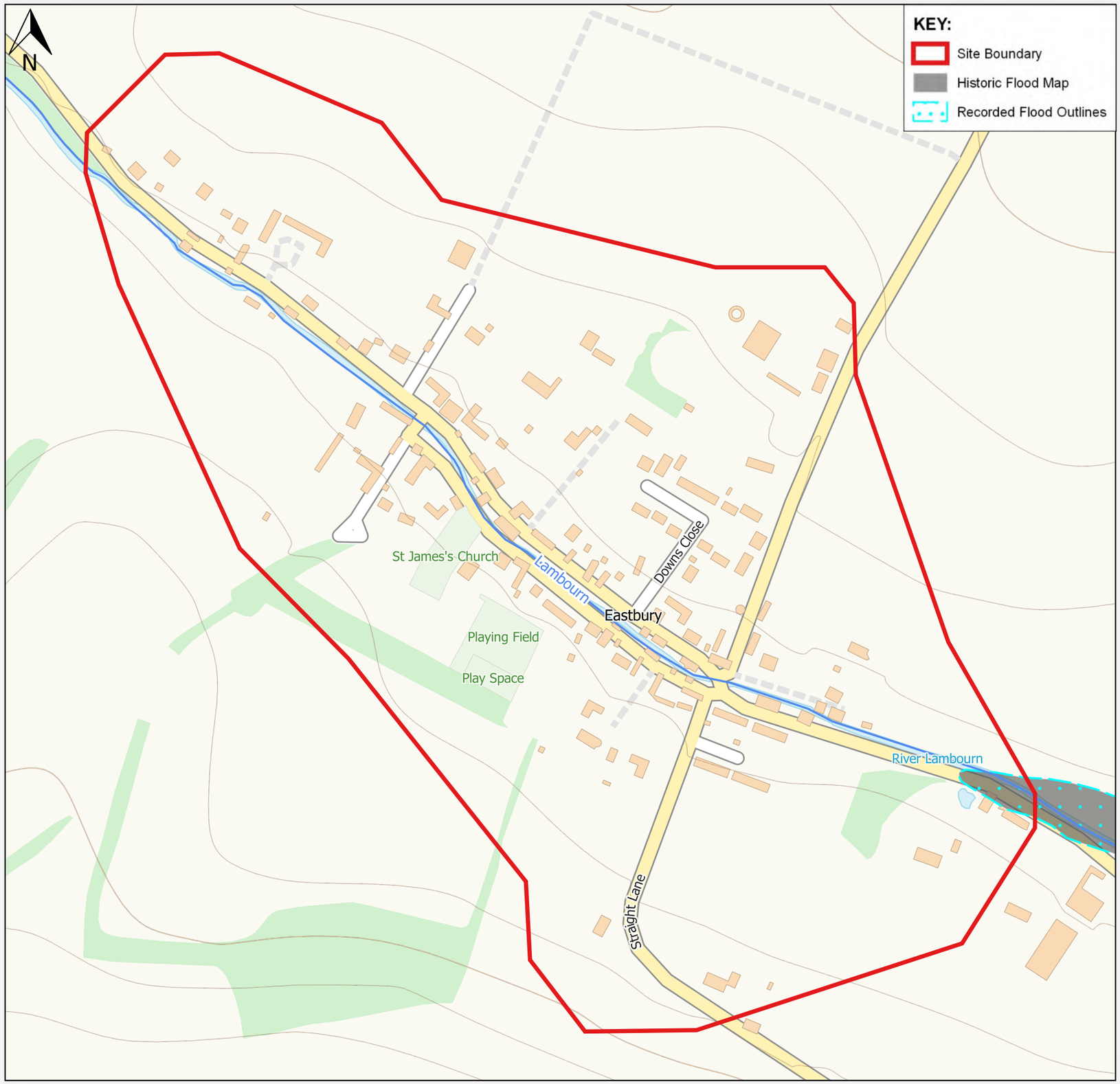
Previous Flooding

RECORDED FLOOD OUTLINES
Recorded Flood Outlines shows all records of historic flooding from rivers, the sea, groundwater and surface water. The absence of coverage by Recorded Flood Outlines for an area does not mean that the area has never flooded, only that there are currently no records of flooding in this area. It is also possible that the pattern of flooding in this area has changed and that this area would now flood or not flood under different circumstances. The Recorded Flood Outlines take into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding. It includes flood extents that may have been affected by overtopping, breaches or blockages. Any flood extents shown do not necessarily indicate that properties were flooded internally.

HISTORIC FLOOD MAP
The Historic Flooding shows the maximum extent of individual Recorded Flood Outlines from river, the sea and groundwater springs that meet a set criteria. It shows areas of land that has previously been subject to flooding. This excludes flooding from surface water, except in areas where it is impossible to determine whether the source is fluvial or surface water, but the dominant source is fluvial. If an area is not covered by the Historic Flood Map it does not mean that the area has never flooded, only that the EA do not currently have records of flooding in this area that meet the criteria for inclusion. It is also possible that the pattern of flooding in this area has changed and that this area would now flood or not flood under different circumstances. Outlines that don't meet these criteria are stored in the Recorded Flood Outlines dataset. The Historic Flood Map takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding. It will include flood extents that may have been affected by overtopping, breaches or blockages. Flooding is shown to the land and does not necessarily indicate that properties were flooded internally.

If an area is not covered by these layers, it does not mean that the area has never flooded, only that there are not currently records of flooding in the area.



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Flood Alert and Warning Areas

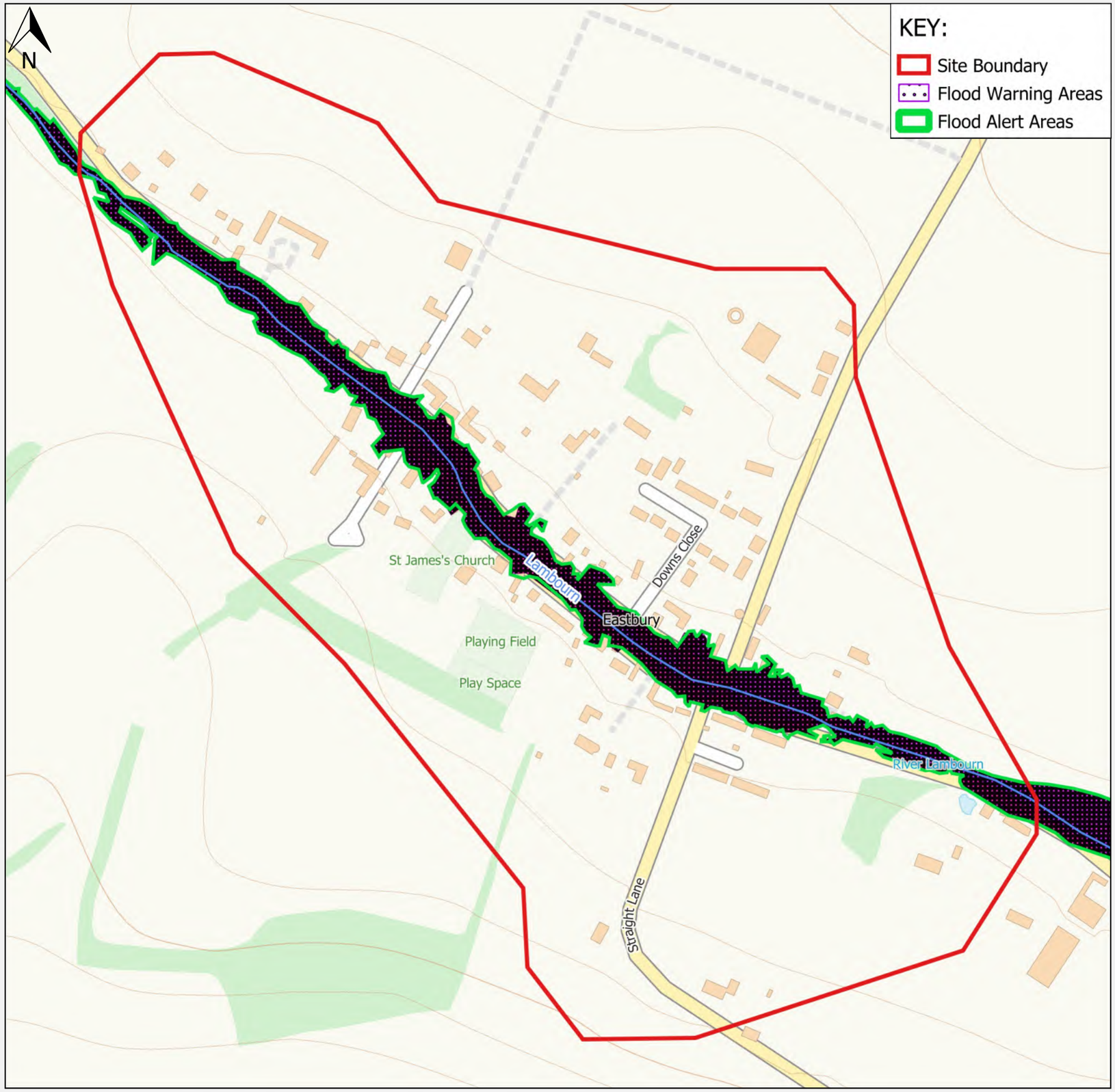
FLOOD ALERT AREAS

Flood Alert Areas are areas where it is possible for flooding to occur from rivers, sea and in some location's groundwater. A single Flood Alert Area may cover the floodplain within the Flood Warning Service Limit of multiple catchments of similar characteristics containing a number of Flood Warning Areas. A Flood Alert Area may also match that of a corresponding Flood Warning Area and warn for the possibility of flooding in that area. In some coastal locations a Flood Alert may be issued for spray or overtopping and be defined by a stretch of coastline. Practical and administrative factors may also influence the exact extent of a Flood Alert Area. A Flood Alert is issued to warn people of the possibility of flooding and encourage them to be alert stay vigilant and make early / low impact preparations for flooding. Flood Alerts are issued earlier than Flood Warnings to provide advance notice of the possibility of flooding and may be issued when there is less confidence that flooding will occur in a Food Warning Area.

FLOOD WARNING AREAS

Flood Warning Areas are areas where flooding is expected to occur and where a Flood Warning Service is provided. Areas generally contain properties that are expected to flood from rivers or the sea and in some areas, from groundwater. Specifically, Flood Warning Areas define locations within the Flood Warning Service Limit that represent a discrete community at risk of flooding. The purpose of Flood Warnings is to alert people that flooding is expected, and they should take action to protect themselves and their property. Flood Warnings are issued when flooding is expected to occur, Severe Flood Warnings are issued to similar areas when there is a danger to life or widespread disruption is expected.

If an area is not covered by these layers, it does not mean that the area has never flooded, only that there are not currently records of flooding in the area.



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Appendix E.5

GREAT SHEFFORD

Site Location

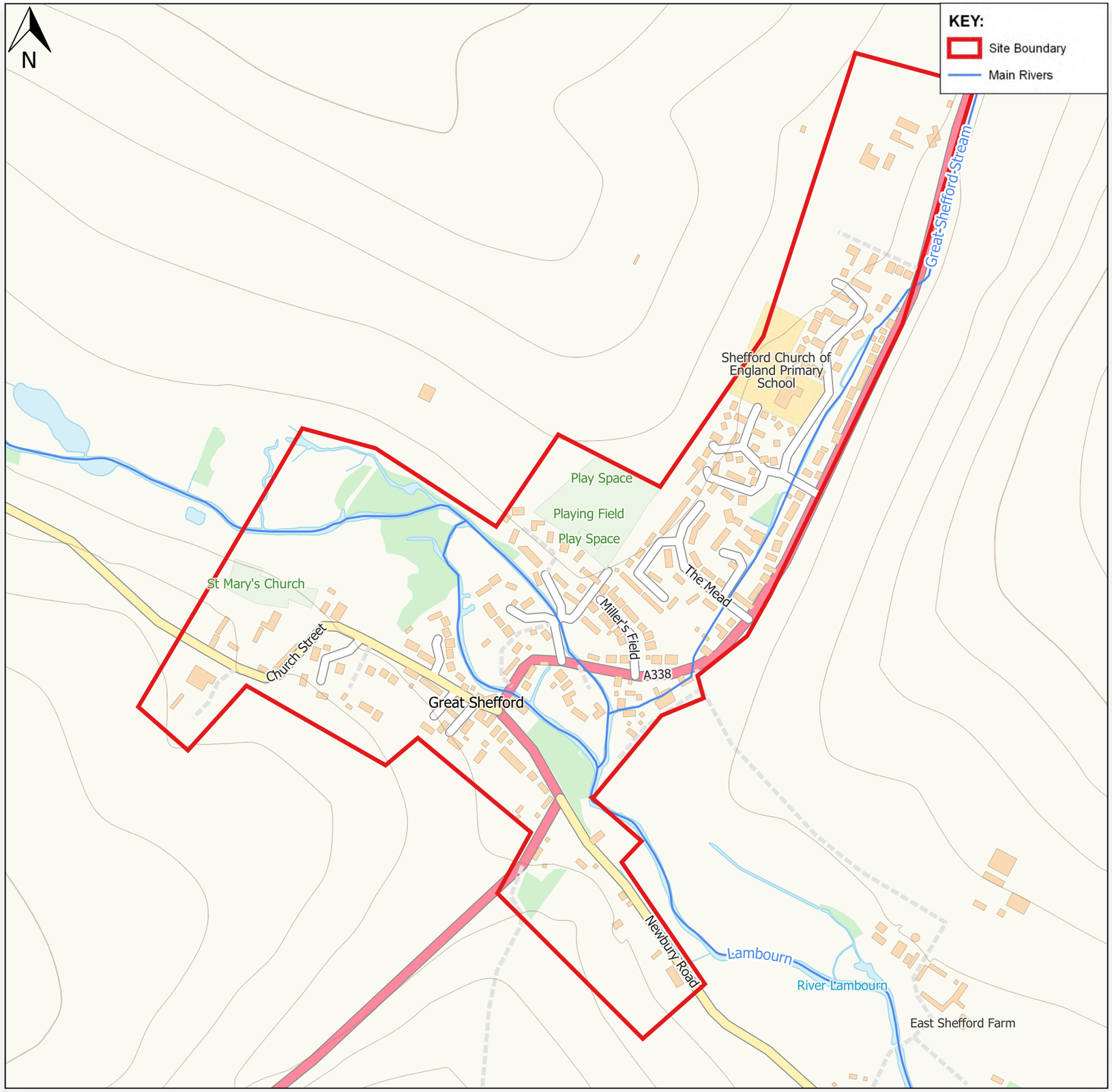
2

CLOSEST MAIN RIVER

Lambourn

DISTANCE BETWEEN SITE AND CLOSEST MAIN RIVER

0m



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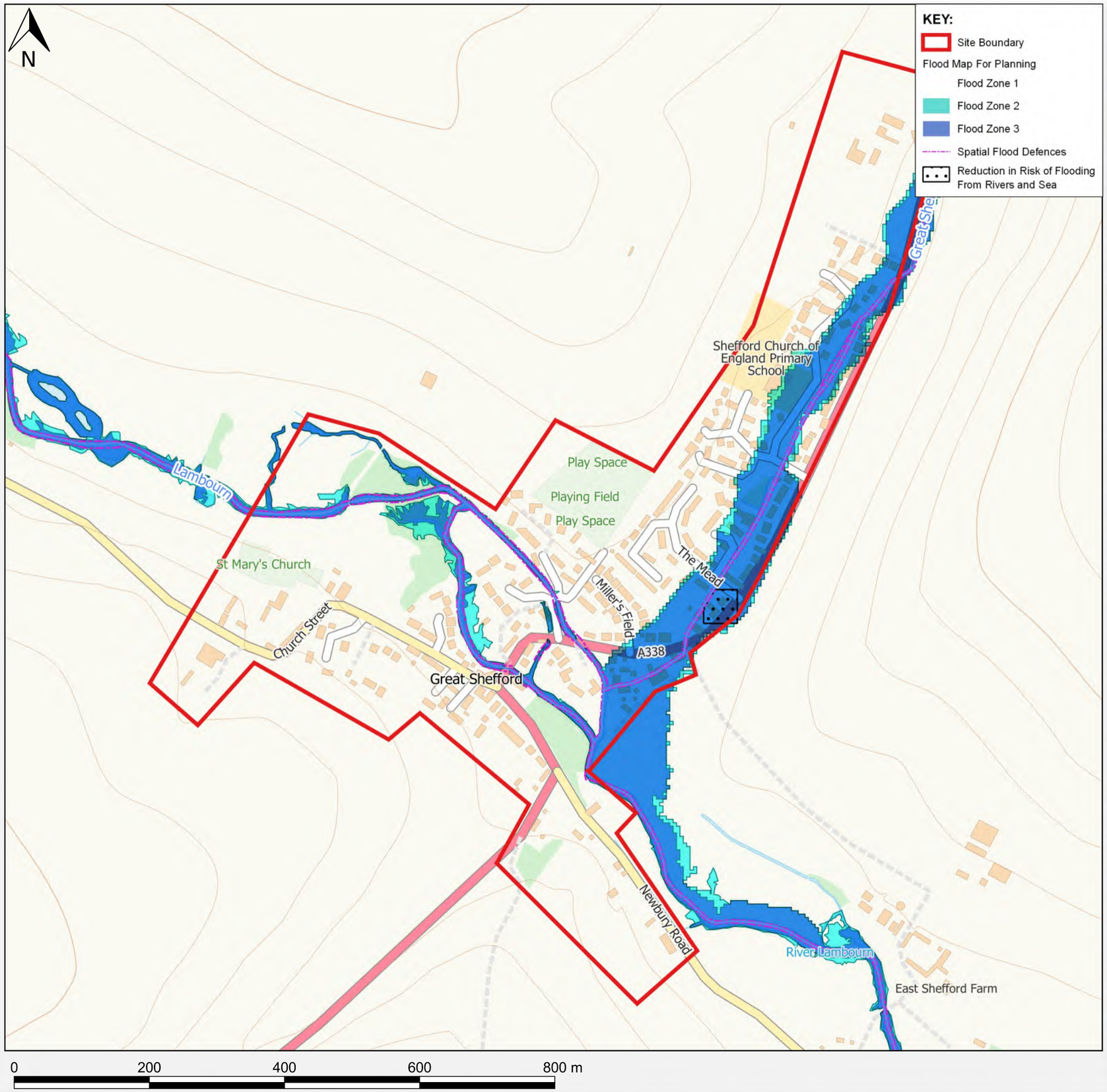
Flood Map for Planning

Flood zone maps are modelled using local and national river and sea data. This information provides an indication of the likelihood of flooding and is intended for planning use only.

- **Flood Zone 1 -** Land having a less than 1 in 1,000 annual probability (0.1% AEP) of river or sea flooding - all land outside Zones 2 and 3).
- **Flood Zone 2 -** Land having between a 1 in 100 and 1 in 1,000 annual probability (0.1% - 1.0% AEP) of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability (0.1% - 0.5% AEP) of sea flooding.
- **Flood Zone 3 -** Land having a 1 in 100 or greater annual probability (>1.0% AEP) of river flooding; or Land having a 1 in 200 or greater annual probability (>0.5% AEP) of sea flooding.

Reduction in Risk of Flooding from Rivers and Sea due to Defences -Reduction in Risk of Flooding from Rivers and Sea due to Defences is a spatial dataset that indicates where areas have reduced flood risk from rivers and sea due to the presence of flood defences. The dataset has been created to help initiate conversations about the impact our flood defences have on the risk of flooding from the rivers and sea,and as a prompt to find out more about the flood defences in a particular area of interest. It does not replace any local, more detailed information.



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Risk of Flooding from Rivers and Sea

This map takes into account the effect of any flood defences in the area. These defences reduce but do not completely stop the chance of flooding as they can be overtopped, or fail.

High Risk - Land having a 1 in 30 or greater annual probability (>3.3% AEP) of flooding from rivers or the sea.

Medium Risk - Land having between a 1 in 30 and a 1 in 100 annual probability (1.0% - 3.3%) of flooding from rivers or the sea.

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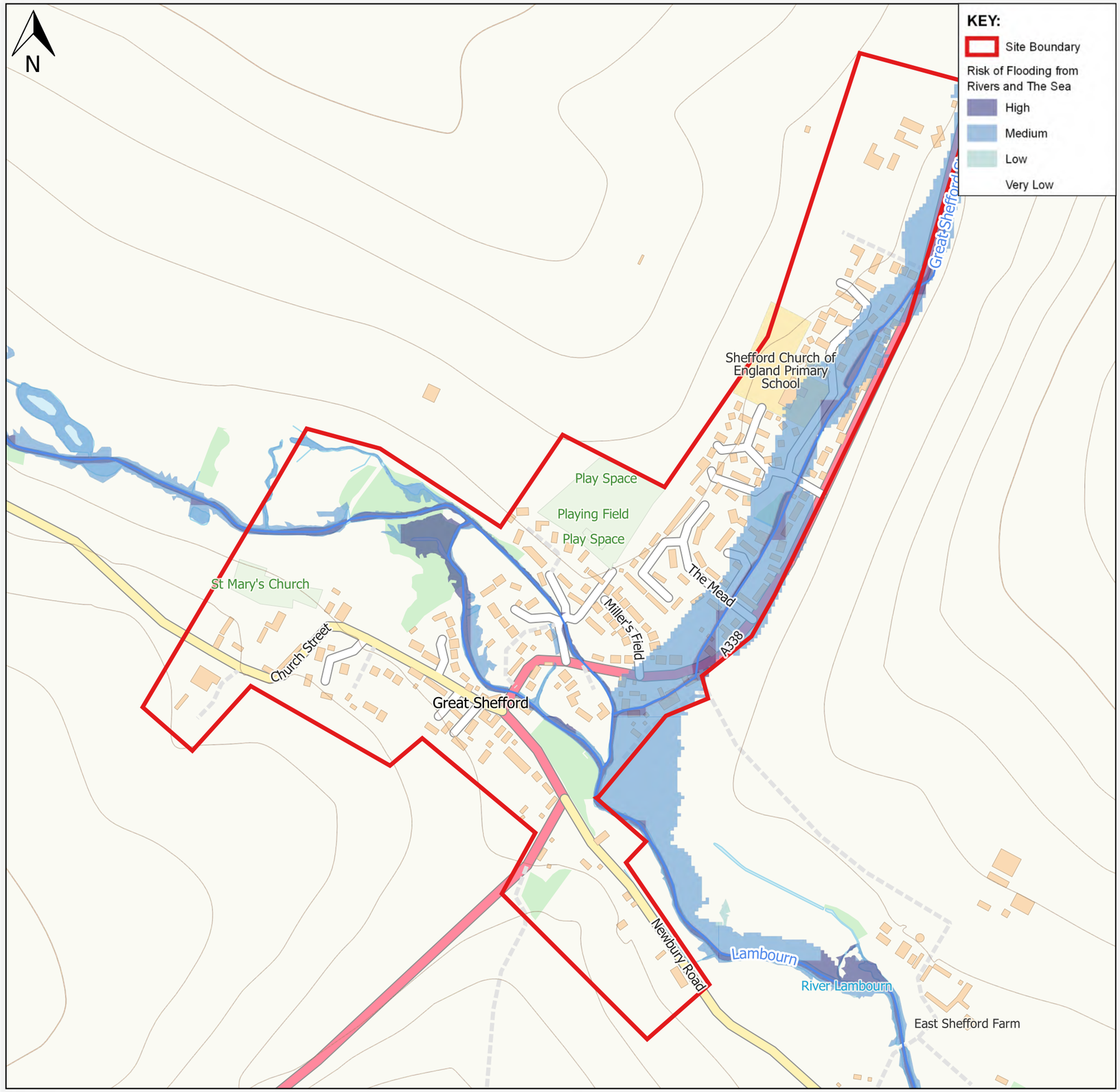

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Risk of Flooding from Surface Water

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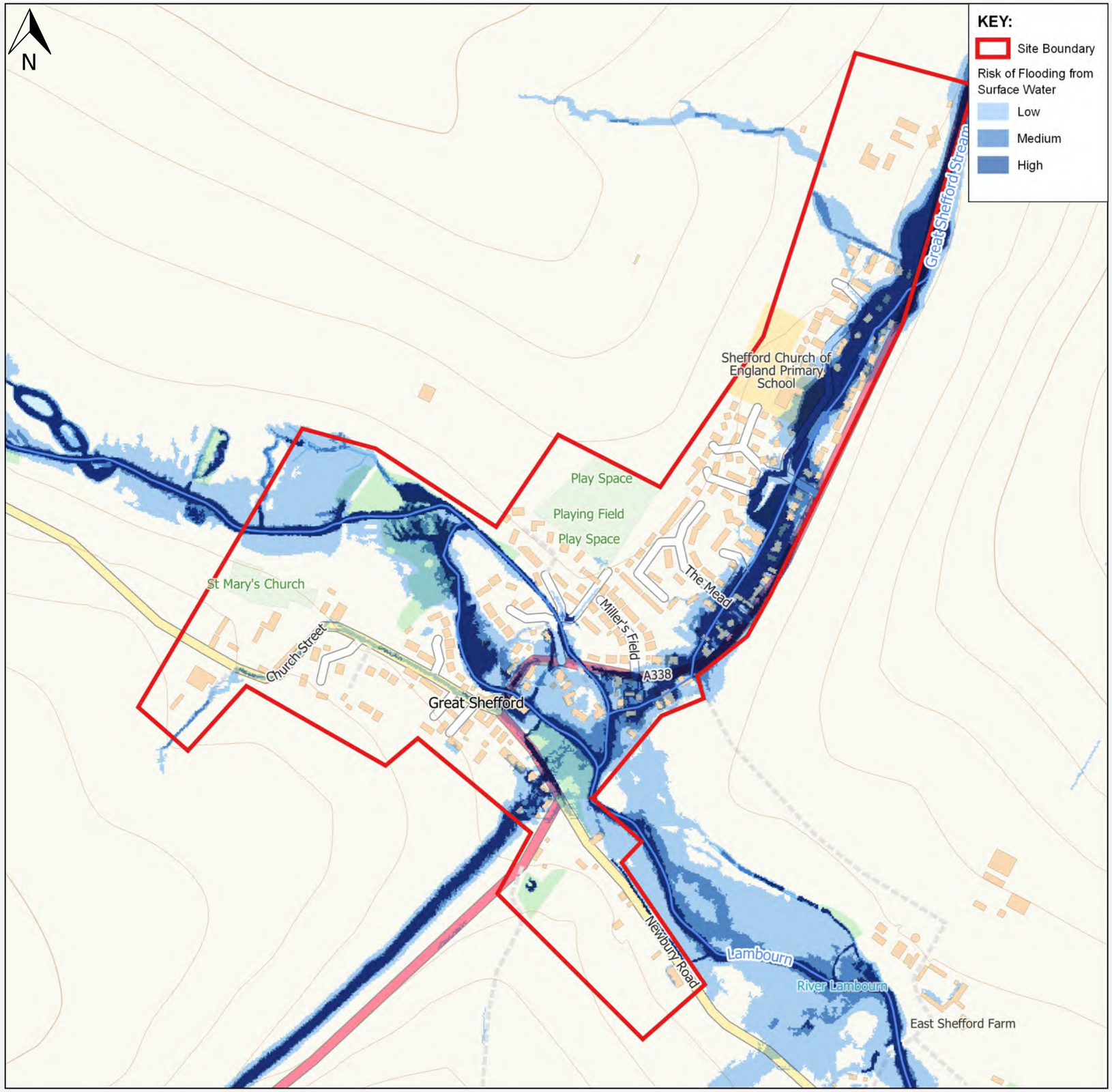

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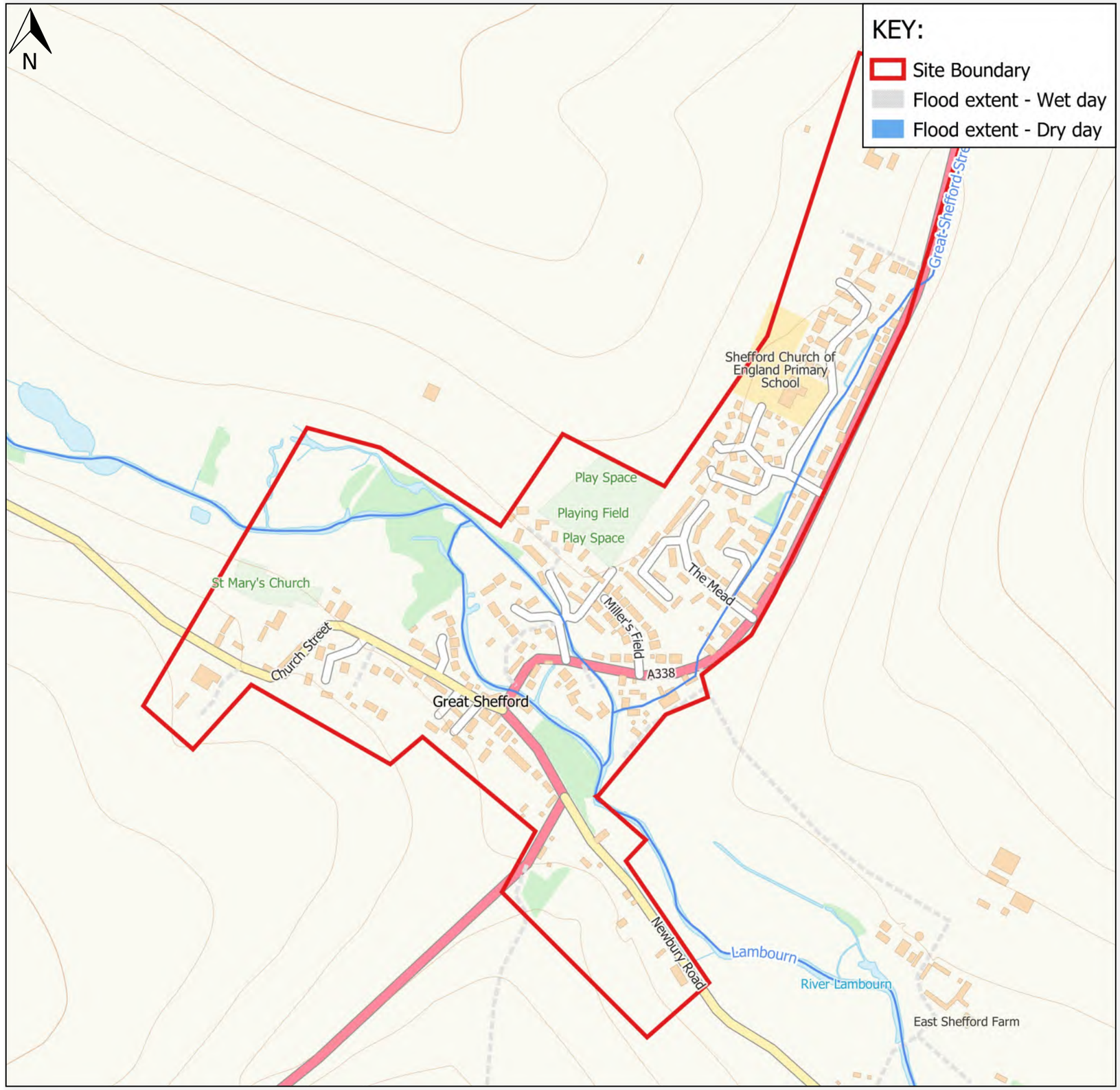

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Previous Flooding

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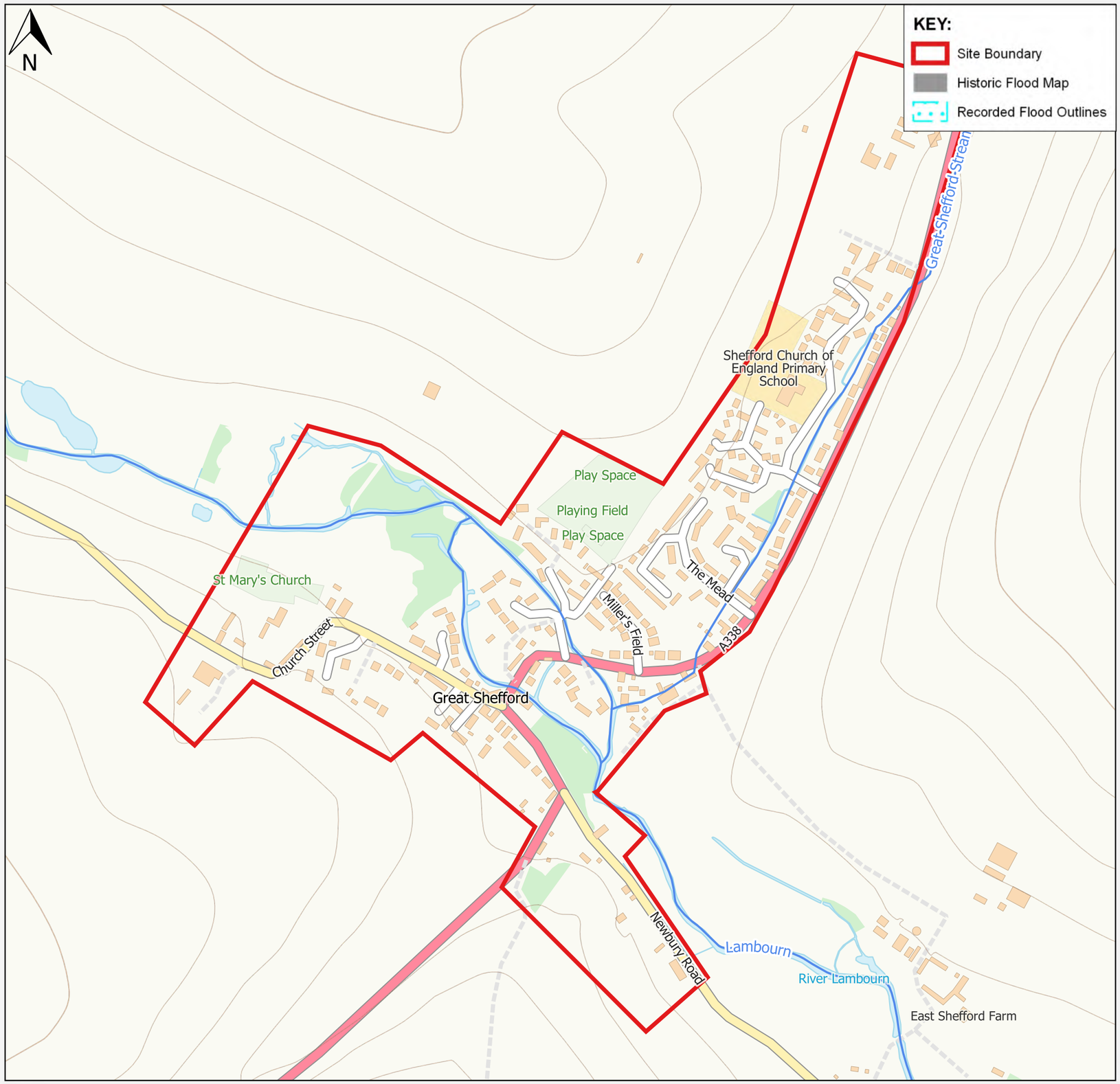

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Flood Alert and Warning Areas

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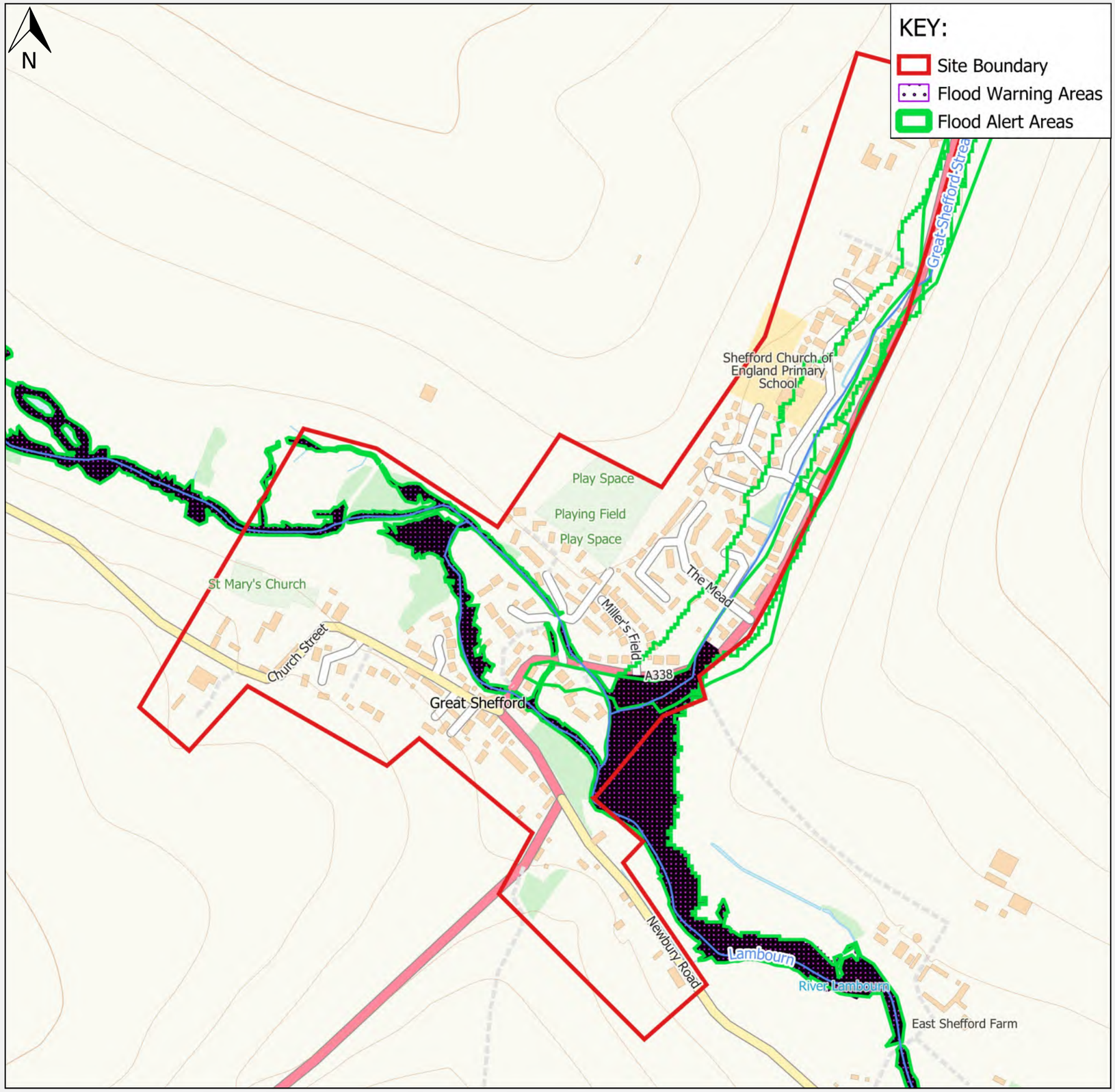

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Appendix E.6

LAMBOURN

Site Location

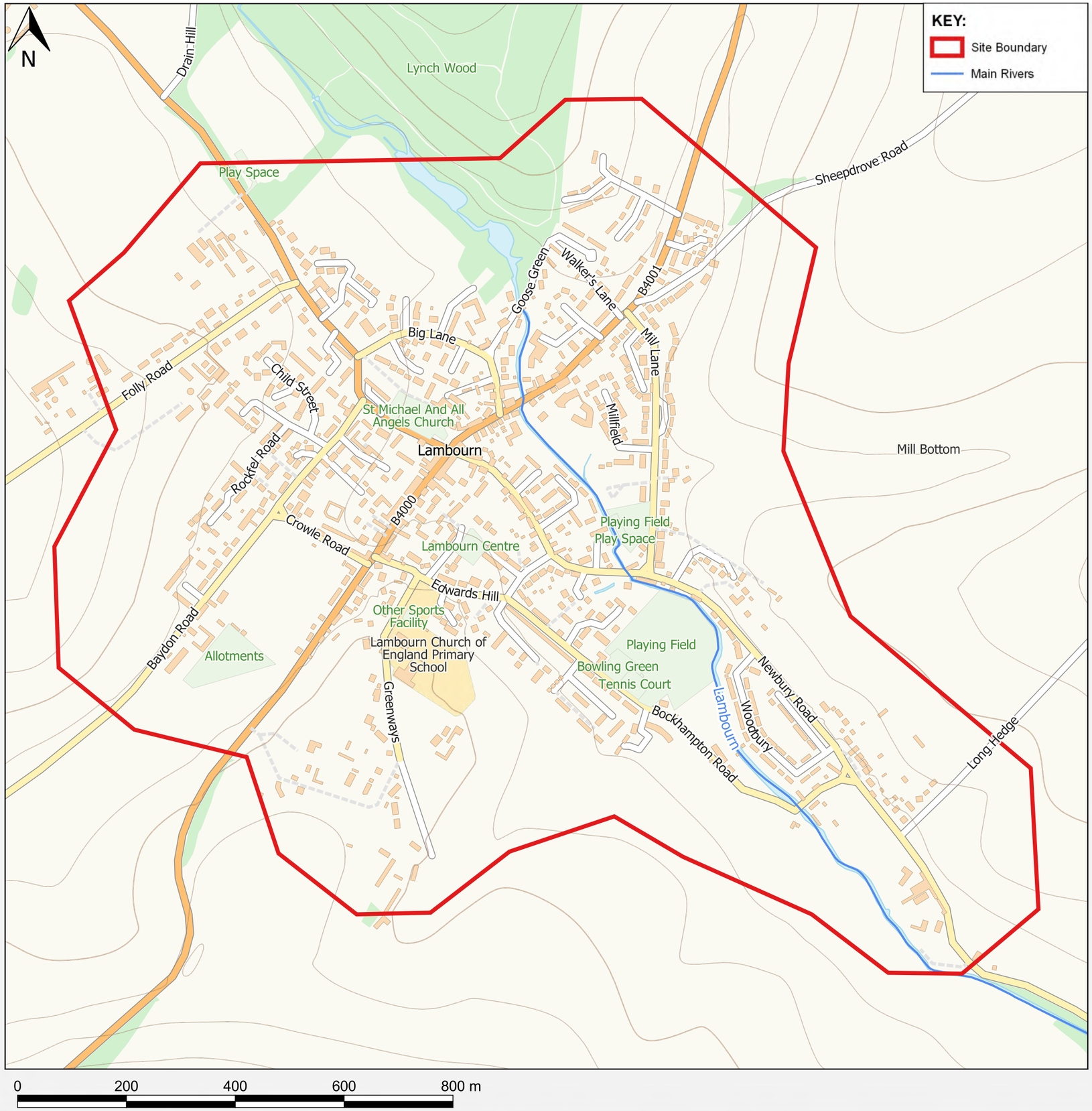
2

CLOSEST MAIN RIVER

Lambourn

DISTANCE BETWEEN SITE AND CLOSEST MAIN RIVER

0m



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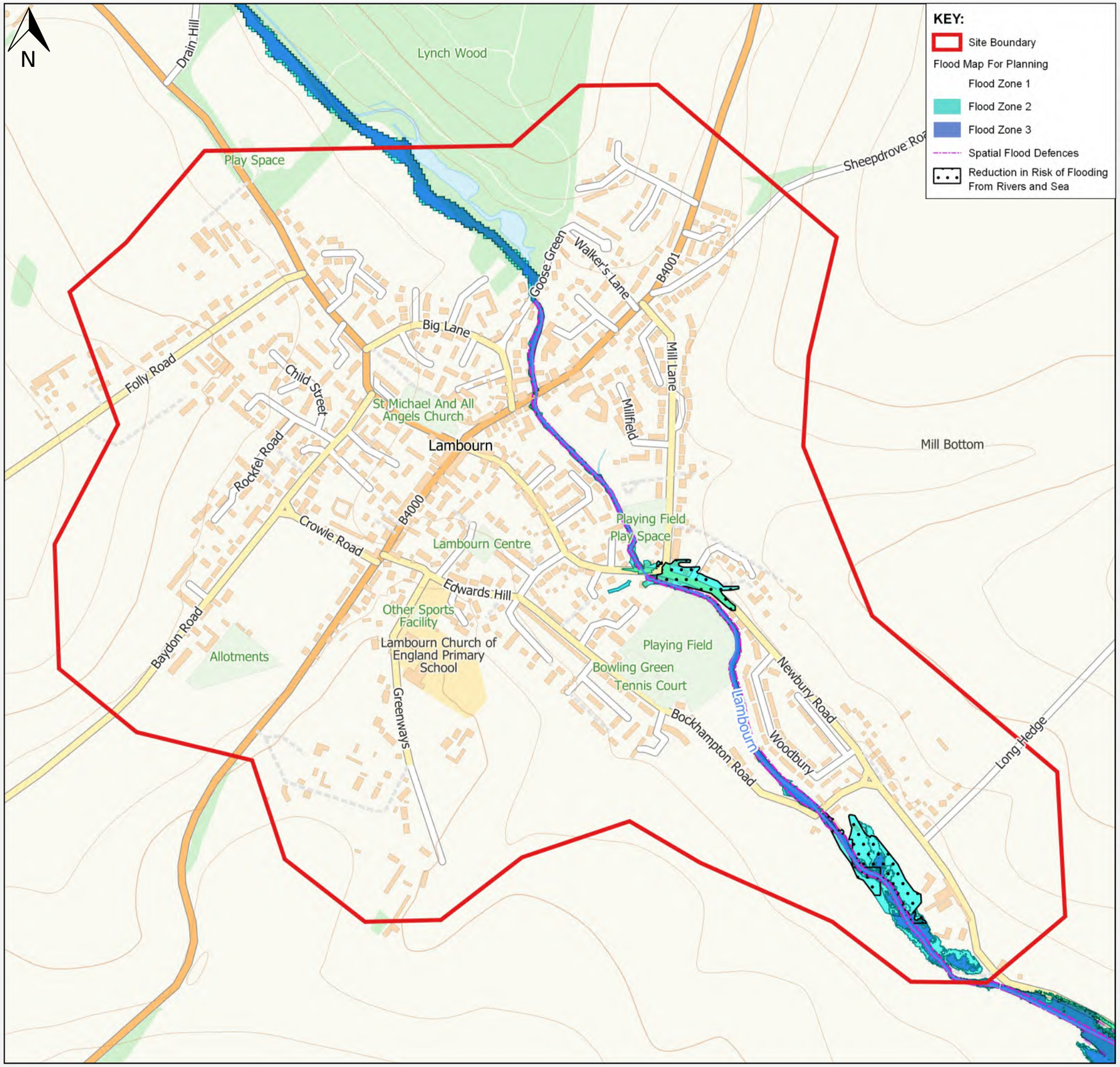

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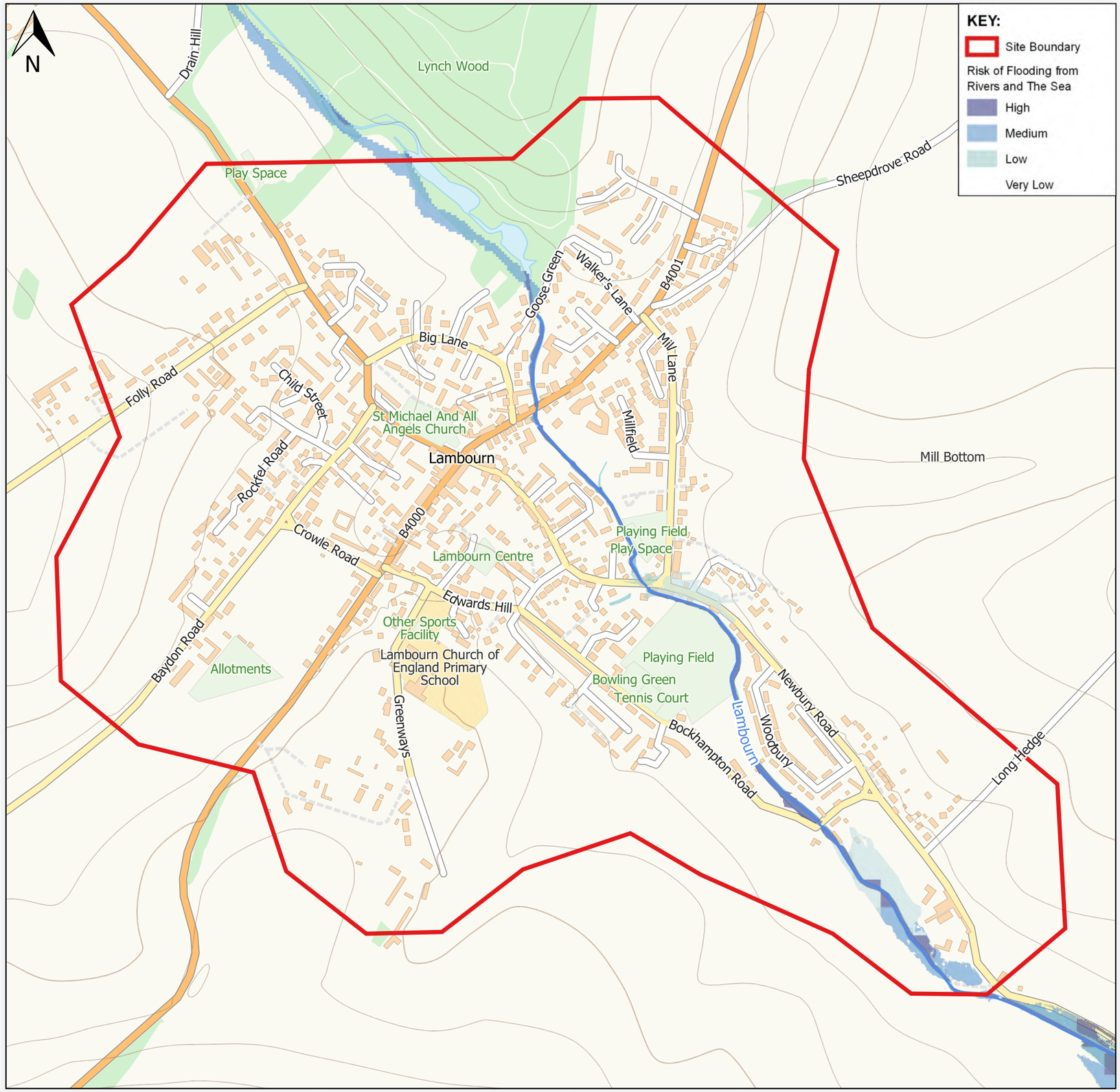

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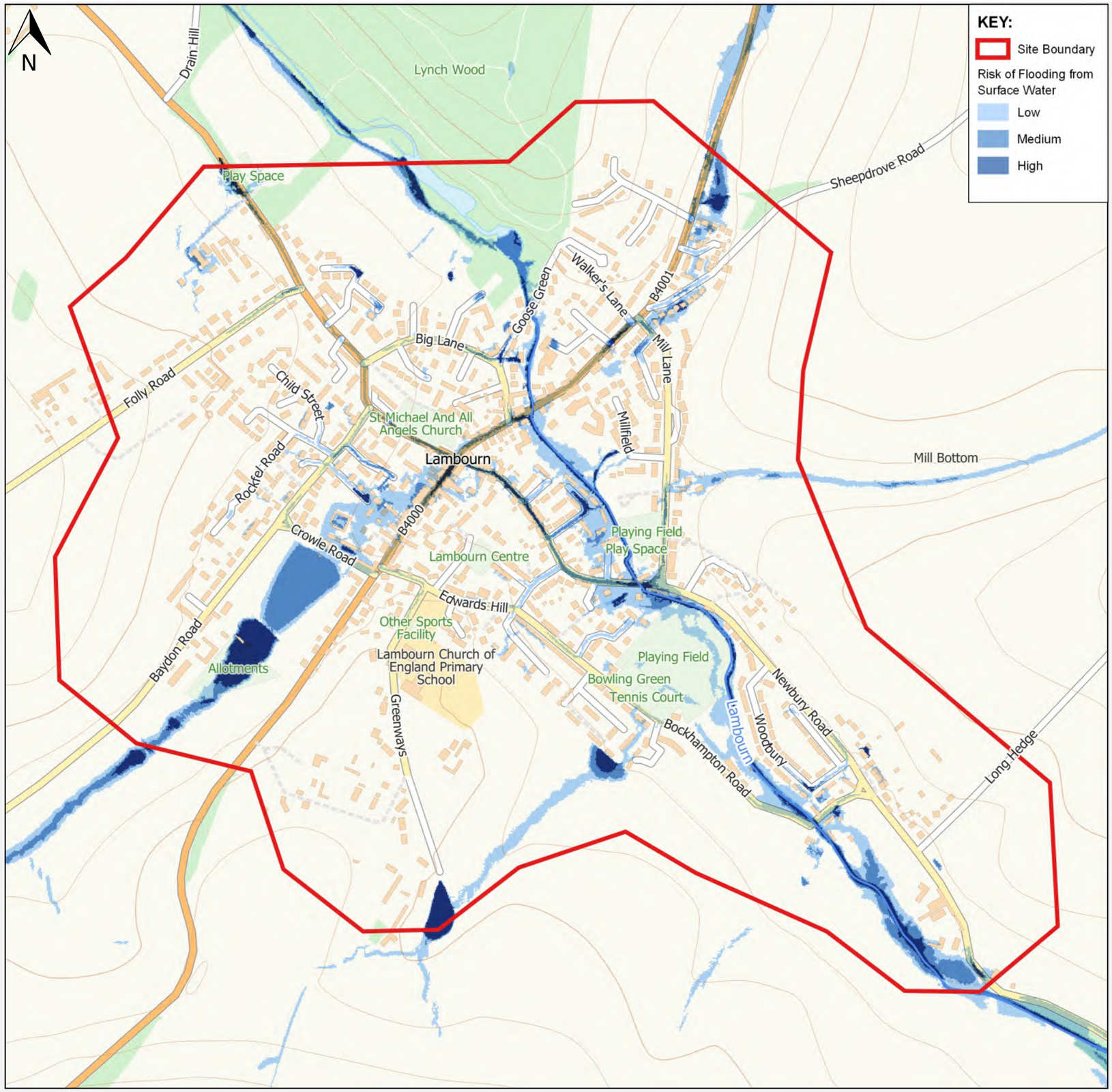

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Risk of Flooding from Reservoirs

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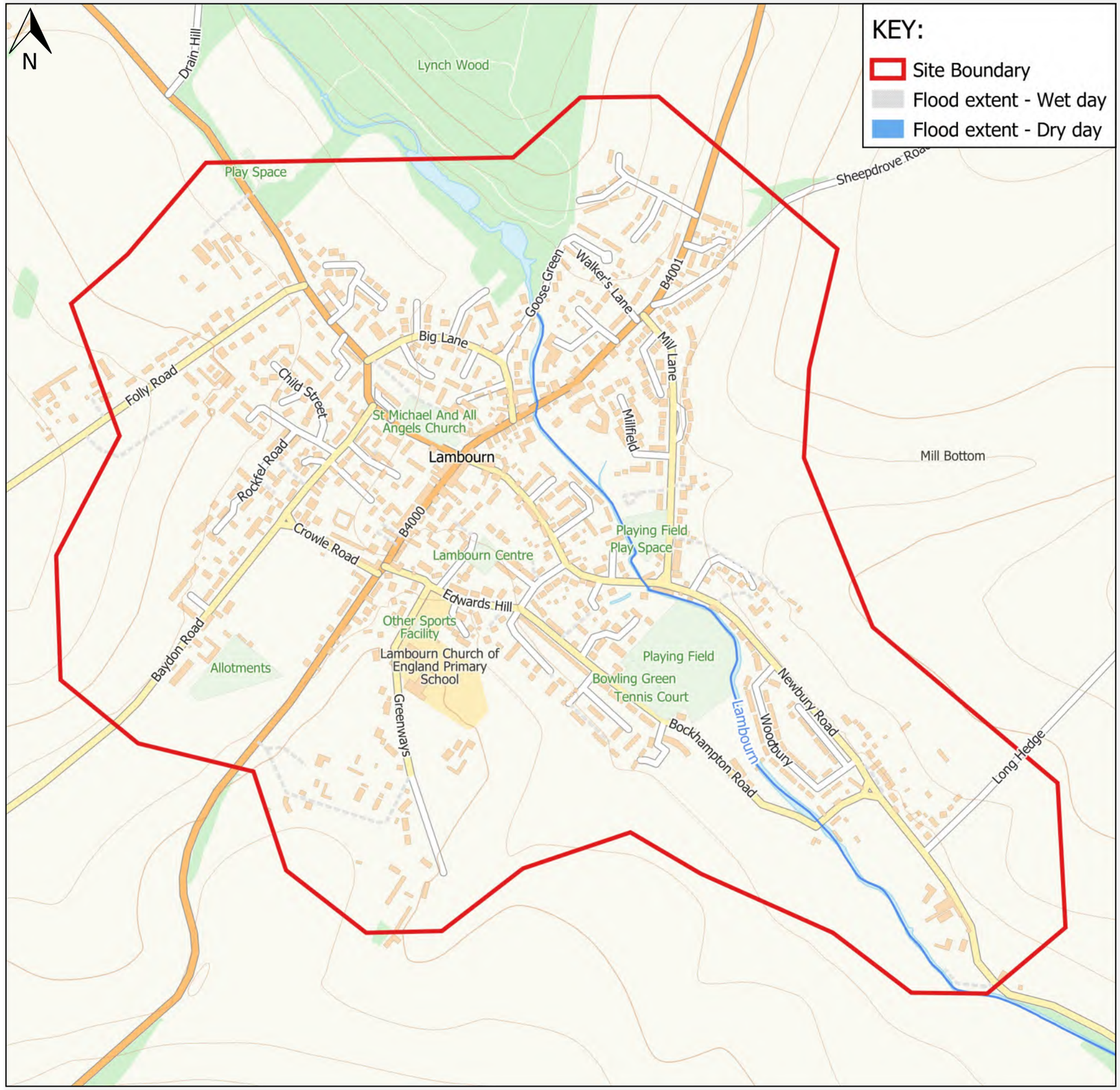

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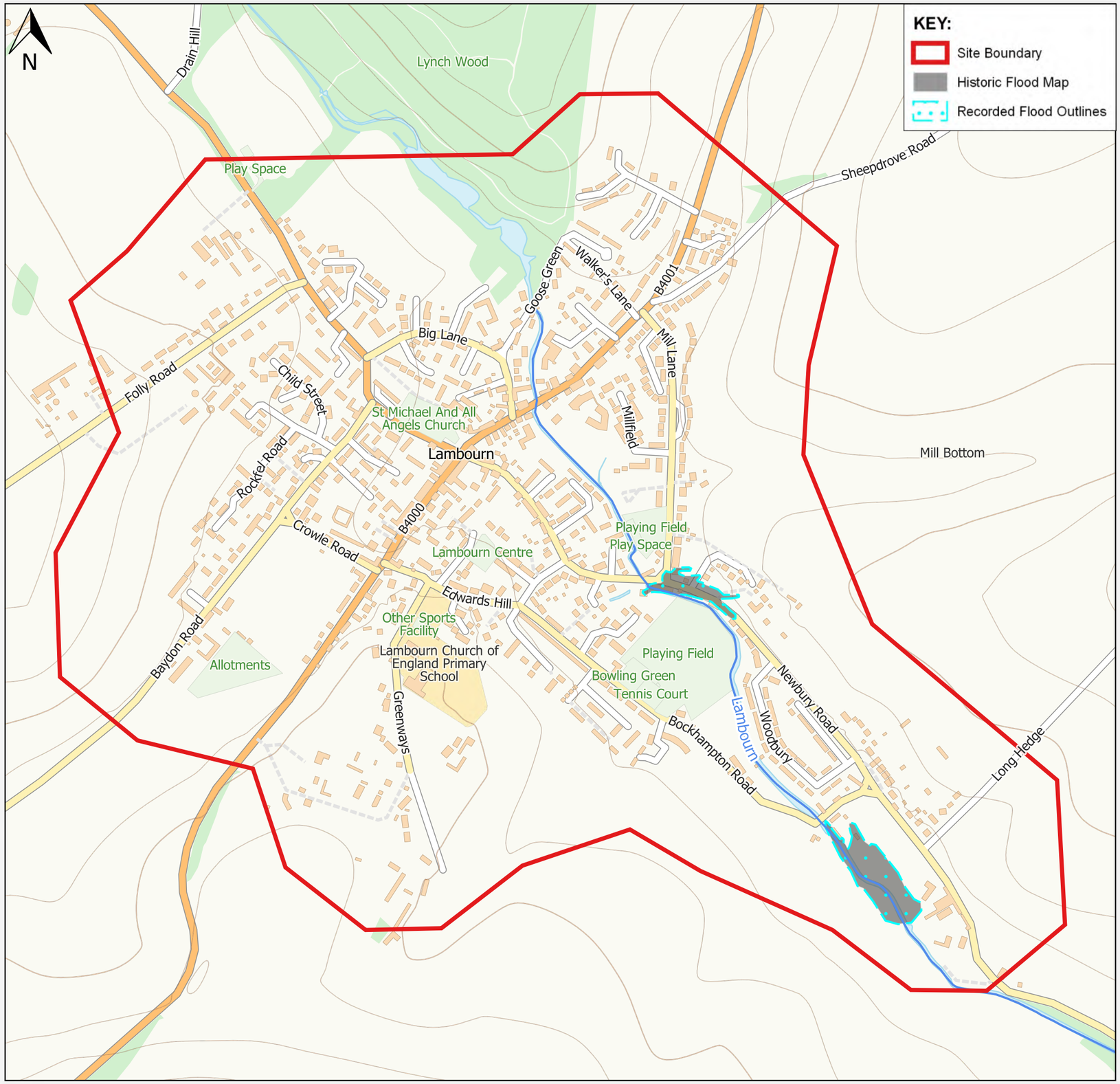
Previous Flooding

RECORDED FLOOD OUTLINES
Recorded Flood Outlines shows all records of historic flooding from rivers, the sea, groundwater and surface water. The absence of coverage by Recorded Flood Outlines for an area does not mean that the area has never flooded, only that there are currently no records of flooding in this area. It is also possible that the pattern of flooding in this area has changed and that this area would now flood or not flood under different circumstances. The Recorded Flood Outlines take into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding. It includes flood extents that may have been affected by overtopping, breaches or blockages. Any flood extents shown do not necessarily indicate that properties were flooded internally.

HISTORIC FLOOD MAP
The Historic Flooding shows the maximum extent of individual Recorded Flood Outlines from river, the sea and groundwater springs that meet a set criteria. It shows areas of land that has previously been subject to flooding. This excludes flooding from surface water, except in areas where it is impossible to determine whether the source is fluvial or surface water, but the dominant source is fluvial. If an area is not covered by the Historic Flood Map it does not mean that the area has never flooded, only that the EA do not currently have records of flooding in this area that meet the criteria for inclusion. It is also possible that the pattern of flooding in this area has changed and that this area would now flood or not flood under different circumstances. Outlines that don't meet these criteria are stored in the Recorded Flood Outlines dataset. The Historic Flood Map takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding. It will include flood extents that may have been affected by overtopping, breaches or blockages. Flooding is shown to the land and does not necessarily indicate that properties were flooded internally.

If an area is not covered by these layers, it does not mean that the area has never flooded, only that there are not currently records of flooding in the area.



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Flood Alert and Warning Areas

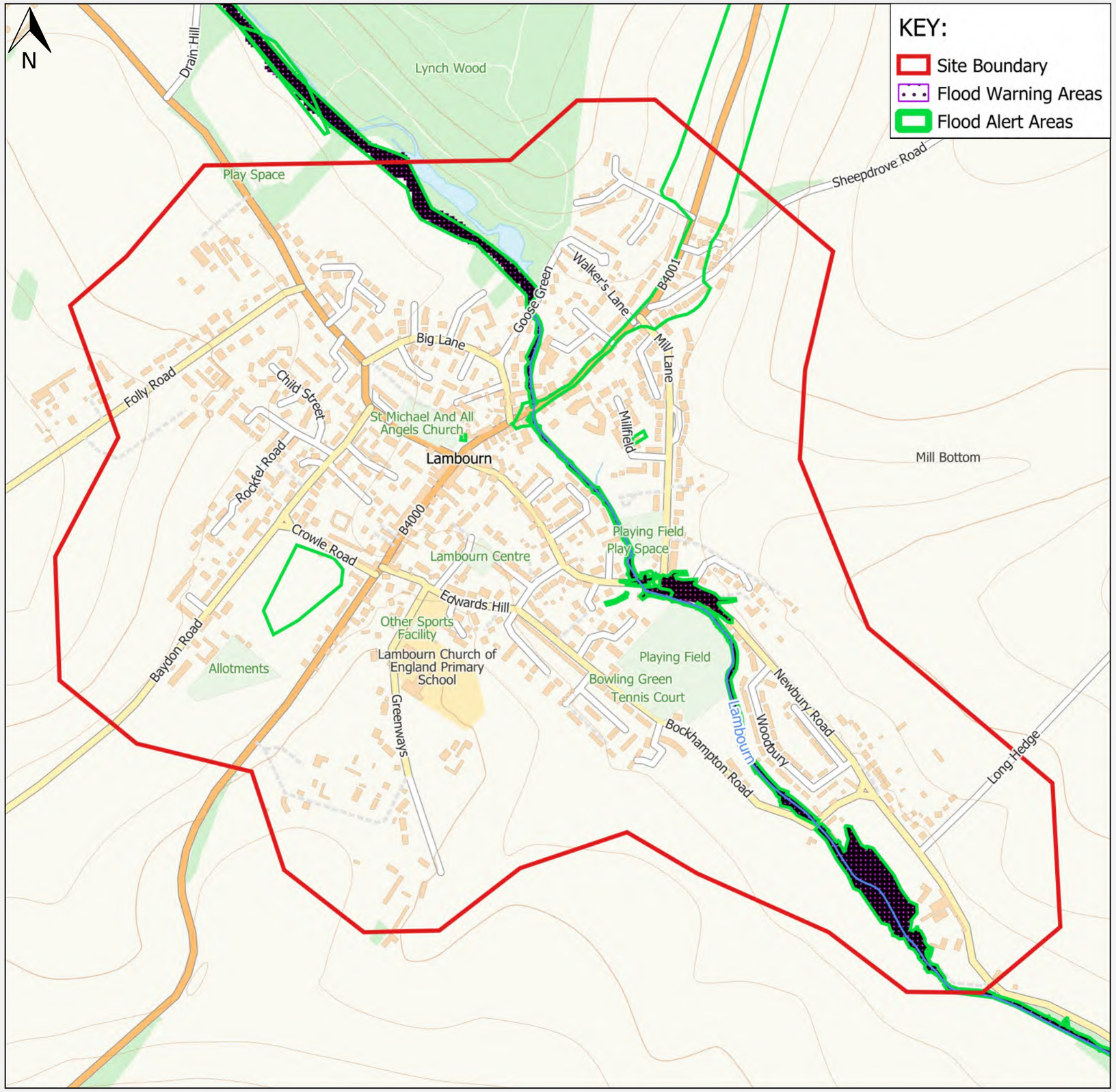
FLOOD ALERT AREAS

Flood Alert Areas are areas where it is possible for flooding to occur from rivers, sea and in some location's groundwater. A single Flood Alert Area may cover the floodplain within the Flood Warning Service Limit of multiple catchments of similar characteristics containing a number of Flood Warning Areas. A Flood Alert Area may also match that of a corresponding Flood Warning Area and warn for the possibility of flooding in that area. In some coastal locations a Flood Alert may be issued for spray or overtopping and be defined by a stretch of coastline. Practical and administrative factors may also influence the exact extent of a Flood Alert Area. A Flood Alert is issued to warn people of the possibility of flooding and encourage them to be alert stay vigilant and make early / low impact preparations for flooding. Flood Alerts are issued earlier than Flood Warnings to provide advance notice of the possibility of flooding and may be issued when there is less confidence that flooding will occur in a Food Warning Area.

FLOOD WARNING AREAS

Flood Warning Areas are areas where flooding is expected to occur and where a Flood Warning Service is provided. Areas generally contain properties that are expected to flood from rivers or the sea and in some areas, from groundwater. Specifically, Flood Warning Areas define locations within the Flood Warning Service Limit that represent a discrete community at risk of flooding. The purpose of Flood Warnings is to alert people that flooding is expected, and they should take action to protect themselves and their property. Flood Warnings are issued when flooding is expected to occur, Severe Flood Warnings are issued to similar areas when there is a danger to life or widespread disruption is expected.

If an area is not covered by these layers, it does not mean that the area has never flooded, only that there are not currently records of flooding in the area.



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Appendix E.7

NEWBURY SOUTH

Site Location

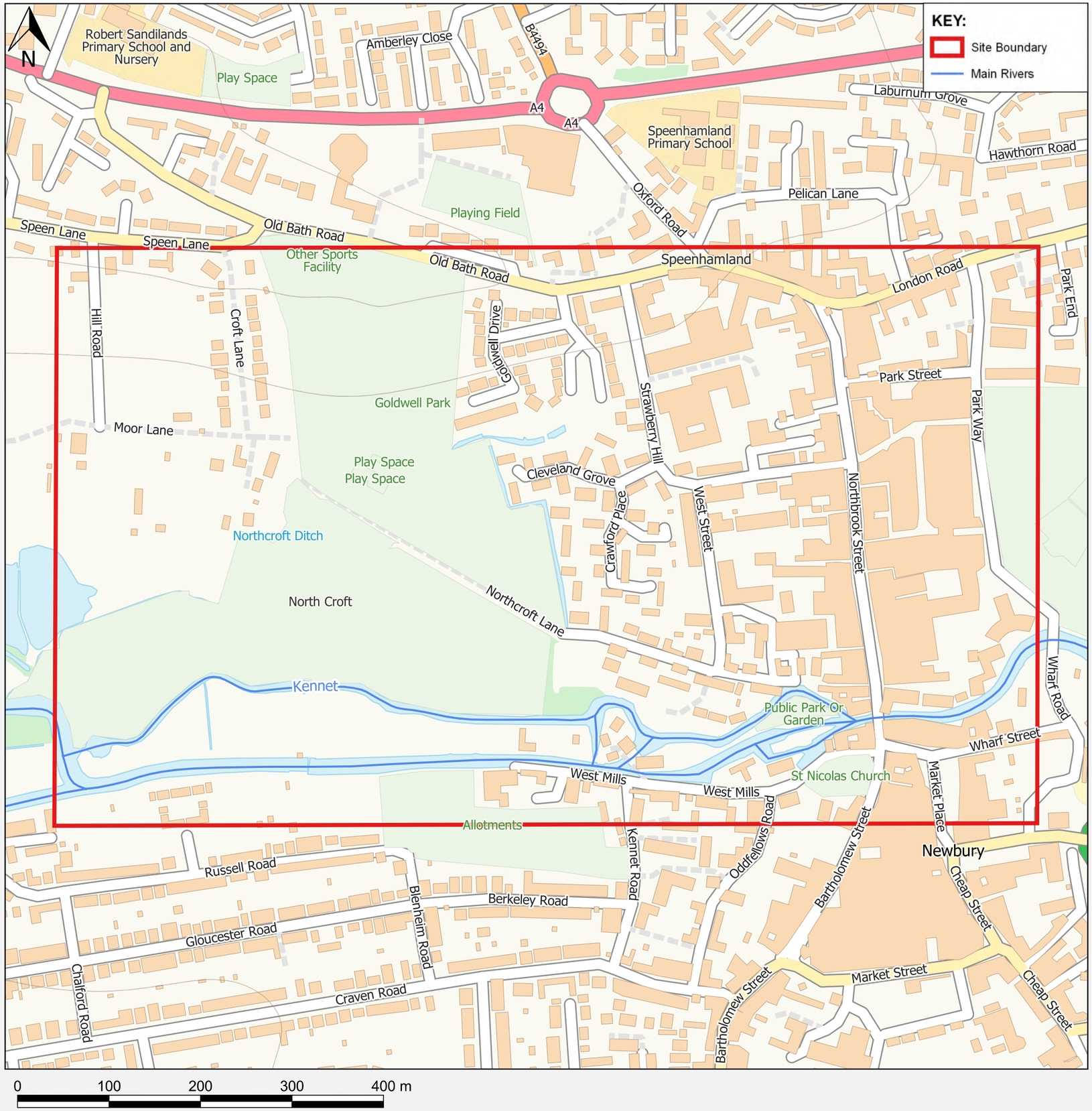
2

CLOSEST MAIN RIVER

Kennet

DISTANCE BETWEEN SITE AND CLOSEST MAIN RIVER

0m



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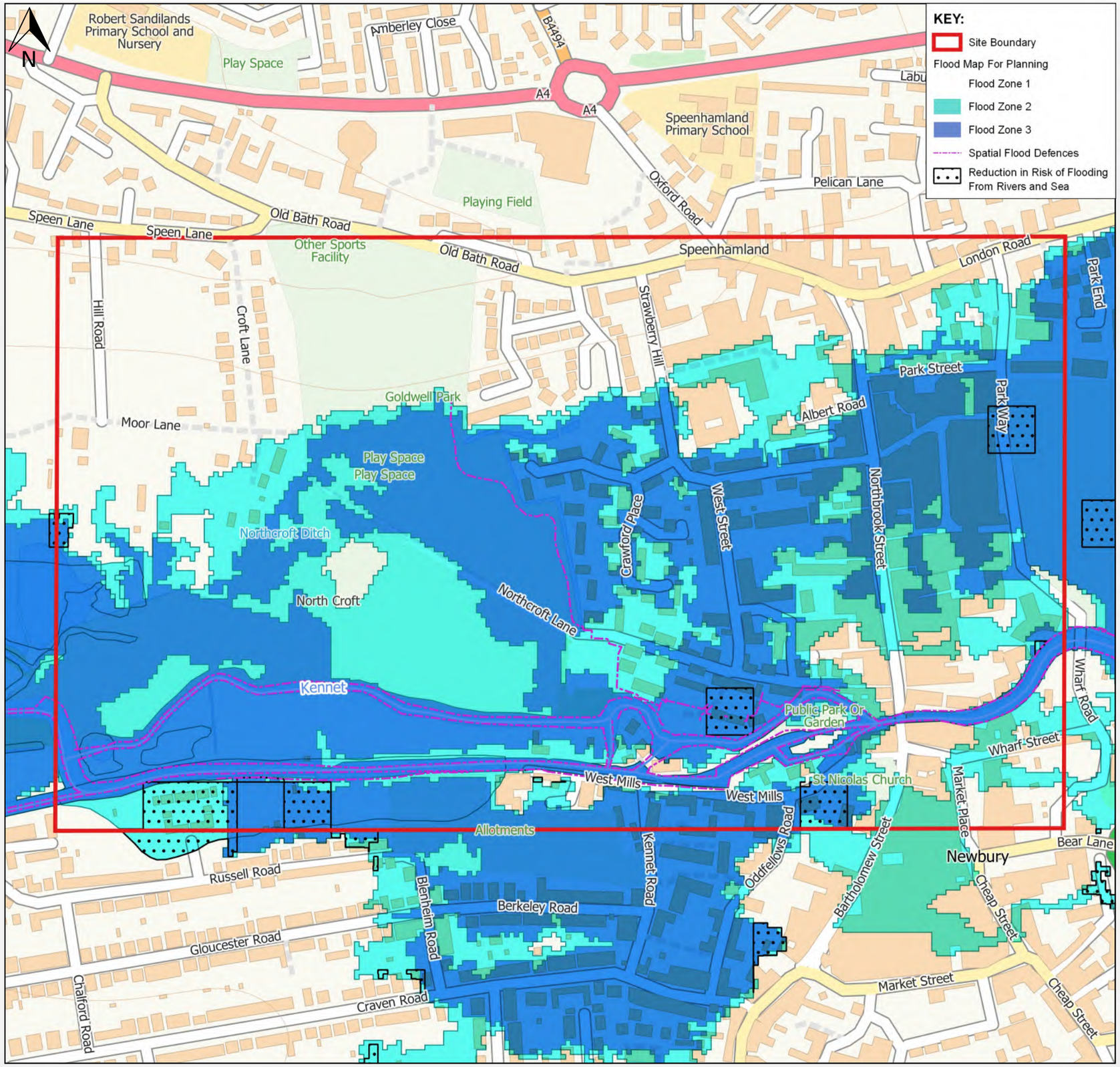
Flood Map for Planning

Flood zone maps are modelled using local and national river and sea data. This information provides an indication of the likelihood of flooding and is intended for planning use only.

- **Flood Zone 1 -** Land having a less than 1 in 1,000 annual probability (0.1% AEP) of river or sea flooding - all land outside Zones 2 and 3).
- **Flood Zone 2 -** Land having between a 1 in 100 and 1 in 1,000 annual probability (0.1% - 1.0% AEP) of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability (0.1% - 0.5% AEP) of sea flooding.
- **Flood Zone 3 -** Land having a 1 in 100 or greater annual probability (>1.0% AEP) of river flooding; or Land having a 1 in 200 or greater annual probability (>0.5% AEP) of sea flooding.

Reduction in Risk of Flooding from Rivers and Sea due to Defences -Reduction in Risk of Flooding from Rivers and Sea due to Defences is a spatial dataset that indicates where areas have reduced flood risk from rivers and sea due to the presence of flood defences. The dataset has been created to help initiate conversations about the impact our flood defences have on the risk of flooding from the rivers and sea,and as a prompt to find out more about the flood defences in a particular area of interest. It does not replace any local, more detailed information.



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Risk of Flooding from Rivers and Sea

This map takes into account the effect of any flood defences in the area. These defences reduce but do not completely stop the chance of flooding as they can be overtopped, or fail.

High Risk - Land having a 1 in 30 or greater annual probability (>3.3% AEP) of flooding from rivers or the sea.

Medium Risk - Land having between a 1 in 30 and a 1 in 100 annual probability (1.0% - 3.3%) of flooding from rivers or the sea.

Low Risk - Land having between a 1 in 100 and a 1 in 1000 annual probability (0.1% - 1.0%) of flooding from rivers or the sea.

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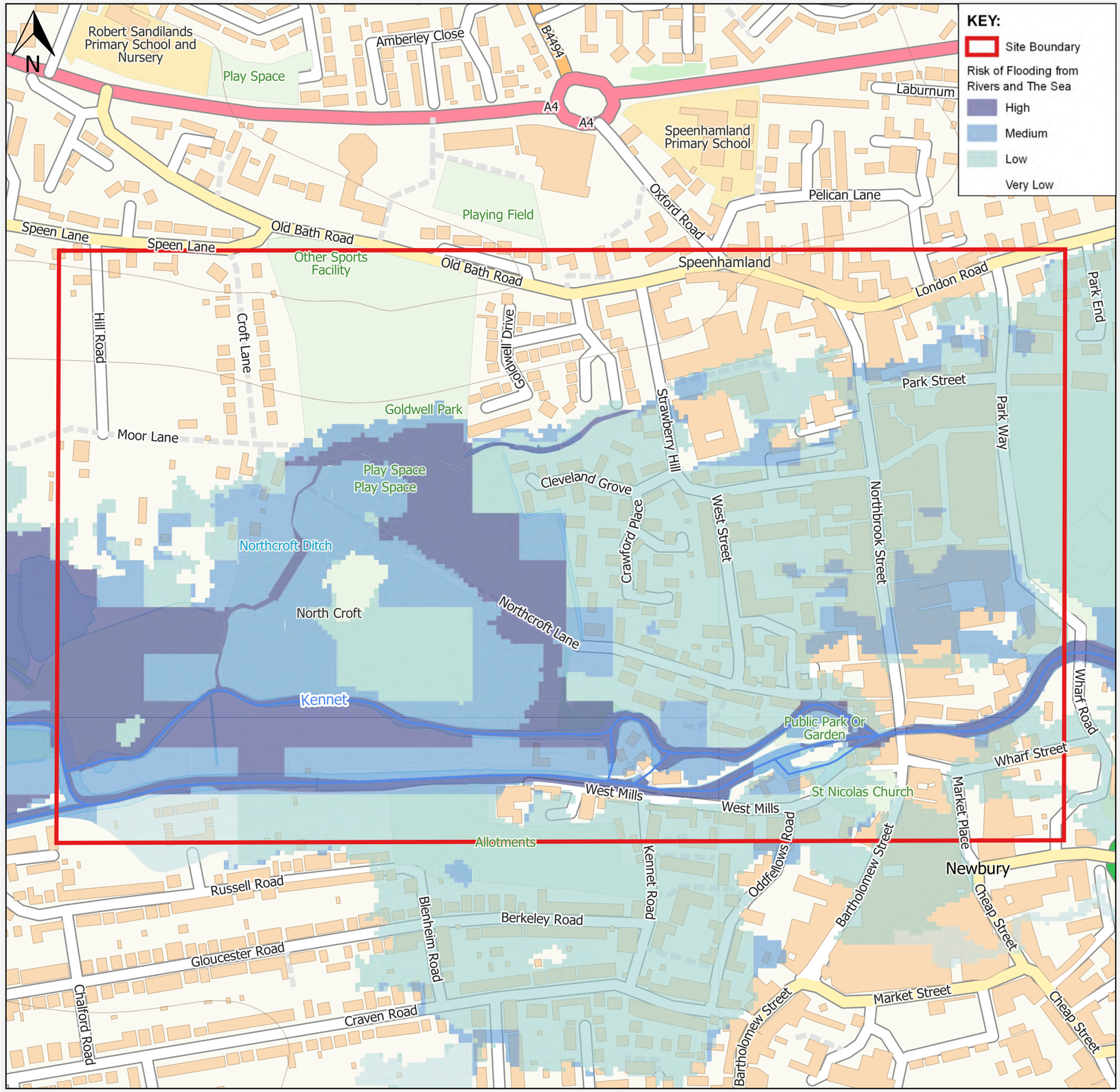

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Risk of Flooding from Surface Water

Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.

High Risk - Land having a 1 in 30 or greater annual probability (>3.3% AEP) of flooding from surface water.

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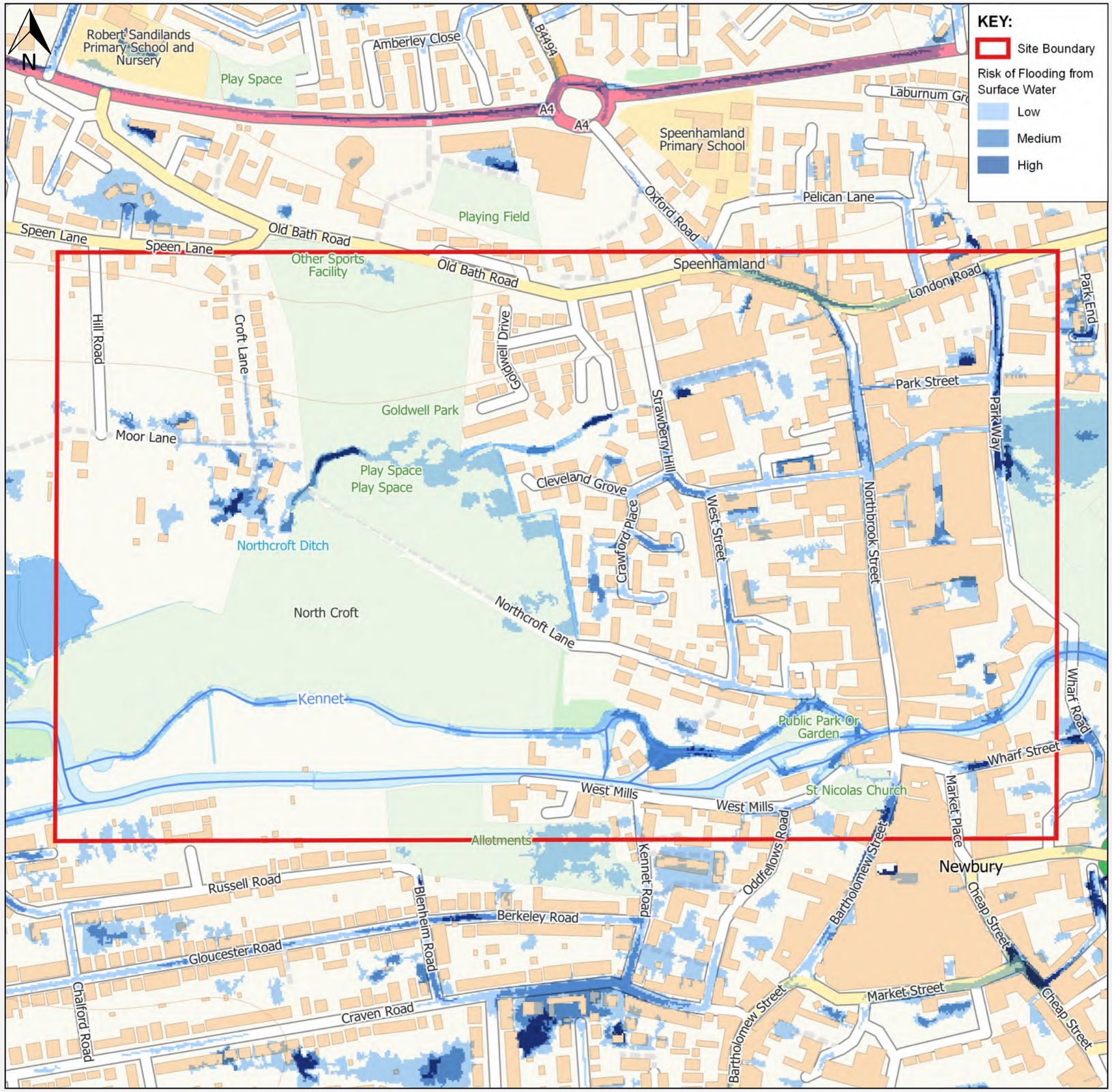

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Risk of Flooding from Reservoirs

The Risk of Flooding from Reservoirs (wet day) layer shows the individual flood extents for all large raised reservoirs in the event that they were to fail and release the water held on a "wet day" when local rivers had already overflowed their banks.

It represents a prediction of a credible worst-case scenario, however it's unlikely that any actual flood would be this large. The data gives no indication of likelihood or probability of reservoir flooding.

The Risk of Flooding from Reservoirs (dry day) shows flood extents for all large raised reservoirs in the event that they were to fail and release the water held on a "dry day" when local rivers are at normal levels.

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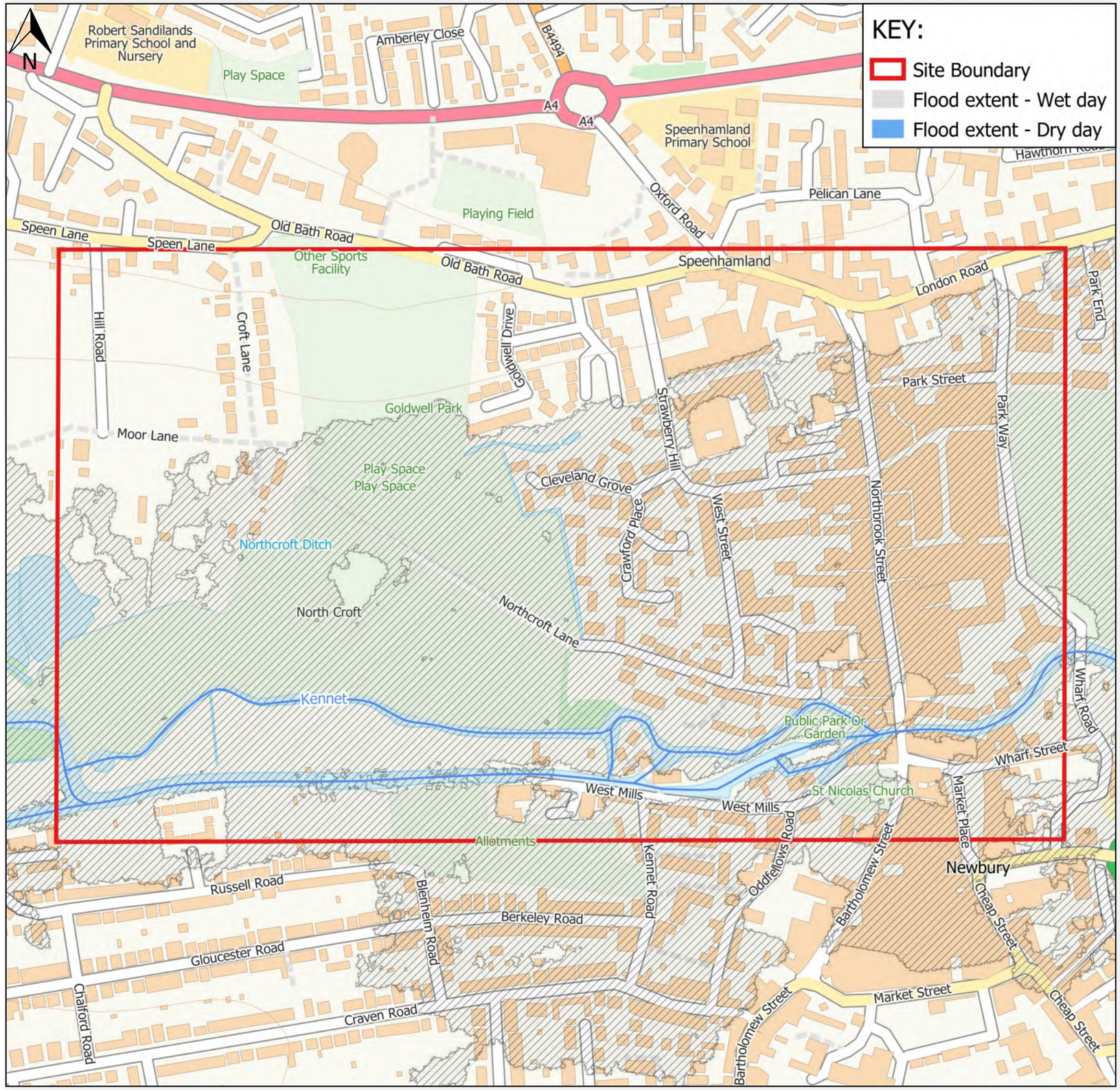

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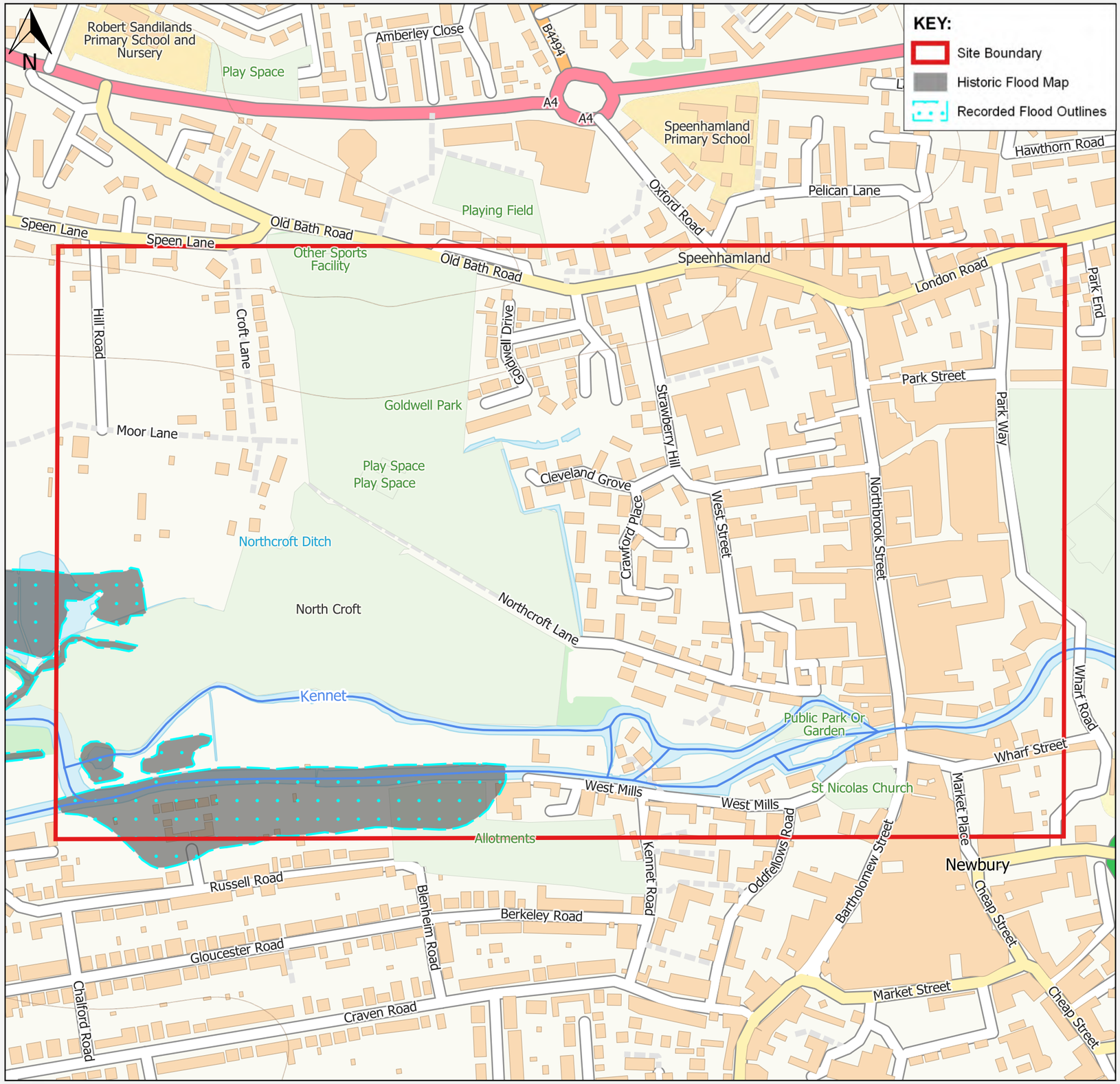

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Flood Alert and Warning Areas

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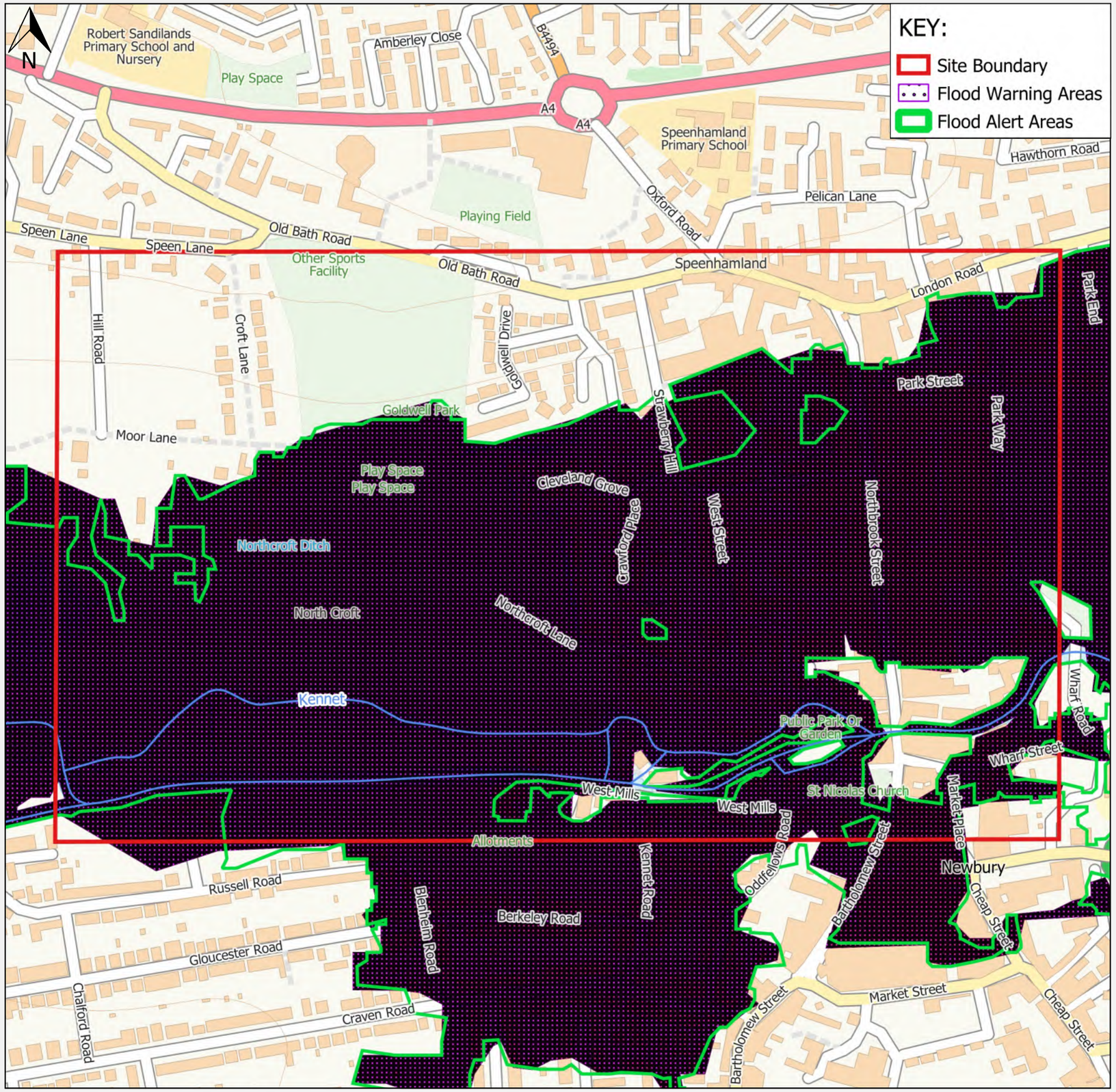

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Appendix E.8

NEWBURY NORTH

Site Location

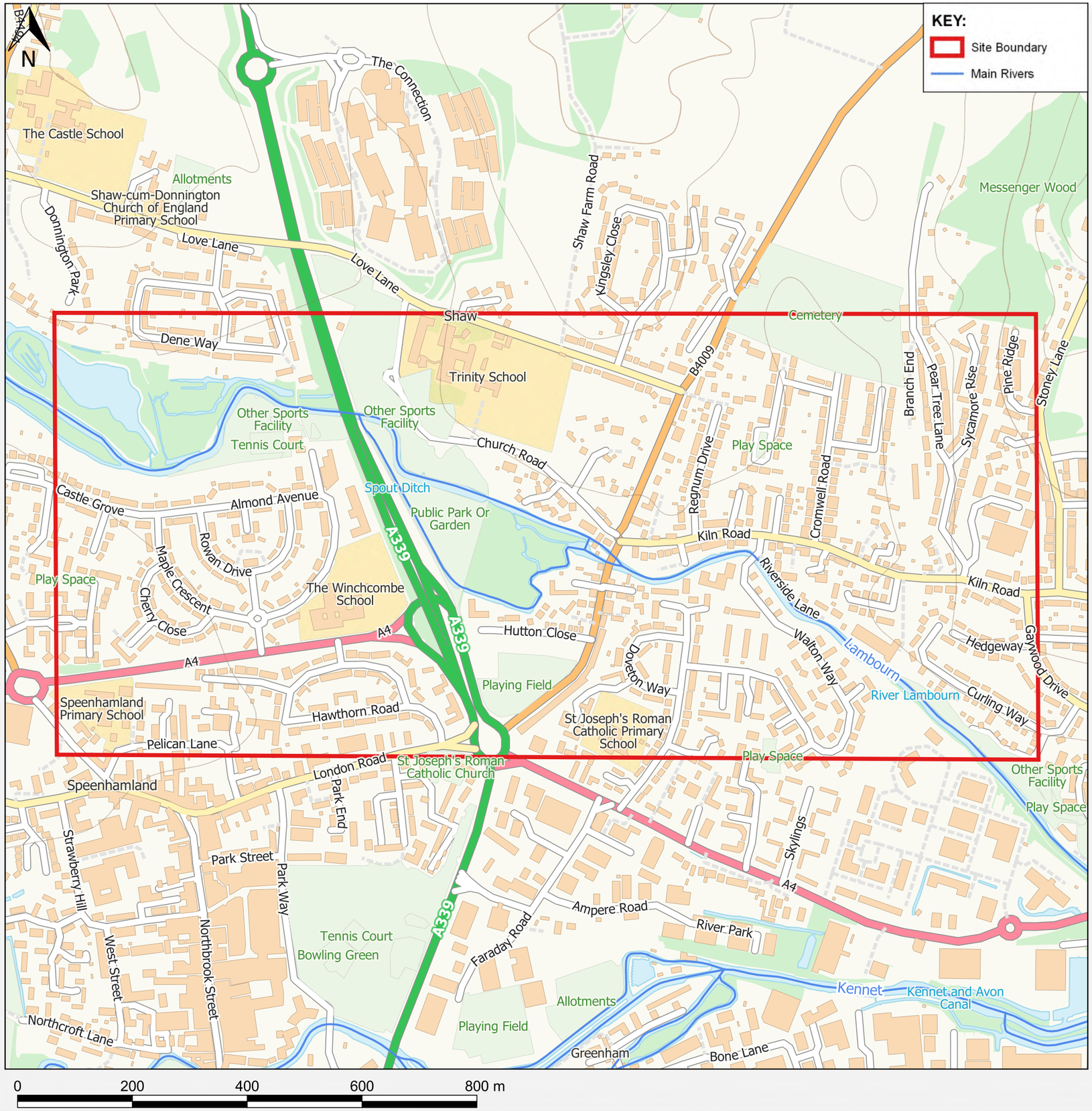
2

CLOSEST MAIN RIVER

Lambourn

DISTANCE BETWEEN SITE AND CLOSEST MAIN RIVER

0m



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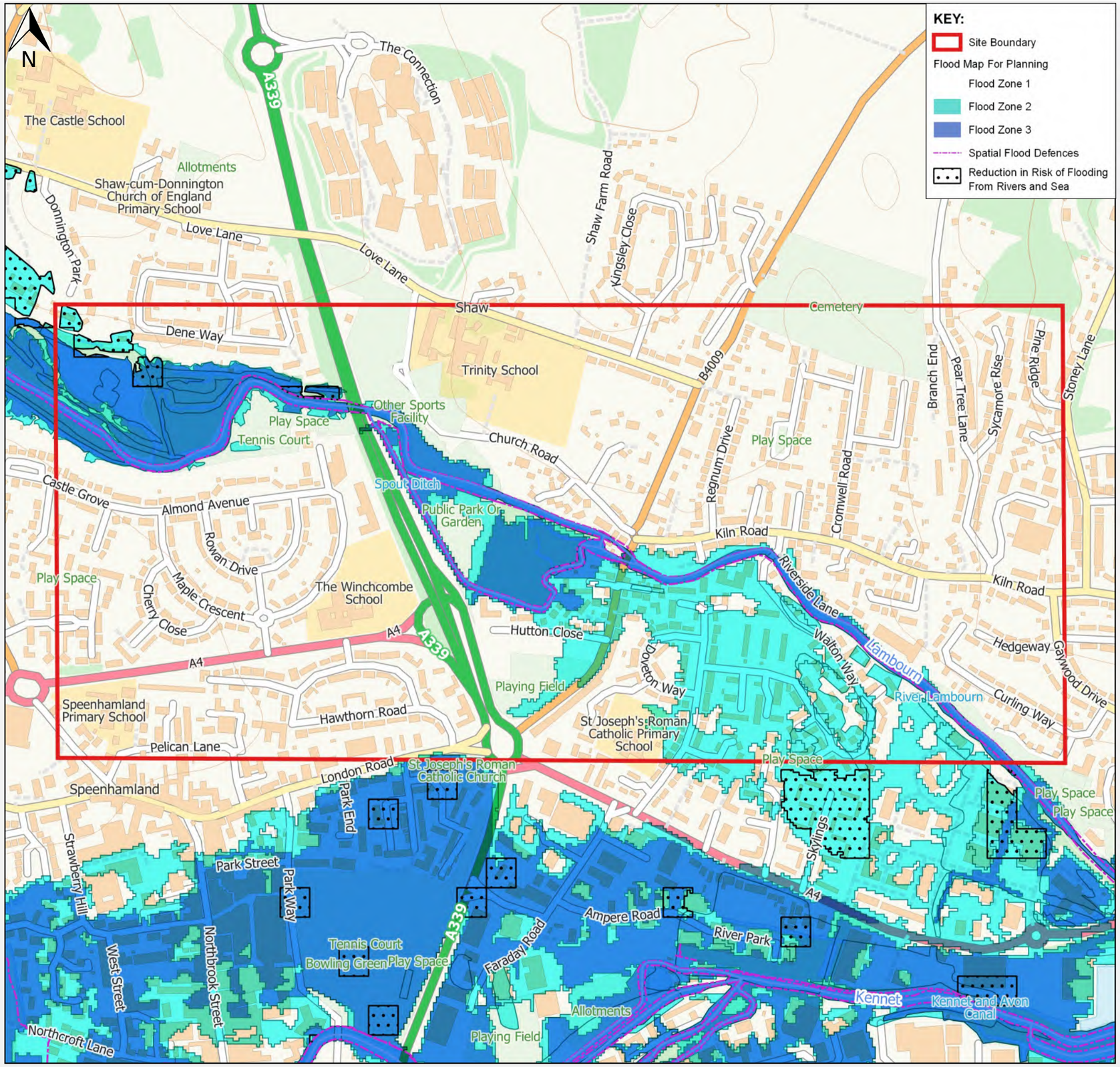

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Risk of Flooding from Rivers and Sea

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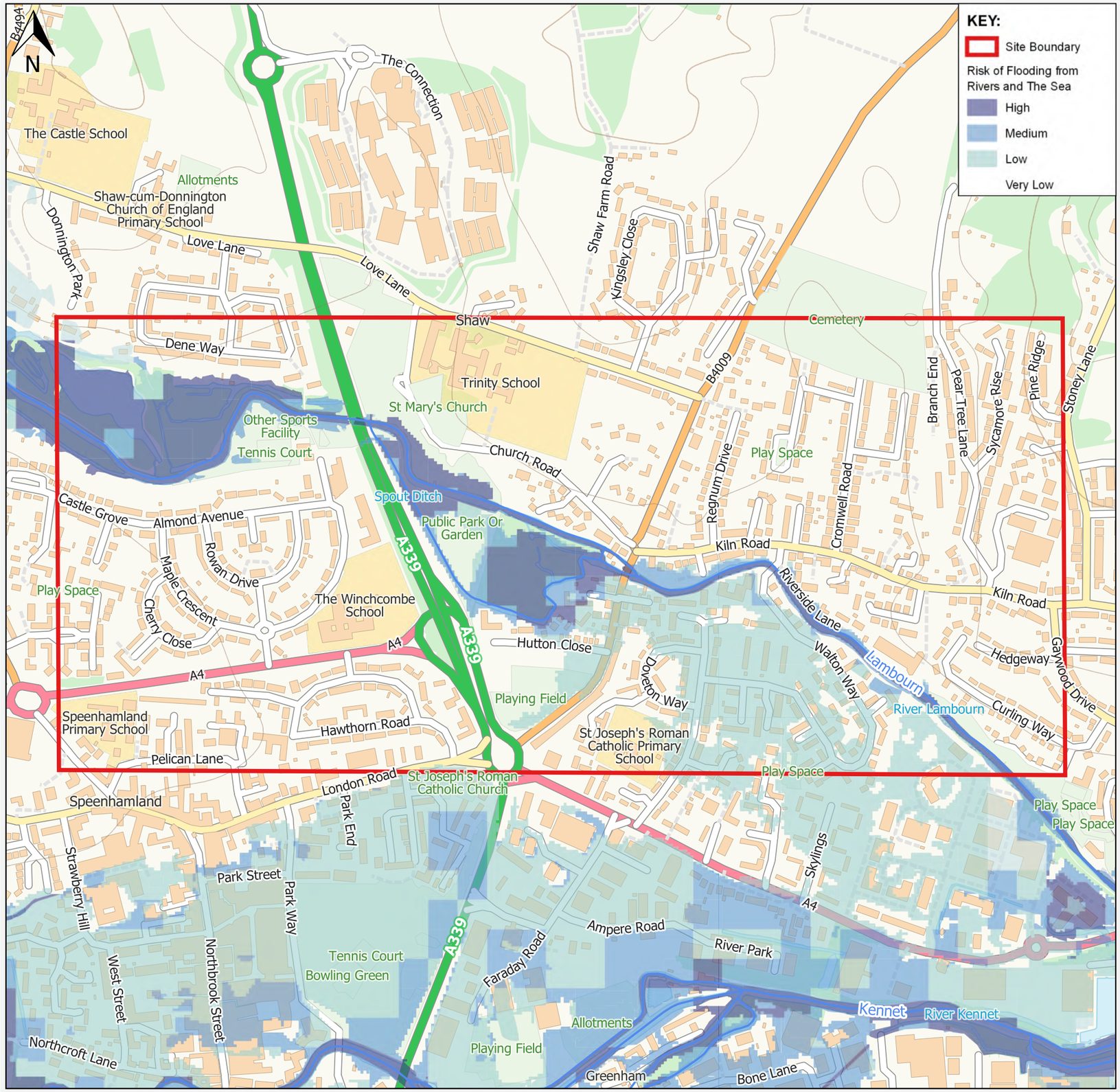

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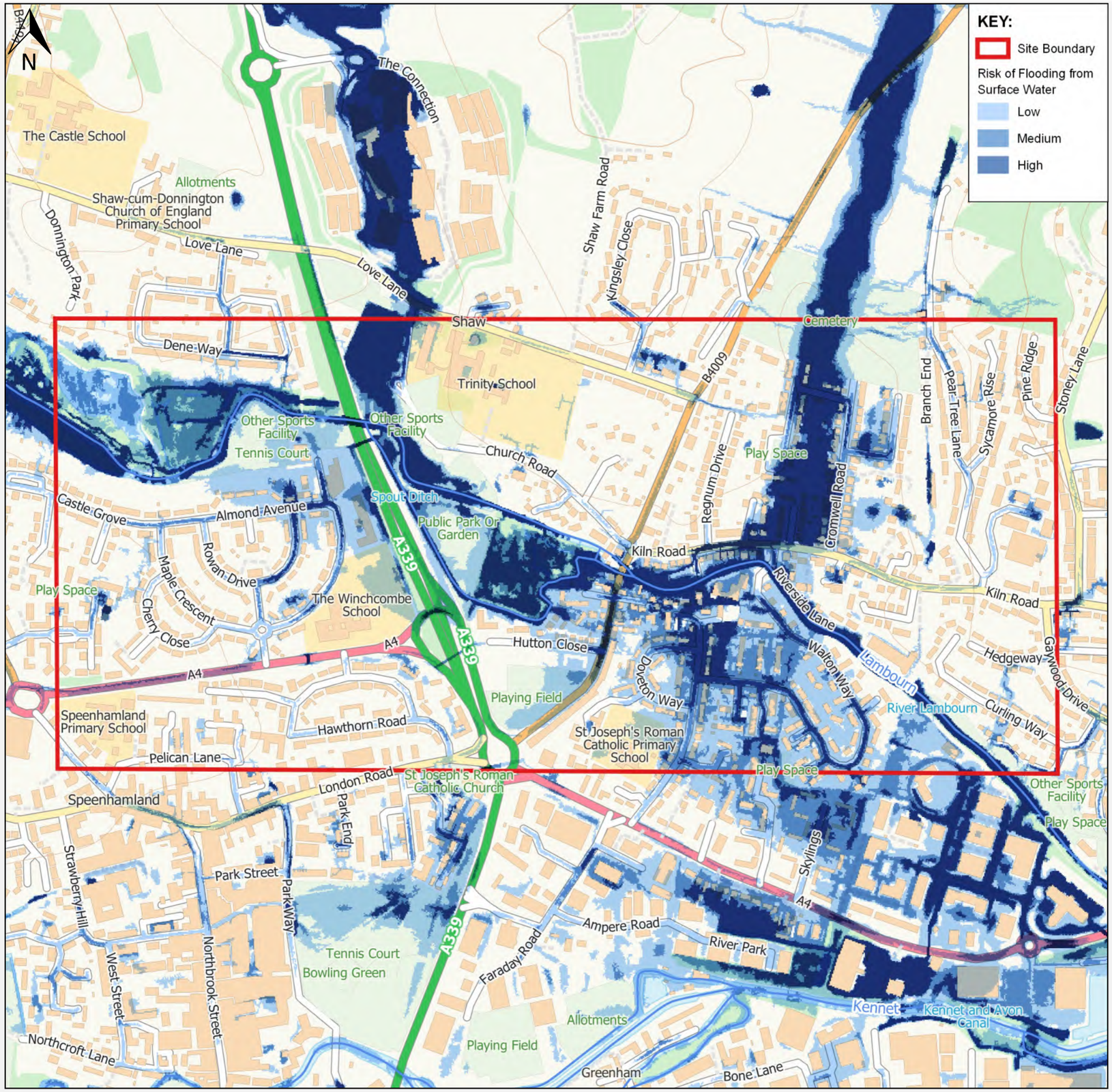

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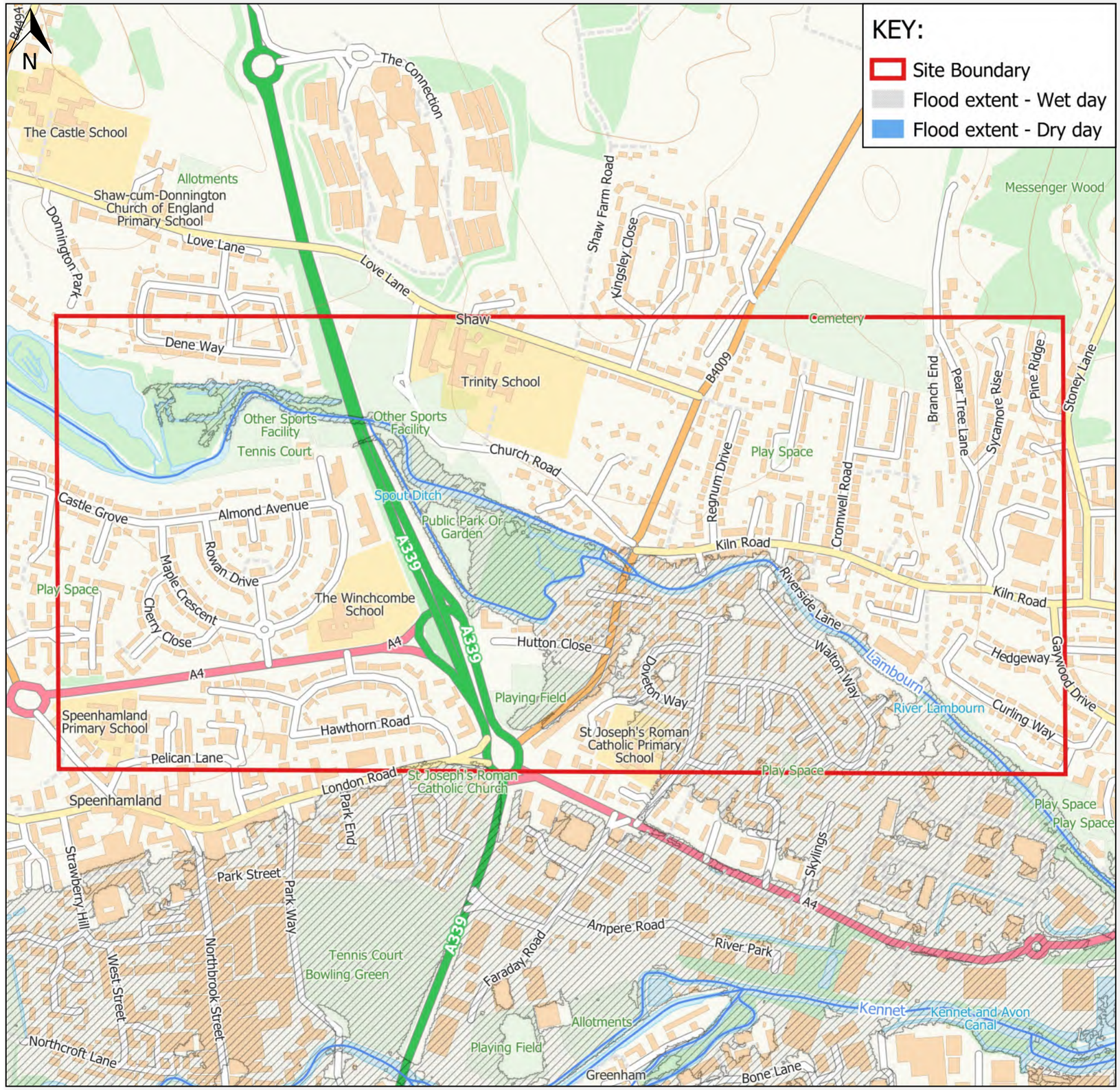

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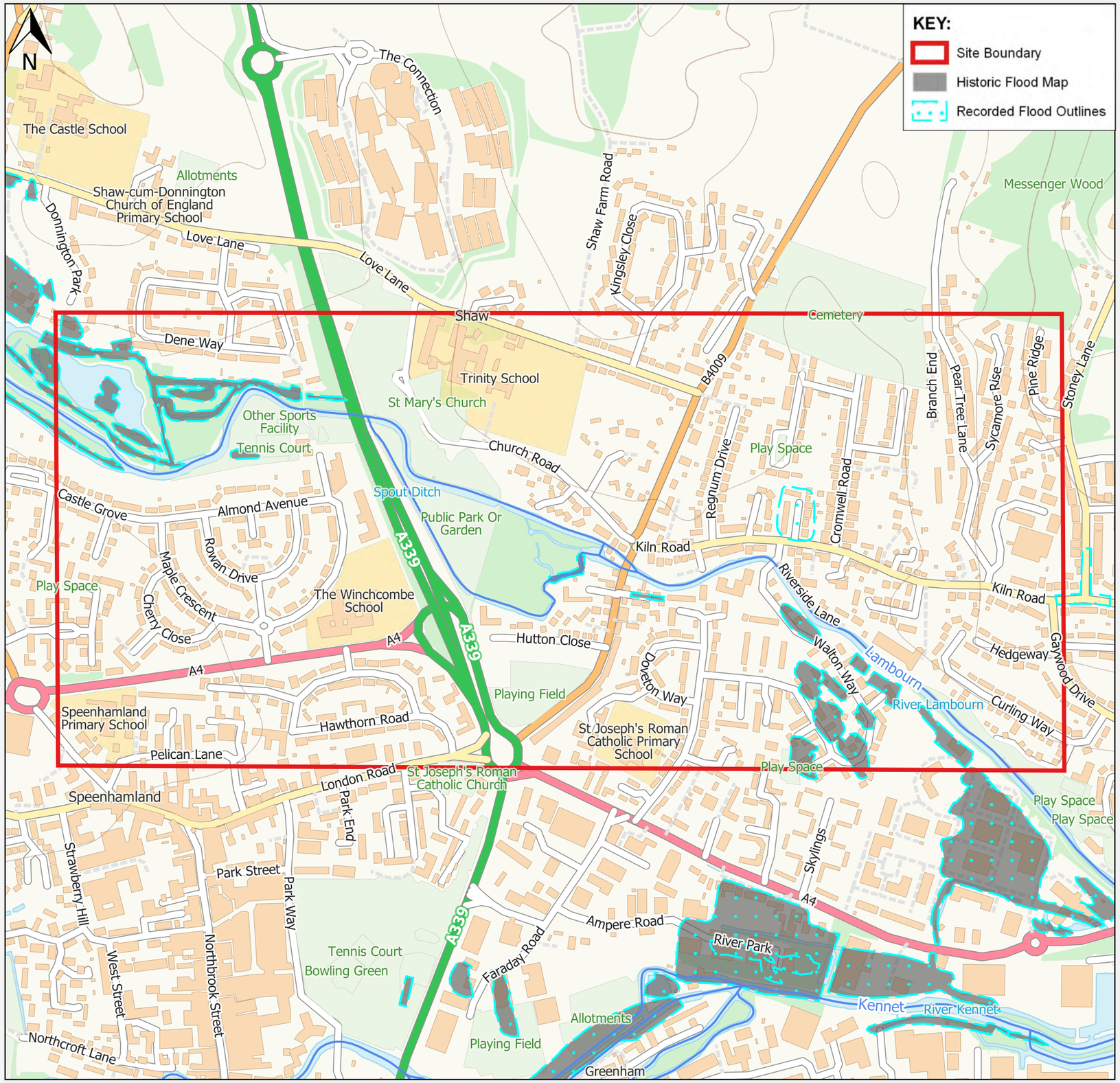

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Flood Alert and Warning Areas

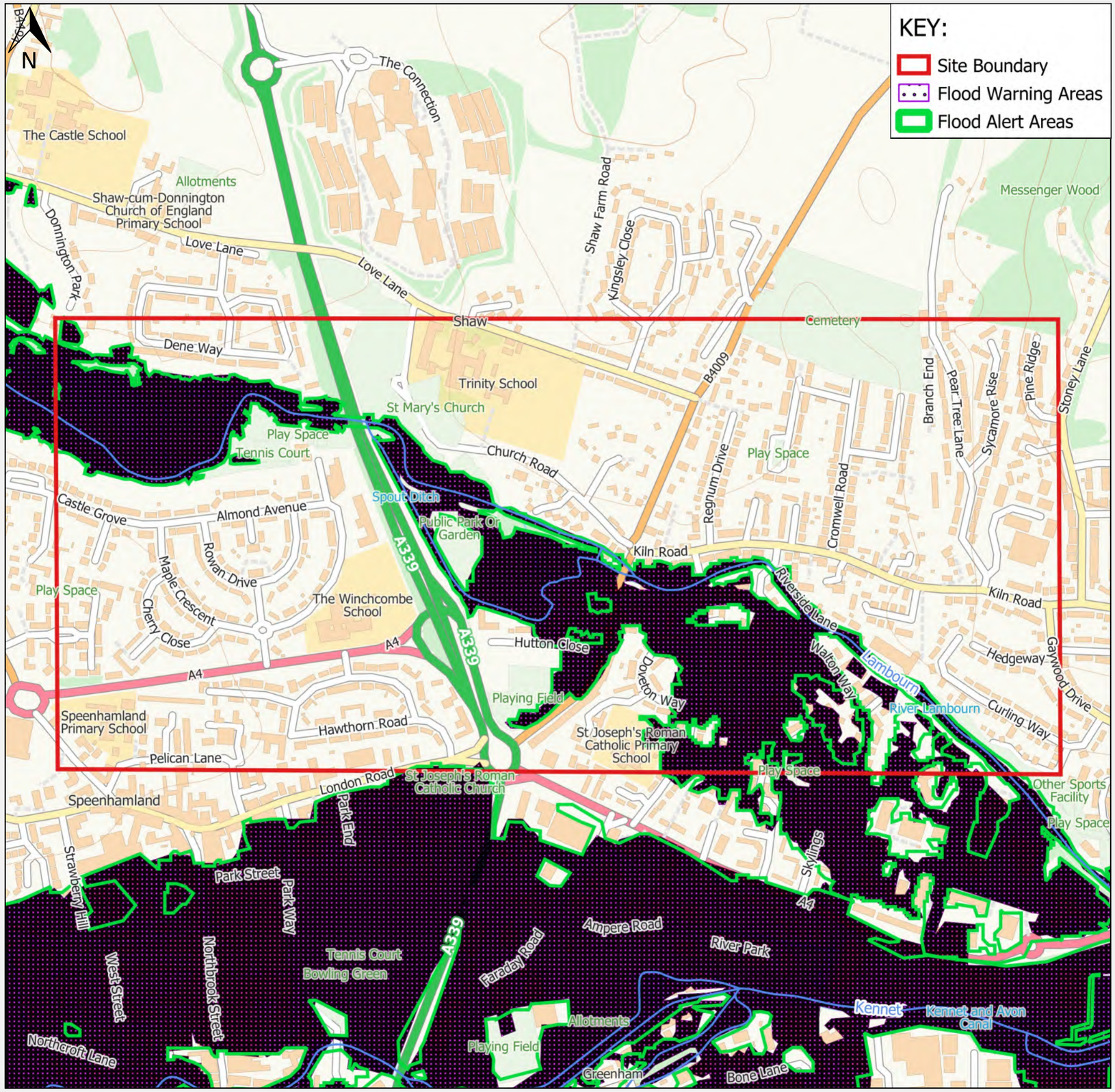
FLOOD ALERT AREAS

Flood Alert Areas are areas where it is possible for flooding to occur from rivers, sea and in some location's groundwater. A single Flood Alert Area may cover the floodplain within the Flood Warning Service Limit of multiple catchments of similar characteristics containing a number of Flood Warning Areas. A Flood Alert Area may also match that of a corresponding Flood Warning Area and warn for the possibility of flooding in that area. In some coastal locations a Flood Alert may be issued for spray or overtopping and be defined by a stretch of coastline. Practical and administrative factors may also influence the exact extent of a Flood Alert Area. A Flood Alert is issued to warn people of the possibility of flooding and encourage them to be alert stay vigilant and make early / low impact preparations for flooding. Flood Alerts are issued earlier than Flood Warnings to provide advance notice of the possibility of flooding and may be issued when there is less confidence that flooding will occur in a Food Warning Area.

FLOOD WARNING AREAS

Flood Warning Areas are areas where flooding is expected to occur and where a Flood Warning Service is provided. Areas generally contain properties that are expected to flood from rivers or the sea and in some areas, from groundwater. Specifically, Flood Warning Areas define locations within the Flood Warning Service Limit that represent a discrete community at risk of flooding. The purpose of Flood Warnings is to alert people that flooding is expected, and they should take action to protect themselves and their property. Flood Warnings are issued when flooding is expected to occur, Severe Flood Warnings are issued to similar areas when there is a danger to life or widespread disruption is expected.

If an area is not covered by these layers, it does not mean that the area has never flooded, only that there are not currently records of flooding in the area.



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Appendix E.9

PANGBOURNE

Site Location

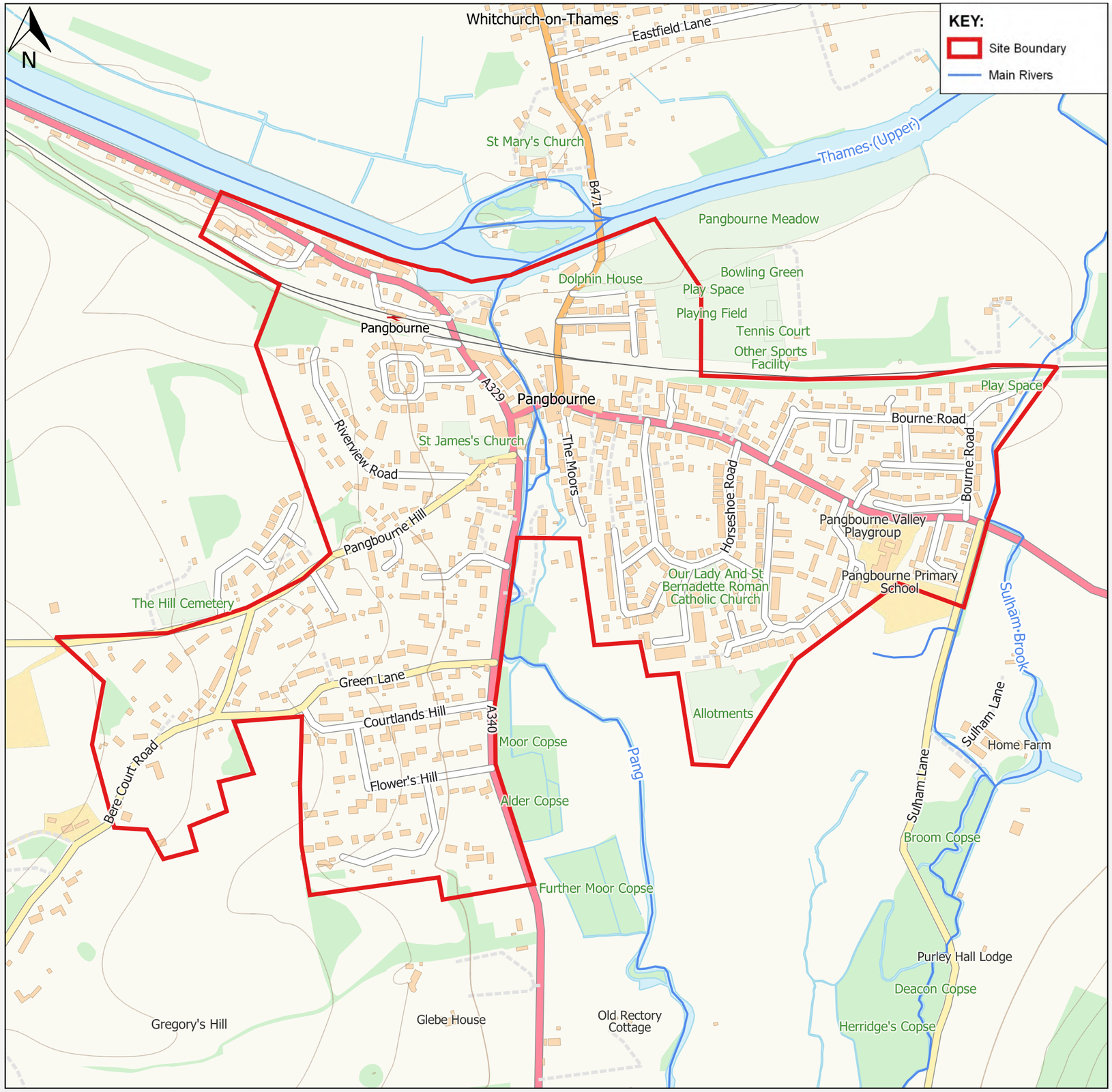
2

CLOSEST MAIN RIVER

Pang

DISTANCE BETWEEN SITE AND CLOSEST MAIN RIVER

0m



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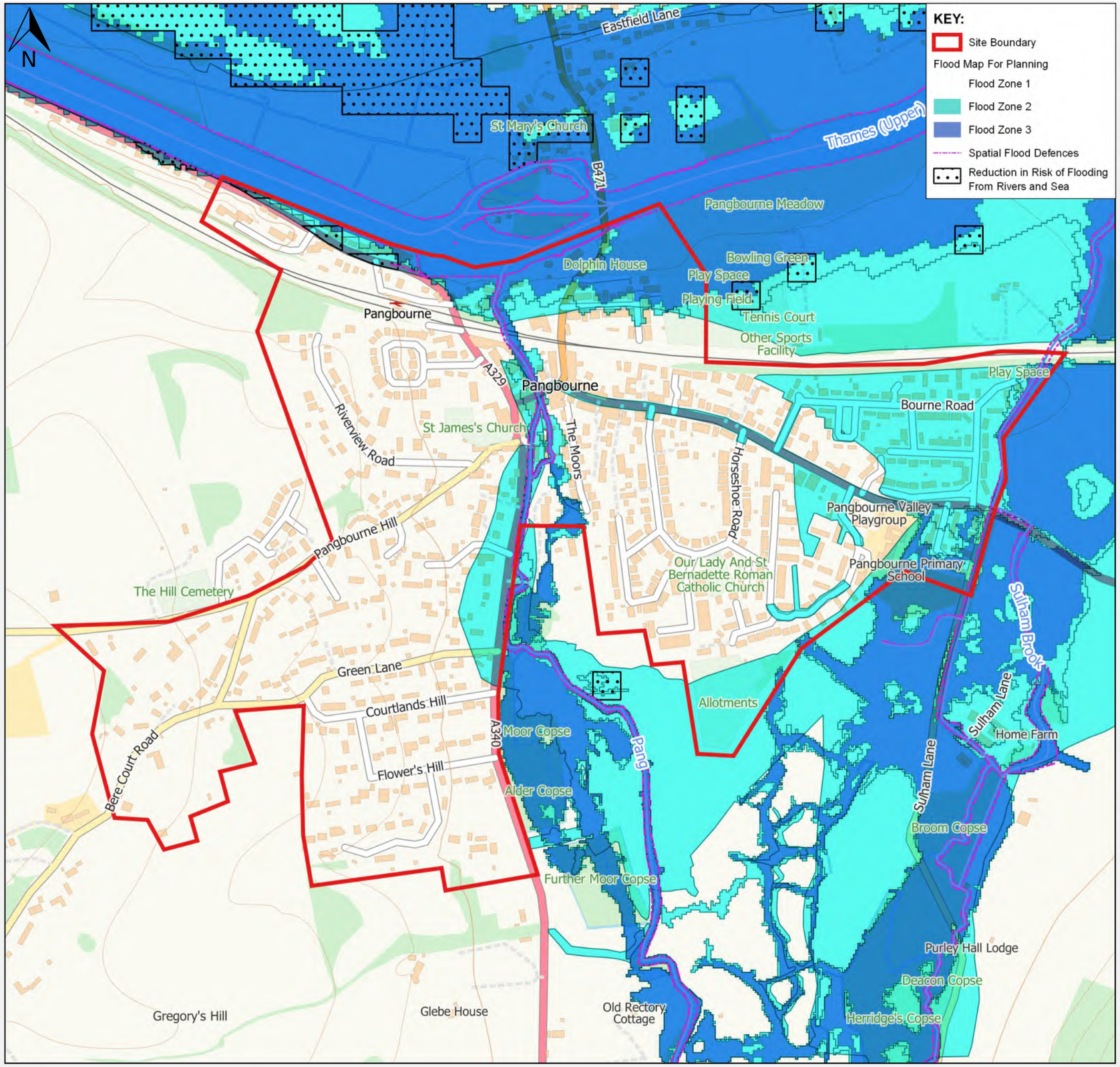
Flood Map for Planning

Flood zone maps are modelled using local and national river and sea data. This information provides an indication of the likelihood of flooding and is intended for planning use only.

- **Flood Zone 1 -** Land having a less than 1 in 1,000 annual probability (0.1% AEP) of river or sea flooding - all land outside Zones 2 and 3).
- **Flood Zone 2 -** Land having between a 1 in 100 and 1 in 1,000 annual probability (0.1% - 1.0% AEP) of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability (0.1% - 0.5% AEP) of sea flooding.
- **Flood Zone 3 -** Land having a 1 in 100 or greater annual probability (>1.0% AEP) of river flooding; or Land having a 1 in 200 or greater annual probability (>0.5% AEP) of sea flooding.

Reduction in Risk of Flooding from Rivers and Sea due to Defences -Reduction in Risk of Flooding from Rivers and Sea due to Defences is a spatial dataset that indicates where areas have reduced flood risk from rivers and sea due to the presence of flood defences. The dataset has been created to help initiate conversations about the impact our flood defences have on the risk of flooding from the rivers and sea,and as a prompt to find out more about the flood defences in a particular area of interest. It does not replace any local, more detailed information.



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Risk of Flooding from Rivers and Sea

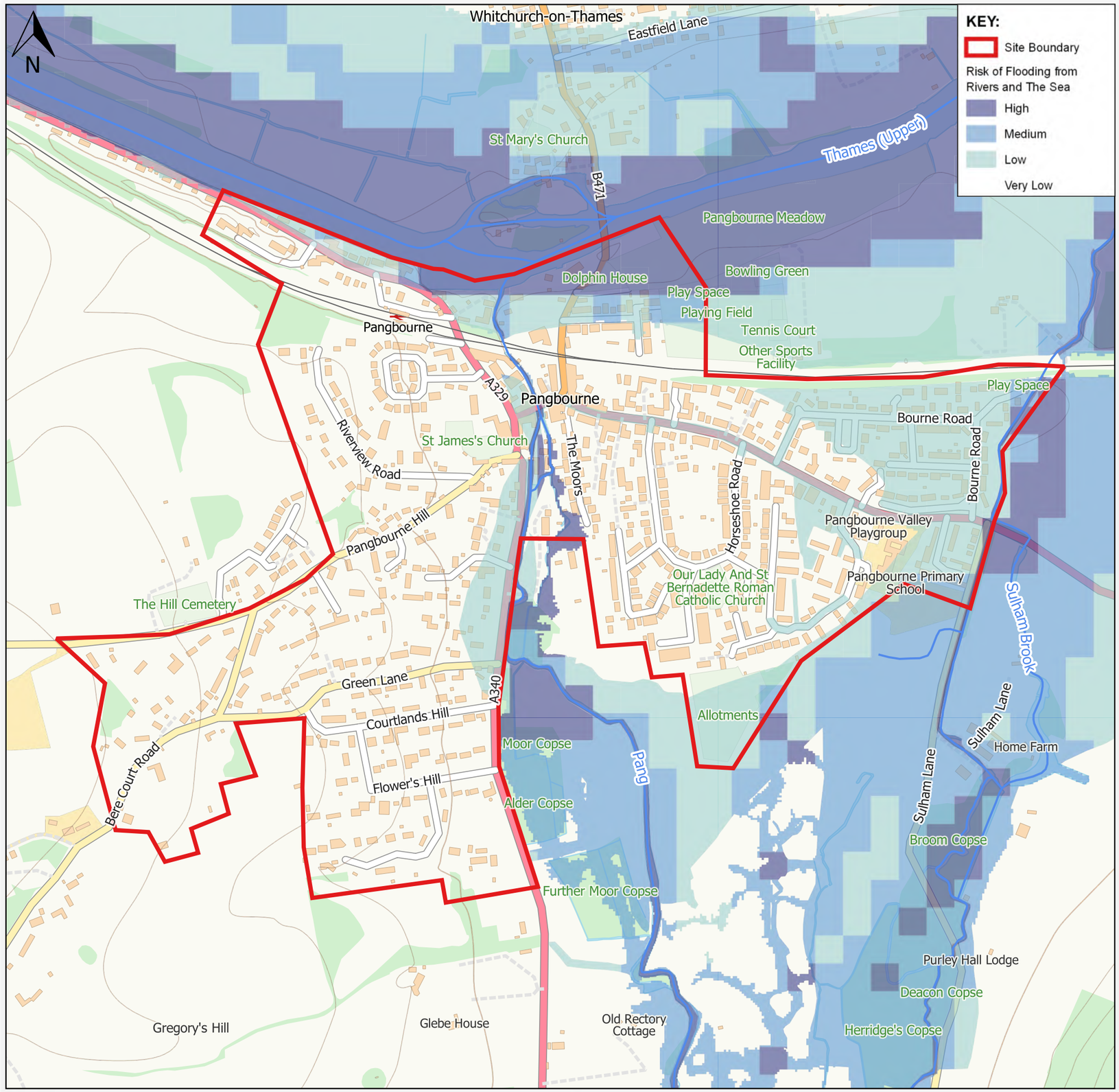
This map takes into account the effect of any flood defences in the area. These defences reduce but do not completely stop the chance of flooding as they can be overtopped, or fail.

High Risk - Land having a 1 in 30 or greater annual probability (>3.3% AEP) of flooding from rivers or the sea.

Medium Risk - Land having between a 1 in 30 and a 1 in 100 annual probability (1.0% - 3.3%) of flooding from rivers or the sea.

Low Risk - Land having between a 1 in 100 and a 1 in 1000 annual probability (0.1% - 1.0%) of flooding from rivers or the sea.

Very Low Risk - Land having a less than 1 in 1,000 annual probability (0.1% AEP) of flooding from rivers or the sea.



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Risk of Flooding from Surface Water

Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.

High Risk - Land having a 1 in 30 or greater annual probability (>3.3% AEP) of flooding from surface water.

Medium Risk - Land having between a 1 in 30 and a 1 in 100 annual probability (1.0% - 3.3%) of flooding from surface water.

Low Risk - Land having between a 1 in 100 and a 1 in 1000 annual probability (0.1% - 1.0%) of flooding from surface water.

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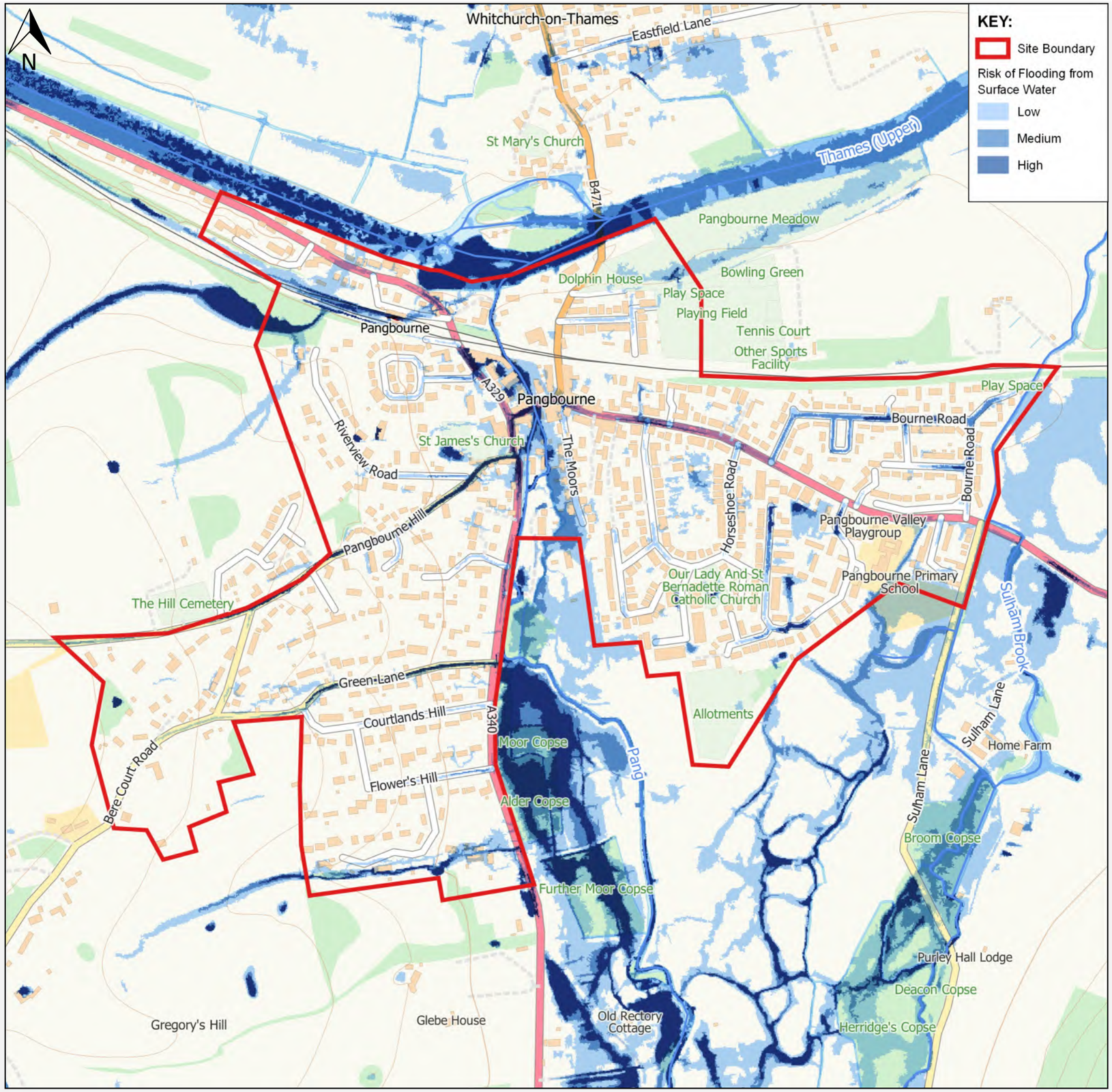

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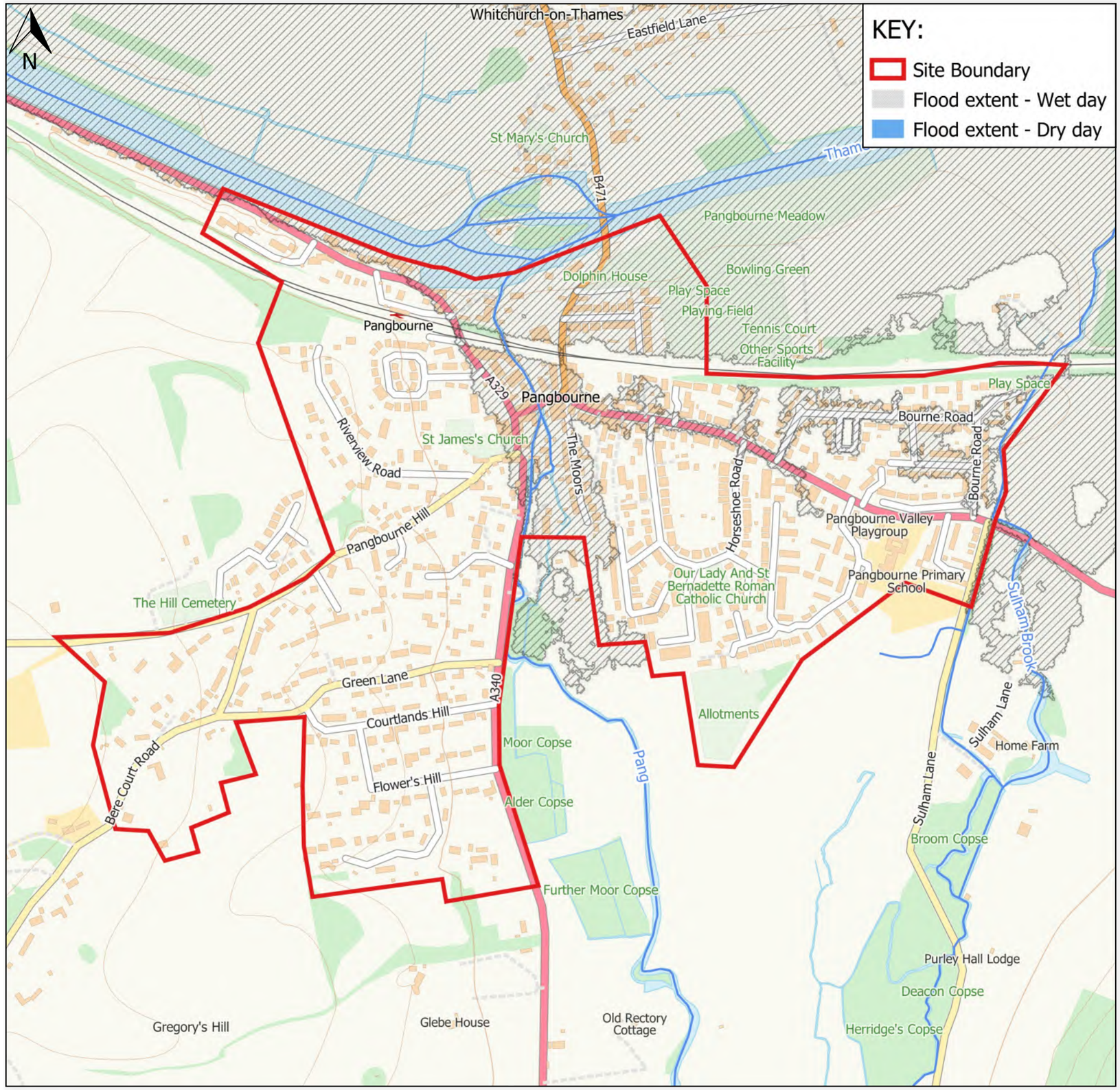
Risk of Flooding from Reservoirs

The Risk of Flooding from Reservoirs (wet day) layer shows the individual flood extents for all large raised reservoirs in the event that they were to fail and release the water held on a "wet day" when local rivers had already overflowed their banks.

It represents a prediction of a credible worst-case scenario, however it's unlikely that any actual flood would be this large. The data gives no indication of likelihood or probability of reservoir flooding.

The Risk of Flooding from Reservoirs (dry day) shows flood extents for all large raised reservoirs in the event that they were to fail and release the water held on a "dry day" when local rivers are at normal levels.

These national datasets are "indicative" not "definitive". Definitive information can only be provided by individual local authorities and you should refer directly to their information for all purposes that require the most up to date and complete dataset.



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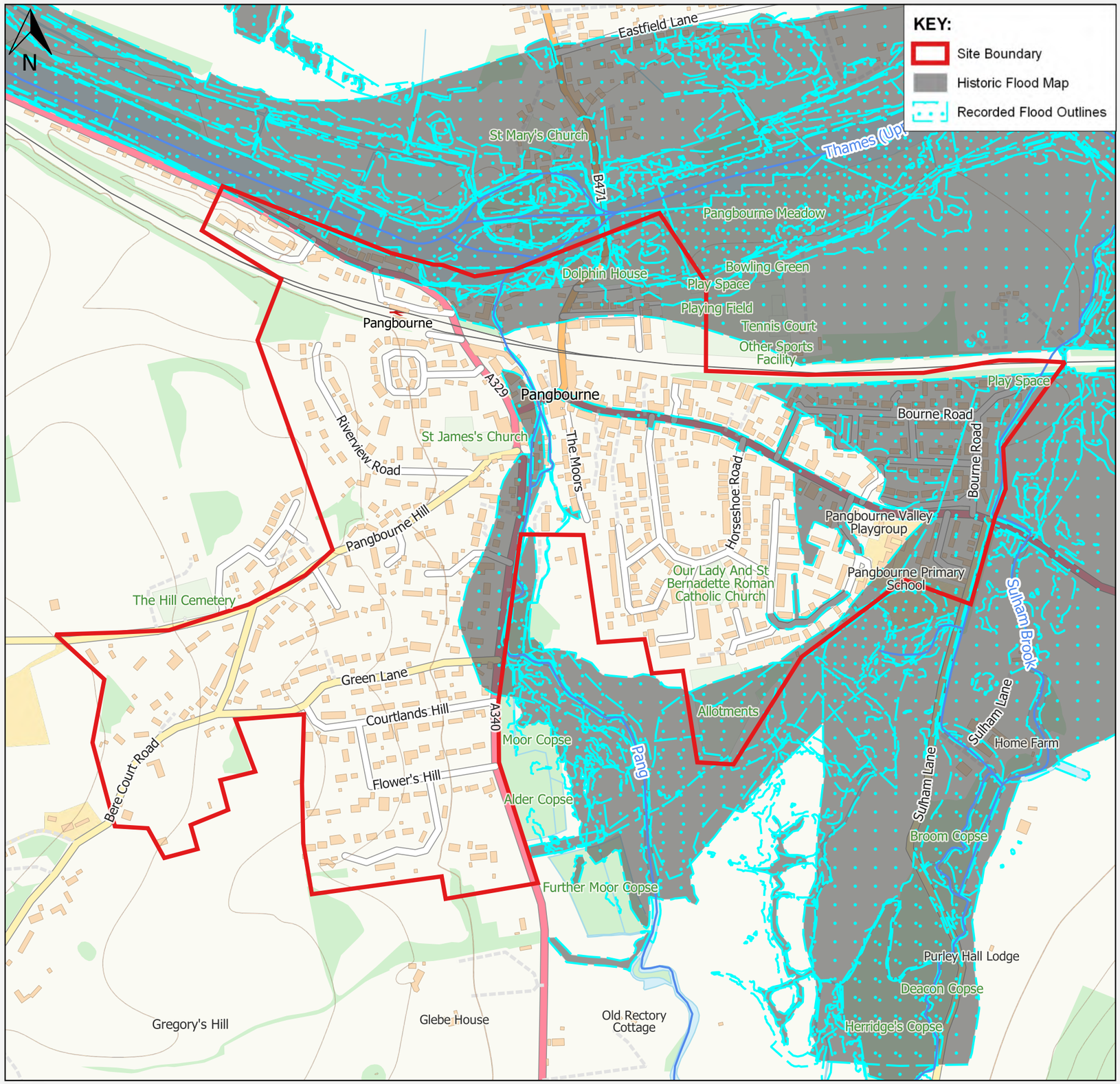
Previous Flooding

RECORDED FLOOD OUTLINES
Recorded Flood Outlines shows all records of historic flooding from rivers, the sea, groundwater and surface water. The absence of coverage by Recorded Flood Outlines for an area does not mean that the area has never flooded, only that there are currently no records of flooding in this area. It is also possible that the pattern of flooding in this area has changed and that this area would now flood or not flood under different circumstances. The Recorded Flood Outlines take into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding. It includes flood extents that may have been affected by overtopping, breaches or blockages. Any flood extents shown do not necessarily indicate that properties were flooded internally.

HISTORIC FLOOD MAP
The Historic Flooding shows the maximum extent of individual Recorded Flood Outlines from river, the sea and groundwater springs that meet a set criteria. It shows areas of land that has previously been subject to flooding. This excludes flooding from surface water, except in areas where it is impossible to determine whether the source is fluvial or surface water, but the dominant source is fluvial. If an area is not covered by the Historic Flood Map it does not mean that the area has never flooded, only that the EA do not currently have records of flooding in this area that meet the criteria for inclusion. It is also possible that the pattern of flooding in this area has changed and that this area would now flood or not flood under different circumstances. Outlines that don't meet these criteria are stored in the Recorded Flood Outlines dataset. The Historic Flood Map takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding. It will include flood extents that may have been affected by overtopping, breaches or blockages. Flooding is shown to the land and does not necessarily indicate that properties were flooded internally.

If an area is not covered by these layers, it does not mean that the area has never flooded, only that there are not currently records of flooding in the area.



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Flood Alert and Warning Areas

FLOOD ALERT AREAS

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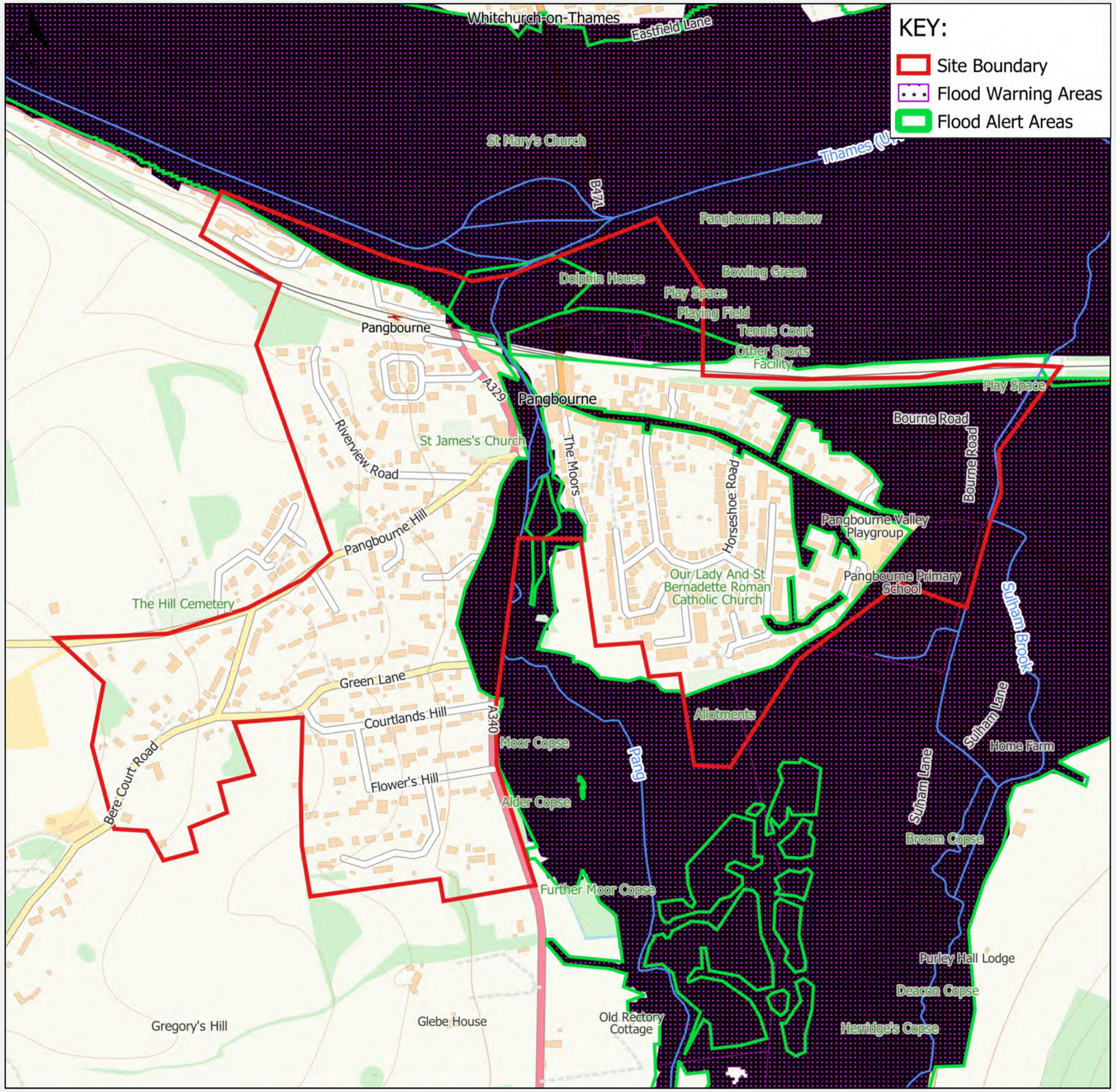

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Appendix E.10

PURLEY ON THAMES

Site Location

2

CLOSEST MAIN RIVER

Thames (Upper)

DISTANCE BETWEEN SITE AND CLOSEST MAIN RIVER

0m

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Flood Map for Planning

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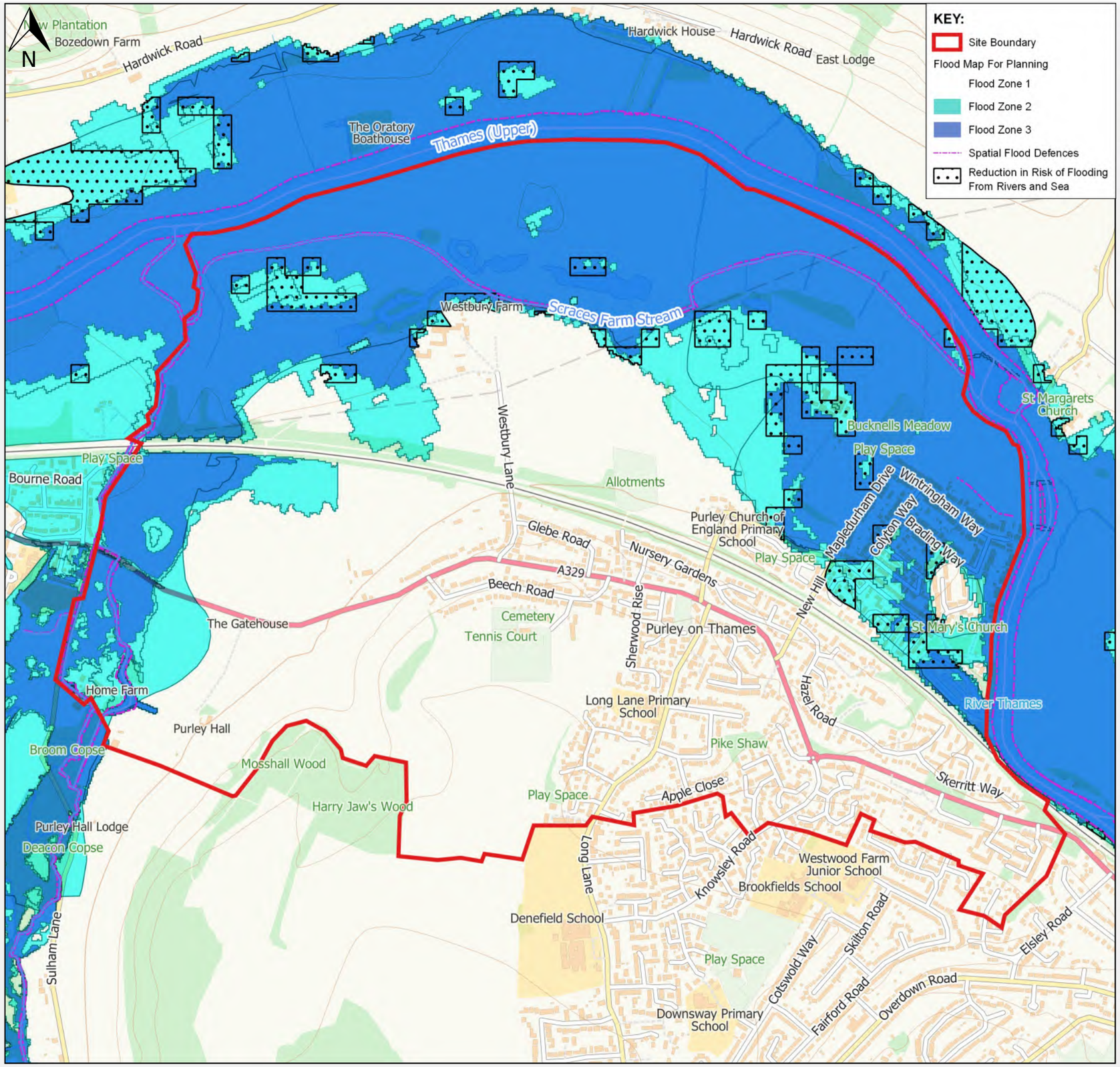

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Risk of Flooding from Rivers and Sea

This map takes into account the effect of any flood defences in the area. These defences reduce but do not completely stop the chance of flooding as they can be overtopped, or fail.

High Risk - Land having a 1 in 30 or greater annual probability (>3.3% AEP) of flooding from rivers or the sea.

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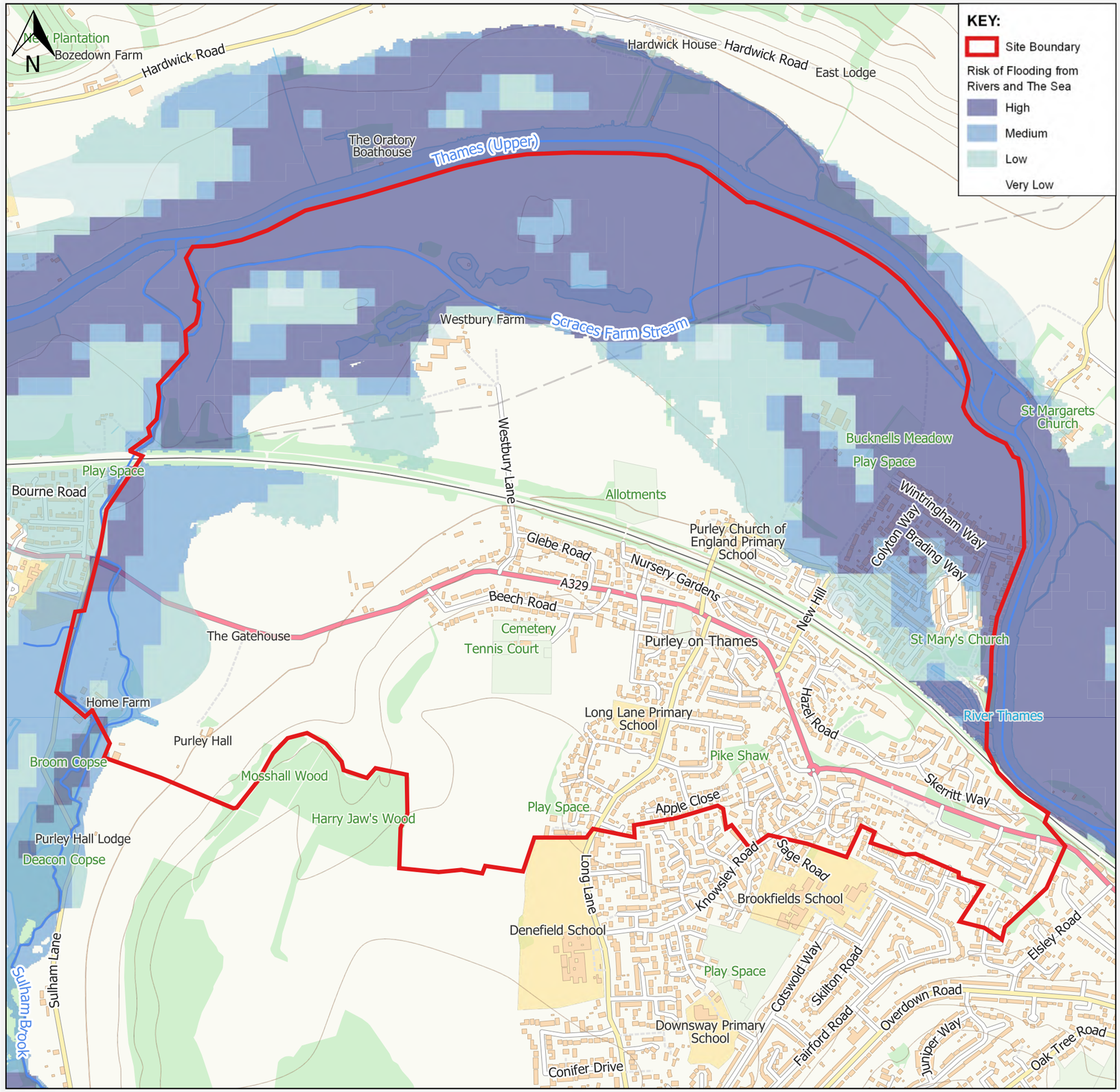

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Risk of Flooding from Surface Water

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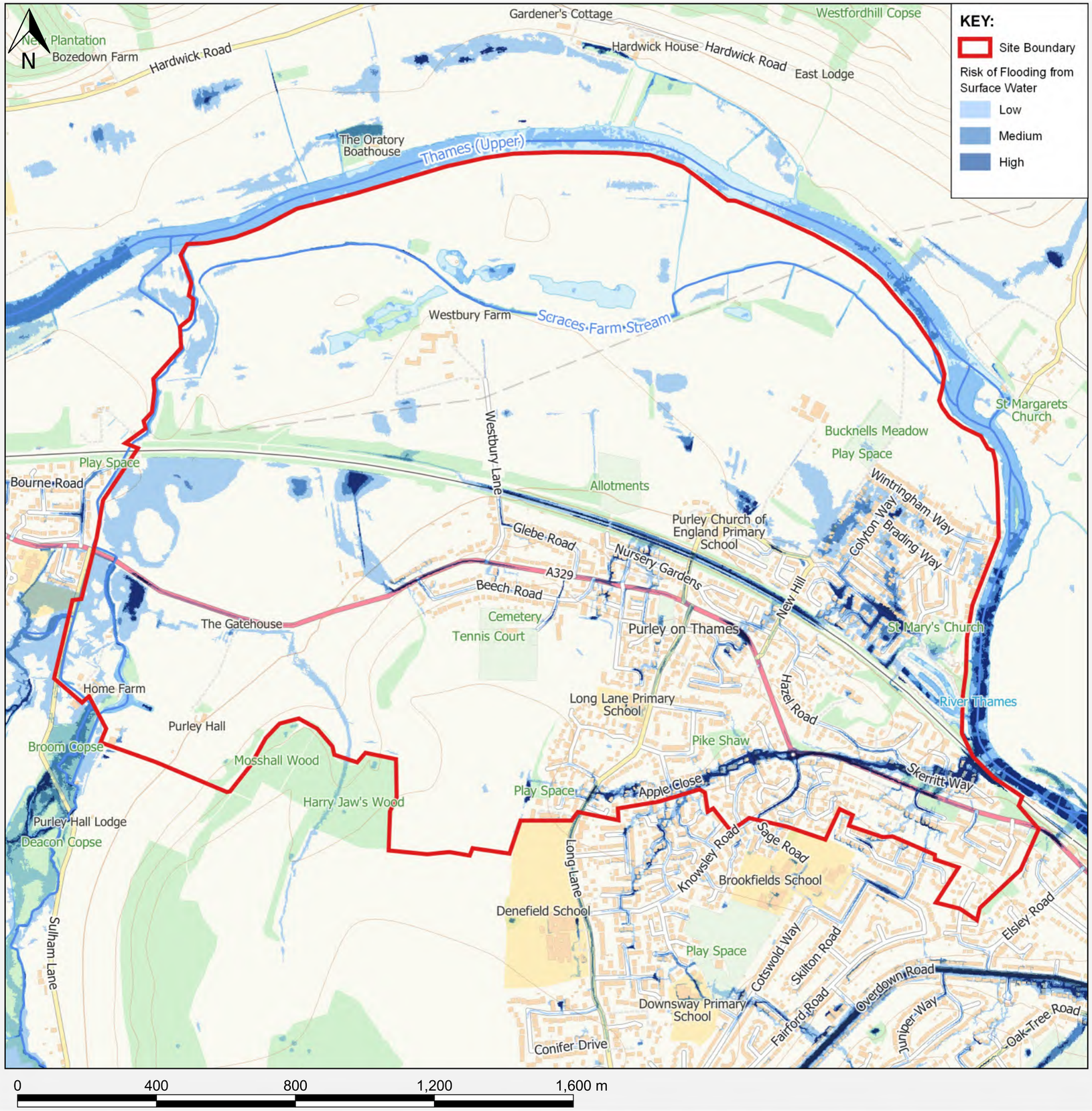

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Risk of Flooding from Reservoirs

The Risk of Flooding from Reservoirs (wet day) layer shows the individual flood extents for all large raised reservoirs in the event that they were to fail and release the water held on a "wet day" when local rivers had already overflowed their banks.

It represents a prediction of a credible worst-case scenario, however it's unlikely that any actual flood would be this large. The data gives no indication of likelihood or probability of reservoir flooding.

The Risk of Flooding from Reservoirs (dry day) shows flood extents for all large raised reservoirs in the event that they were to fail and release the water held on a "dry day" when local rivers are at normal levels.

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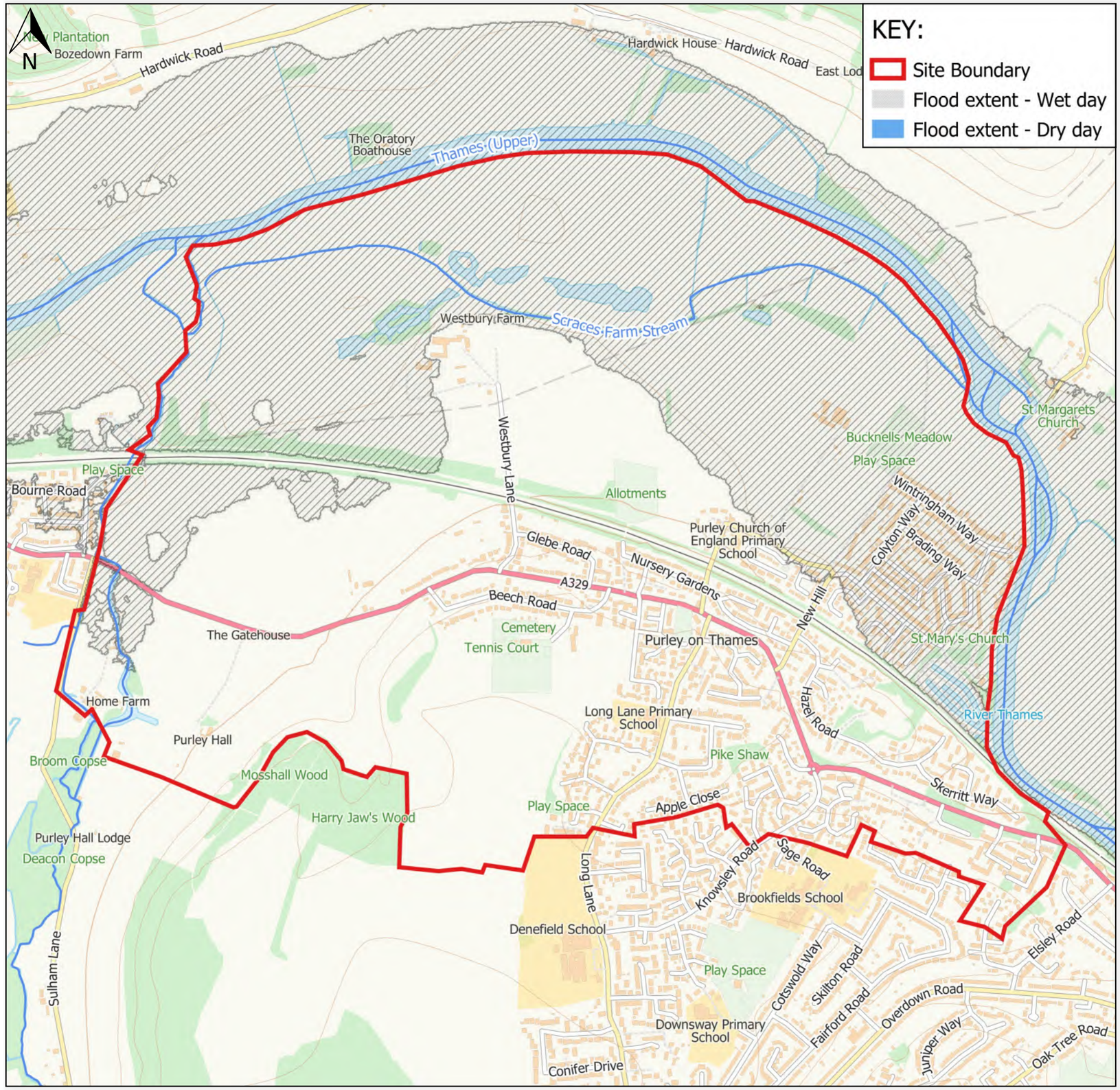

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Previous Flooding

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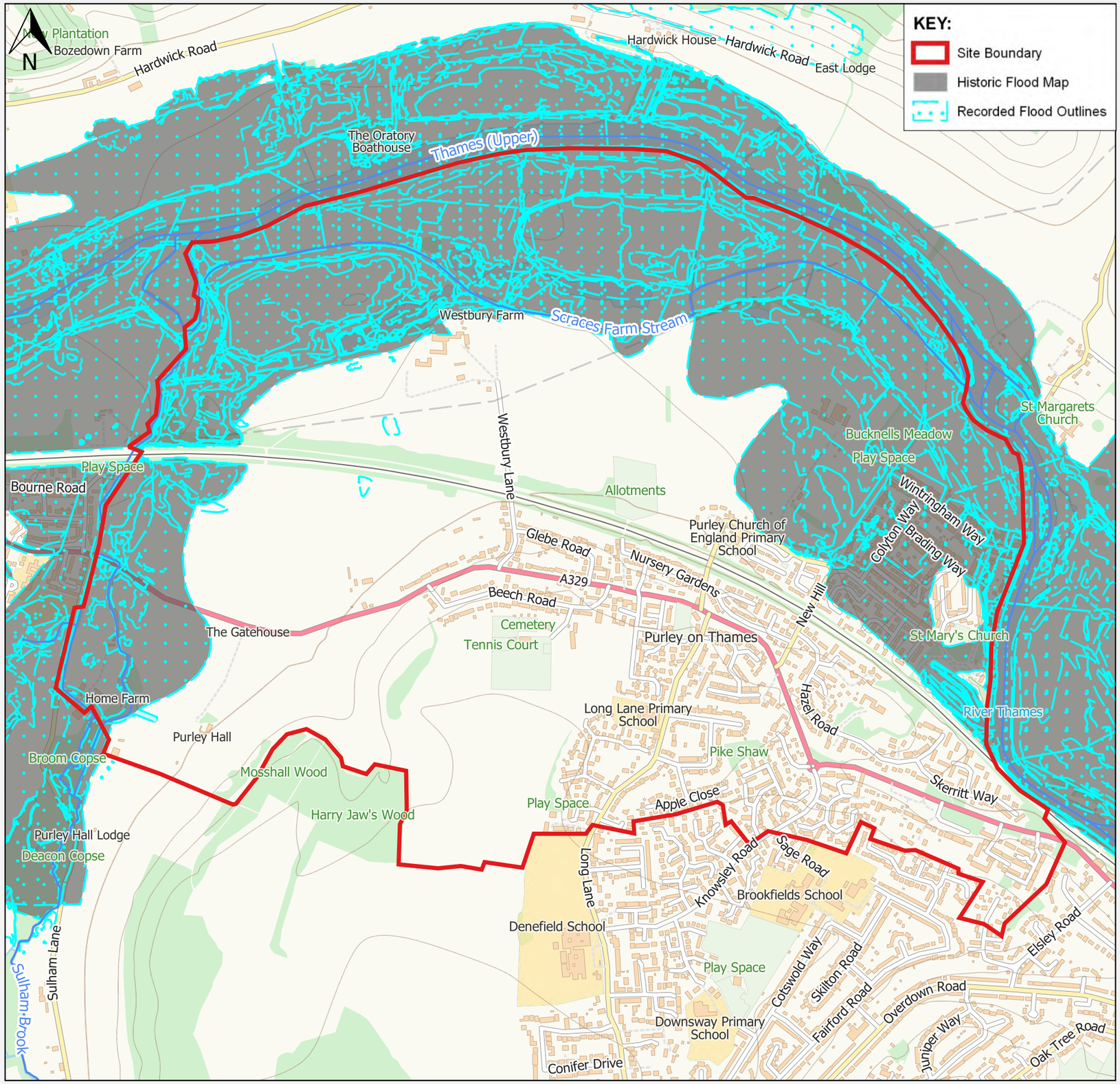

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Flood Alert and Warning Areas

FLOOD ALERT AREAS

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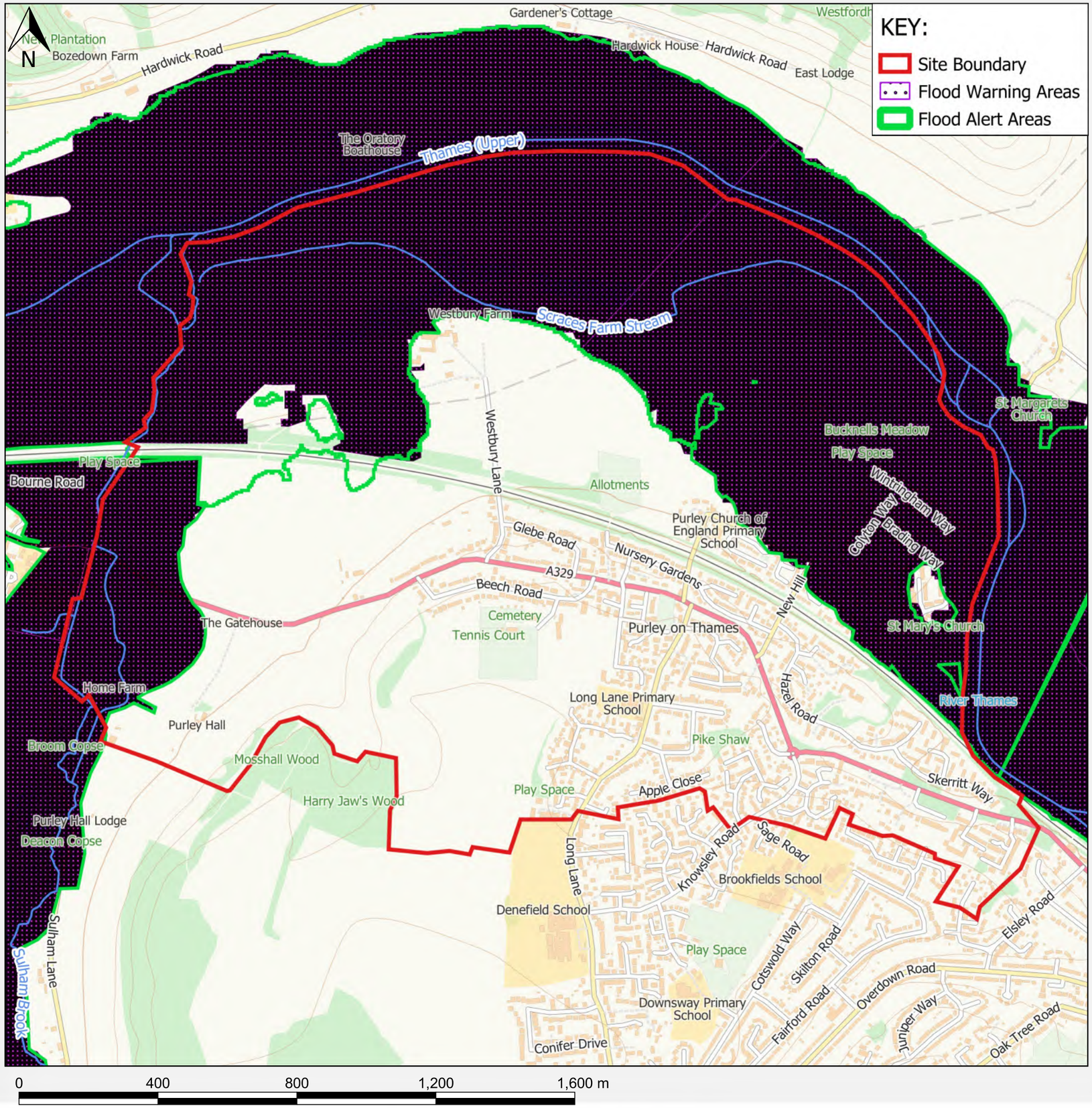

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Appendix E.11

STREATLEY

Site Location

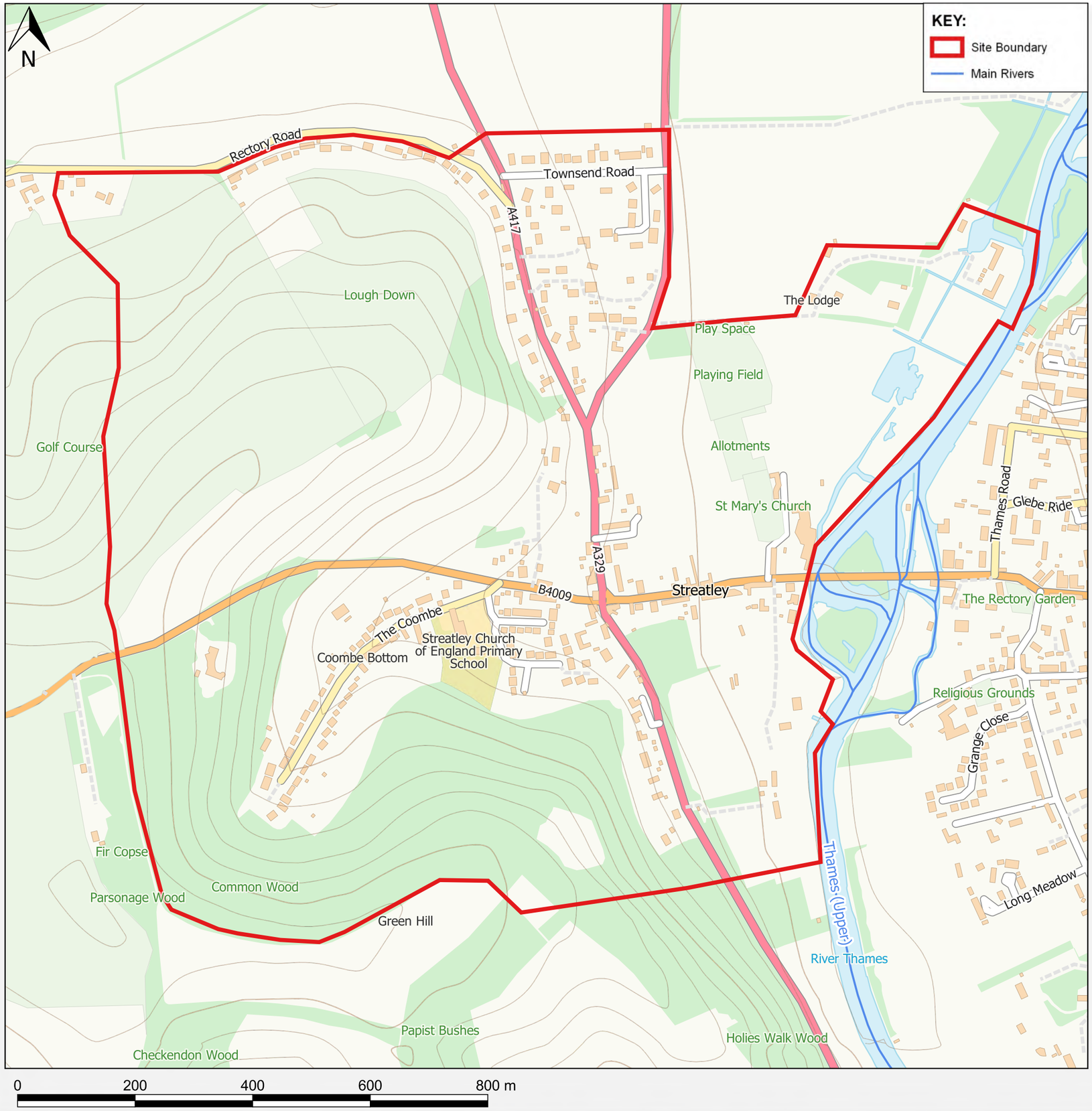
2

CLOSEST MAIN RIVER

Thames (Upper)

DISTANCE BETWEEN SITE AND CLOSEST MAIN RIVER

0m



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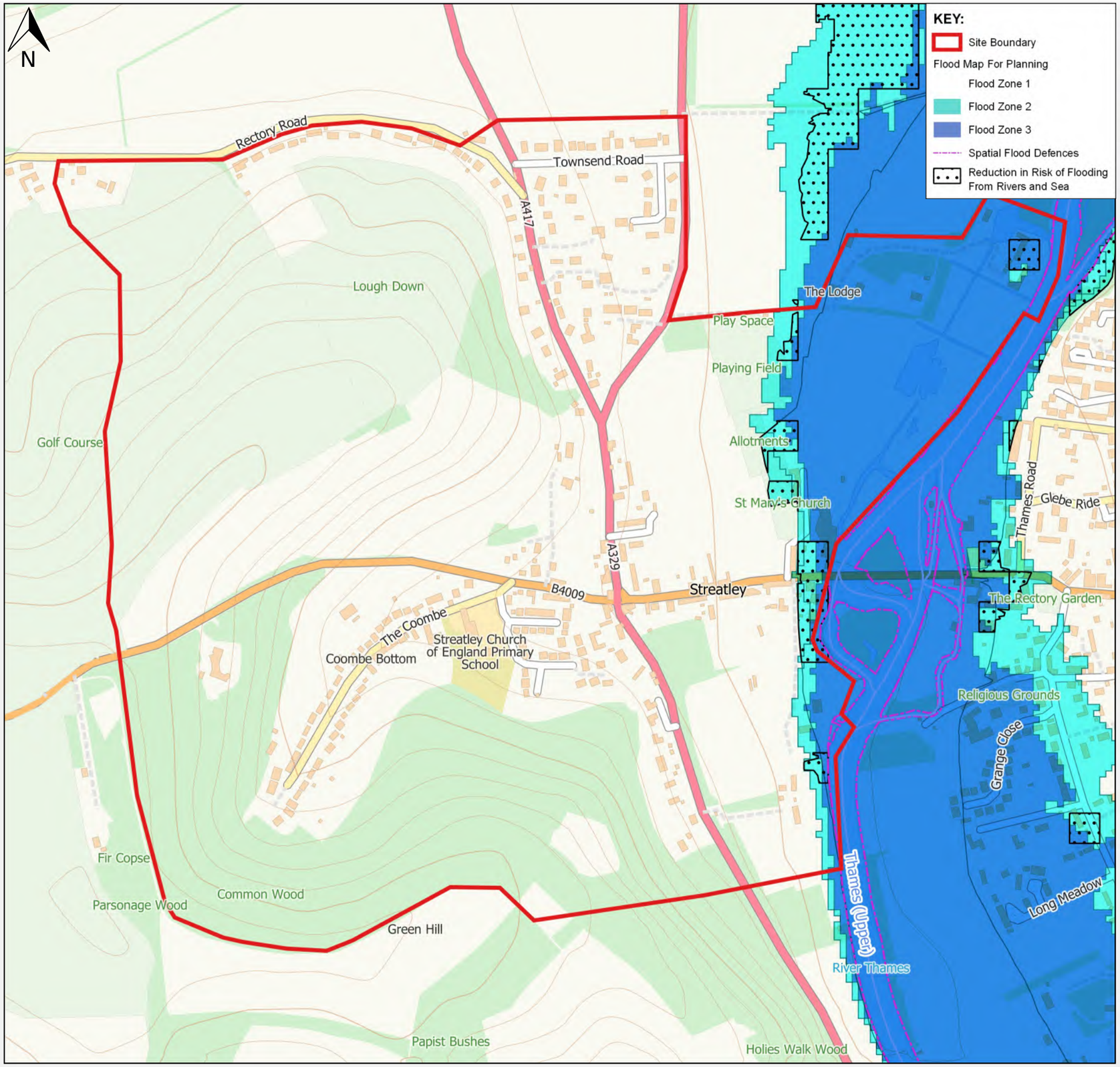
Flood Map for Planning

Flood zone maps are modelled using local and national river and sea data. This information provides an indication of the likelihood of flooding and is intended for planning use only.

- **Flood Zone 1 -** Land having a less than 1 in 1,000 annual probability (0.1% AEP) of river or sea flooding - all land outside Zones 2 and 3).
- **Flood Zone 2 -** Land having between a 1 in 100 and 1 in 1,000 annual probability (0.1% - 1.0% AEP) of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability (0.1% - 0.5% AEP) of sea flooding.
- **Flood Zone 3 -** Land having a 1 in 100 or greater annual probability (>1.0% AEP) of river flooding; or Land having a 1 in 200 or greater annual probability (>0.5% AEP) of sea flooding.

Reduction in Risk of Flooding from Rivers and Sea due to Defences -Reduction in Risk of Flooding from Rivers and Sea due to Defences is a spatial dataset that indicates where areas have reduced flood risk from rivers and sea due to the presence of flood defences. The dataset has been created to help initiate conversations about the impact our flood defences have on the risk of flooding from the rivers and sea,and as a prompt to find out more about the flood defences in a particular area of interest. It does not replace any local, more detailed information.



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Risk of Flooding from Rivers and Sea

This map takes into account the effect of any flood defences in the area. These defences reduce but do not completely stop the chance of flooding as they can be overtopped, or fail.

High Risk - Land having a 1 in 30 or greater annual probability (>3.3% AEP) of flooding from rivers or the sea.

Medium Risk - Land having between a 1 in 30 and a 1 in 100 annual probability (1.0% - 3.3%) of flooding from rivers or the sea.

Low Risk - Land having between a 1 in 100 and a 1 in 1000 annual probability (0.1% - 1.0%) of flooding from rivers or the sea.

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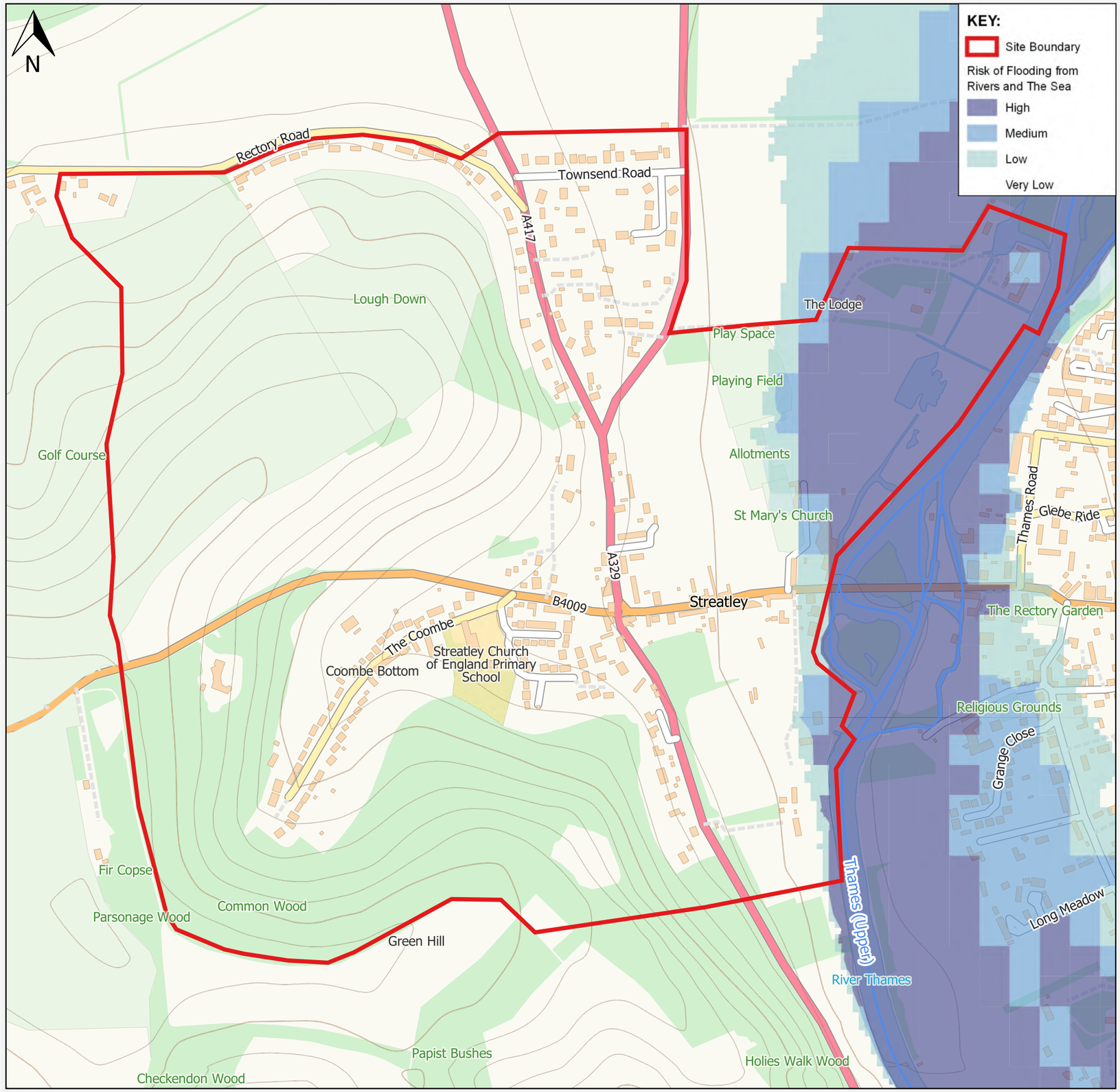

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Risk of Flooding from Surface Water

Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.

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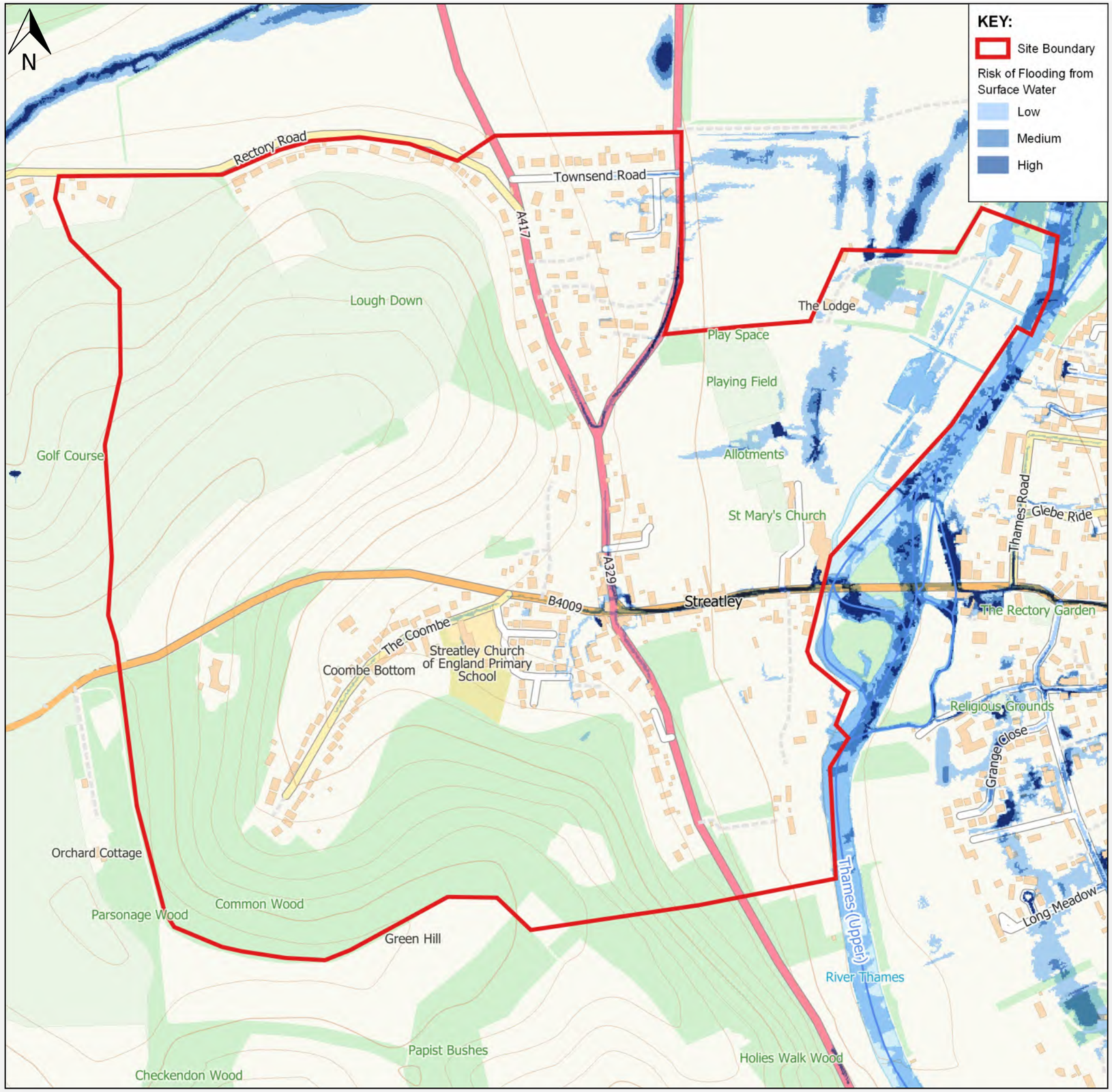

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Risk of Flooding from Reservoirs

The Risk of Flooding from Reservoirs (wet day) layer shows the individual flood extents for all large raised reservoirs in the event that they were to fail and release the water held on a "wet day" when local rivers had already overflowed their banks.

It represents a prediction of a credible worst-case scenario, however it's unlikely that any actual flood would be this large. The data gives no indication of likelihood or probability of reservoir flooding.

The Risk of Flooding from Reservoirs (dry day) shows flood extents for all large raised reservoirs in the event that they were to fail and release the water held on a "dry day" when local rivers are at normal levels.

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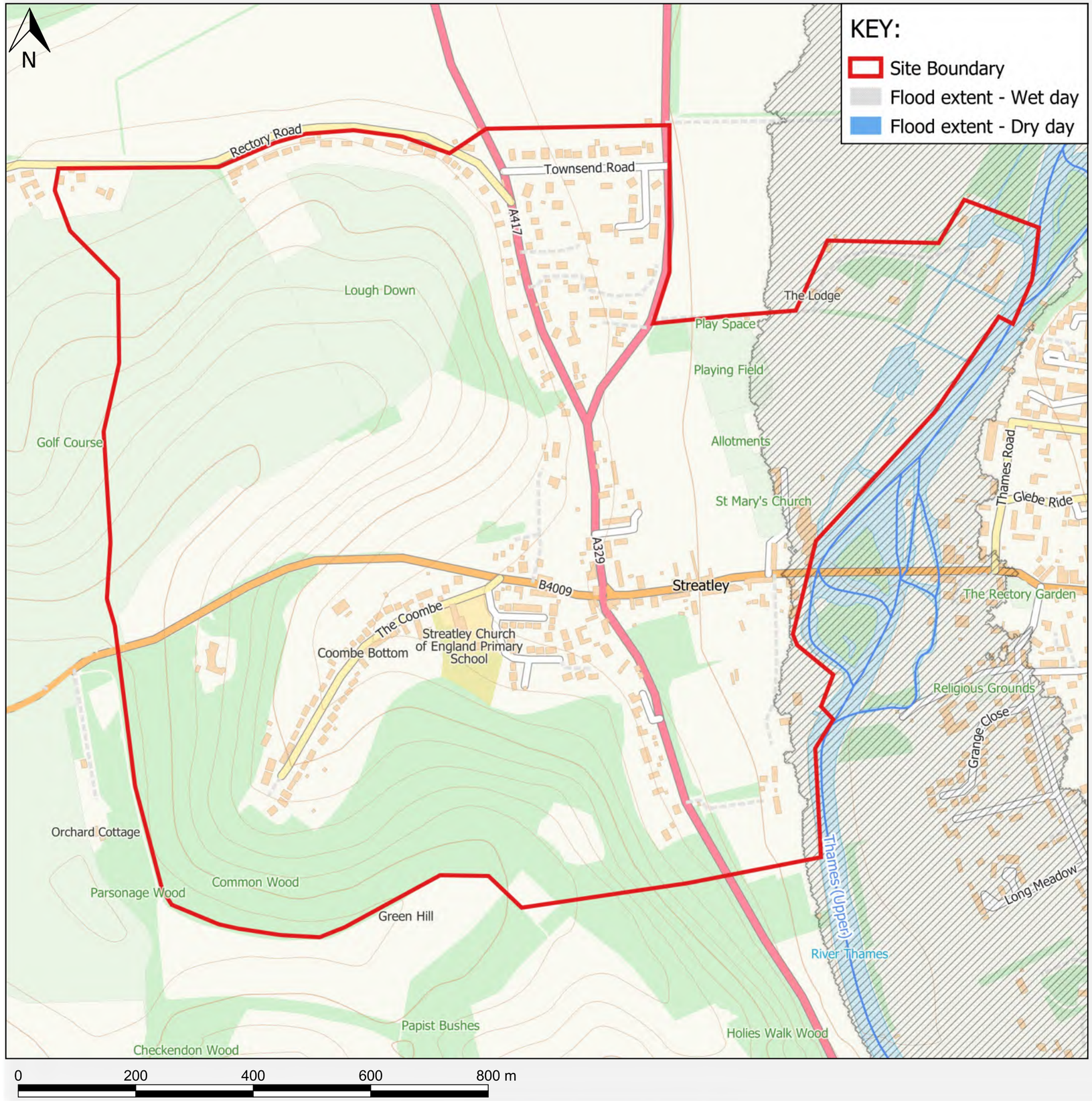

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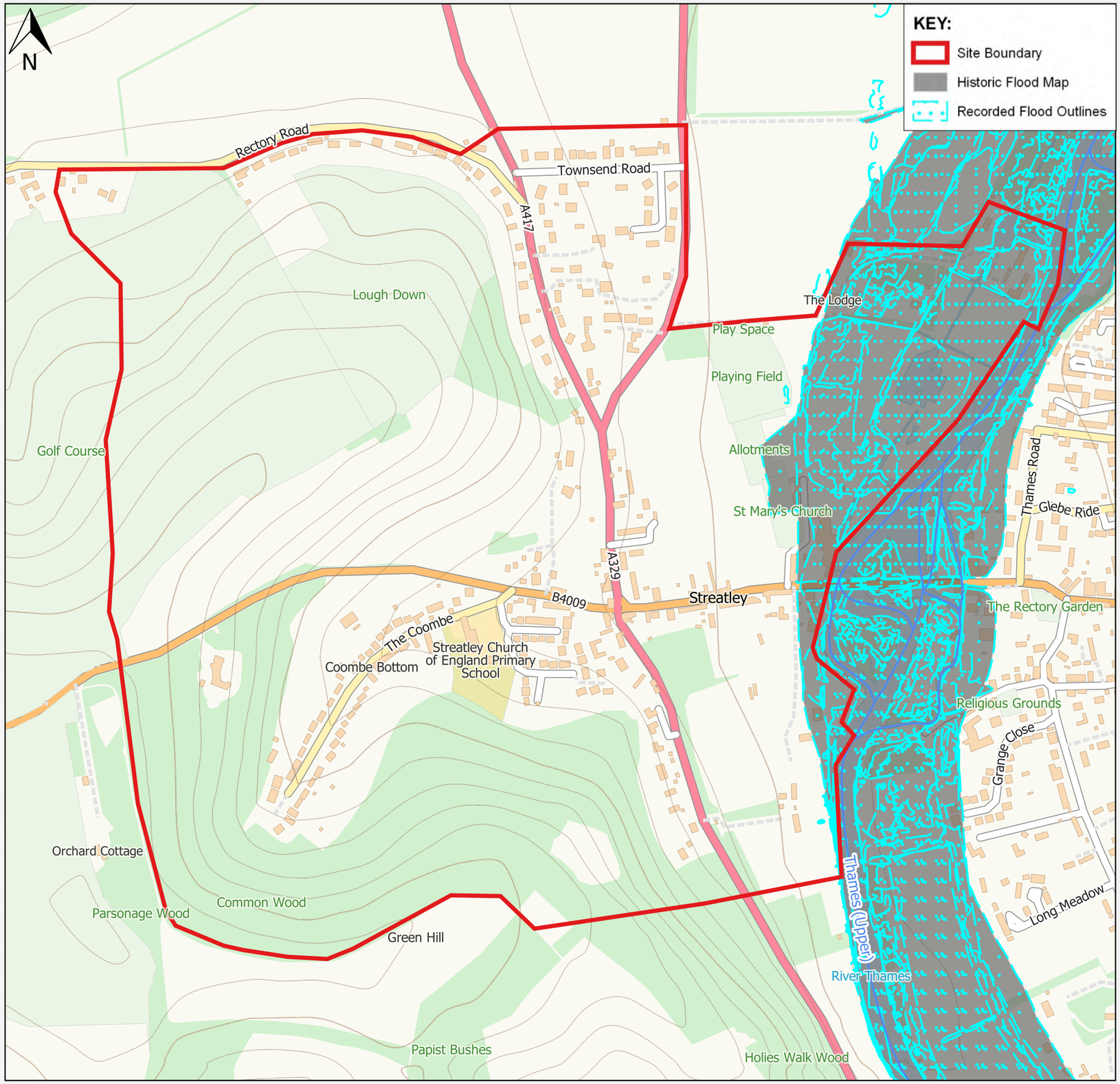
Previous Flooding

RECORDED FLOOD OUTLINES
Recorded Flood Outlines shows all records of historic flooding from rivers, the sea, groundwater and surface water. The absence of coverage by Recorded Flood Outlines for an area does not mean that the area has never flooded, only that there are currently no records of flooding in this area. It is also possible that the pattern of flooding in this area has changed and that this area would now flood or not flood under different circumstances. The Recorded Flood Outlines take into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding. It includes flood extents that may have been affected by overtopping, breaches or blockages. Any flood extents shown do not necessarily indicate that properties were flooded internally.

HISTORIC FLOOD MAP
The Historic Flooding shows the maximum extent of individual Recorded Flood Outlines from river, the sea and groundwater springs that meet a set criteria. It shows areas of land that has previously been subject to flooding. This excludes flooding from surface water, except in areas where it is impossible to determine whether the source is fluvial or surface water, but the dominant source is fluvial. If an area is not covered by the Historic Flood Map it does not mean that the area has never flooded, only that the EA do not currently have records of flooding in this area that meet the criteria for inclusion. It is also possible that the pattern of flooding in this area has changed and that this area would now flood or not flood under different circumstances. Outlines that don't meet these criteria are stored in the Recorded Flood Outlines dataset. The Historic Flood Map takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding. It will include flood extents that may have been affected by overtopping, breaches or blockages. Flooding is shown to the land and does not necessarily indicate that properties were flooded internally.

If an area is not covered by these layers, it does not mean that the area has never flooded, only that there are not currently records of flooding in the area.



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Flood Alert and Warning Areas

FLOOD ALERT AREAS

Flood Alert Areas are areas where it is possible for flooding to occur from rivers, sea and in some location's groundwater. A single Flood Alert Area may cover the floodplain within the Flood Warning Service Limit of multiple catchments of similar characteristics containing a number of Flood Warning Areas. A Flood Alert Area may also match that of a corresponding Flood Warning Area and warn for the possibility of flooding in that area. In some coastal locations a Flood Alert may be issued for spray or overtopping and be defined by a stretch of coastline. Practical and administrative factors may also influence the exact extent of a Flood Alert Area. A Flood Alert is issued to warn people of the possibility of flooding and encourage them to be alert stay vigilant and make early / low impact preparations for flooding. Flood Alerts are issued earlier than Flood Warnings to provide advance notice of the possibility of flooding and may be issued when there is less confidence that flooding will occur in a Food Warning Area.

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Flood Warning Areas are areas where flooding is expected to occur and where a Flood Warning Service is provided. Areas generally contain properties that are expected to flood from rivers or the sea and in some areas, from groundwater. Specifically, Flood Warning Areas define locations within the Flood Warning Service Limit that represent a discrete community at risk of flooding. The purpose of Flood Warnings is to alert people that flooding is expected, and they should take action to protect themselves and their property. Flood Warnings are issued when flooding is expected to occur, Severe Flood Warnings are issued to similar areas when there is a danger to life or widespread disruption is expected.

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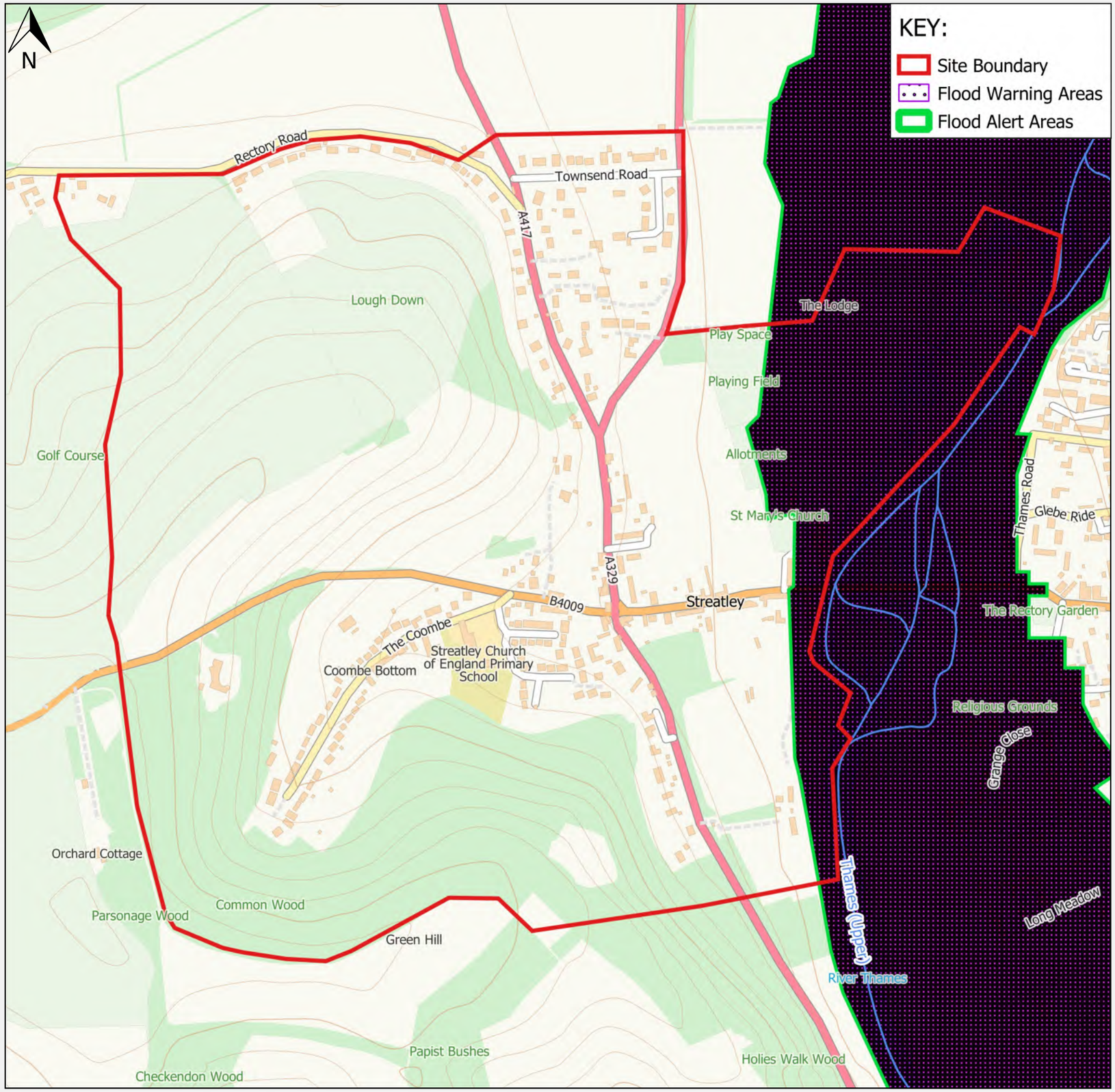

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Appendix E.12

WINTERBOURNE

Site Location

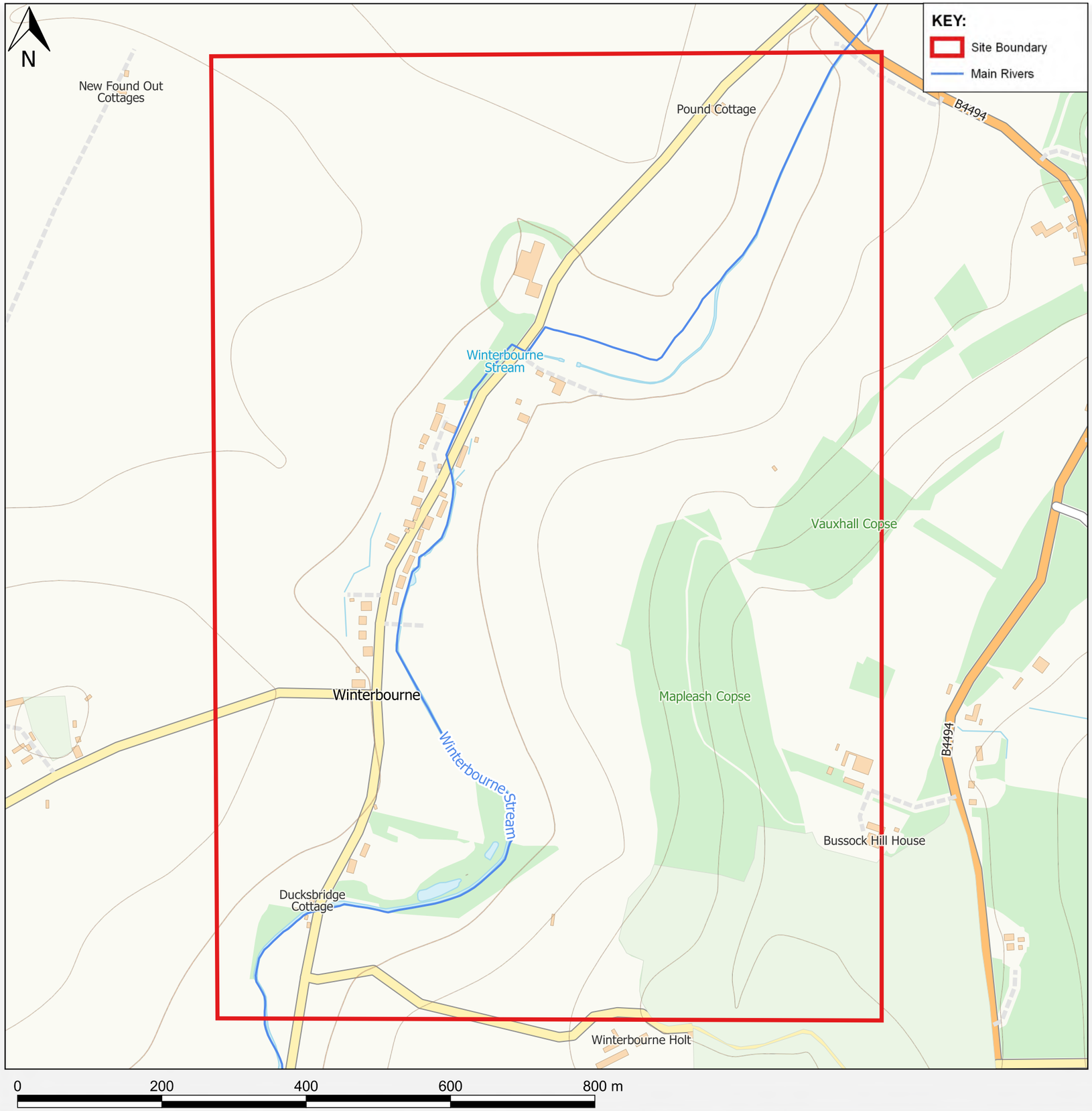
2

CLOSEST MAIN RIVER

Winterbourne Stream

DISTANCE BETWEEN SITE AND CLOSEST MAIN RIVER

0m



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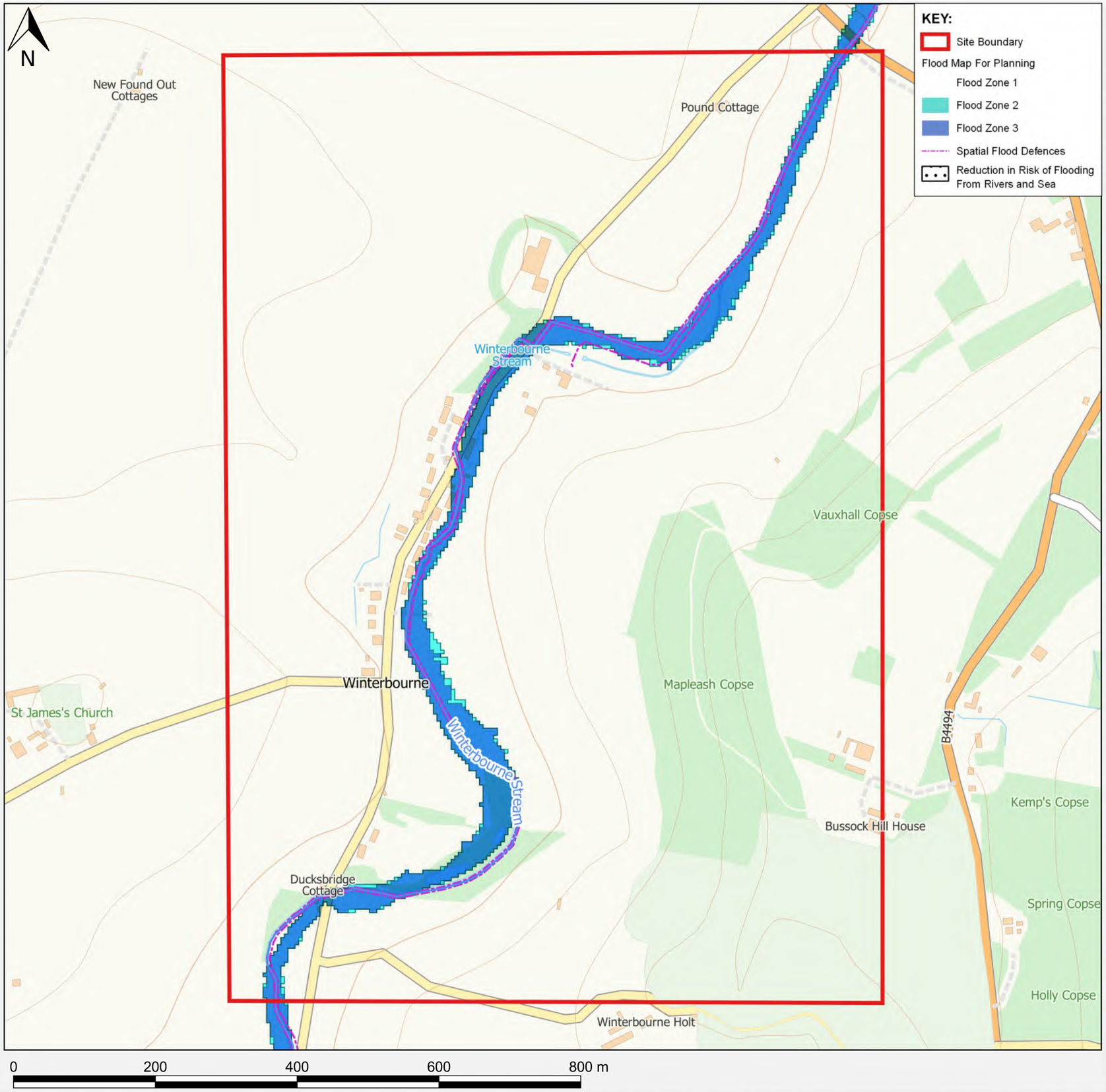

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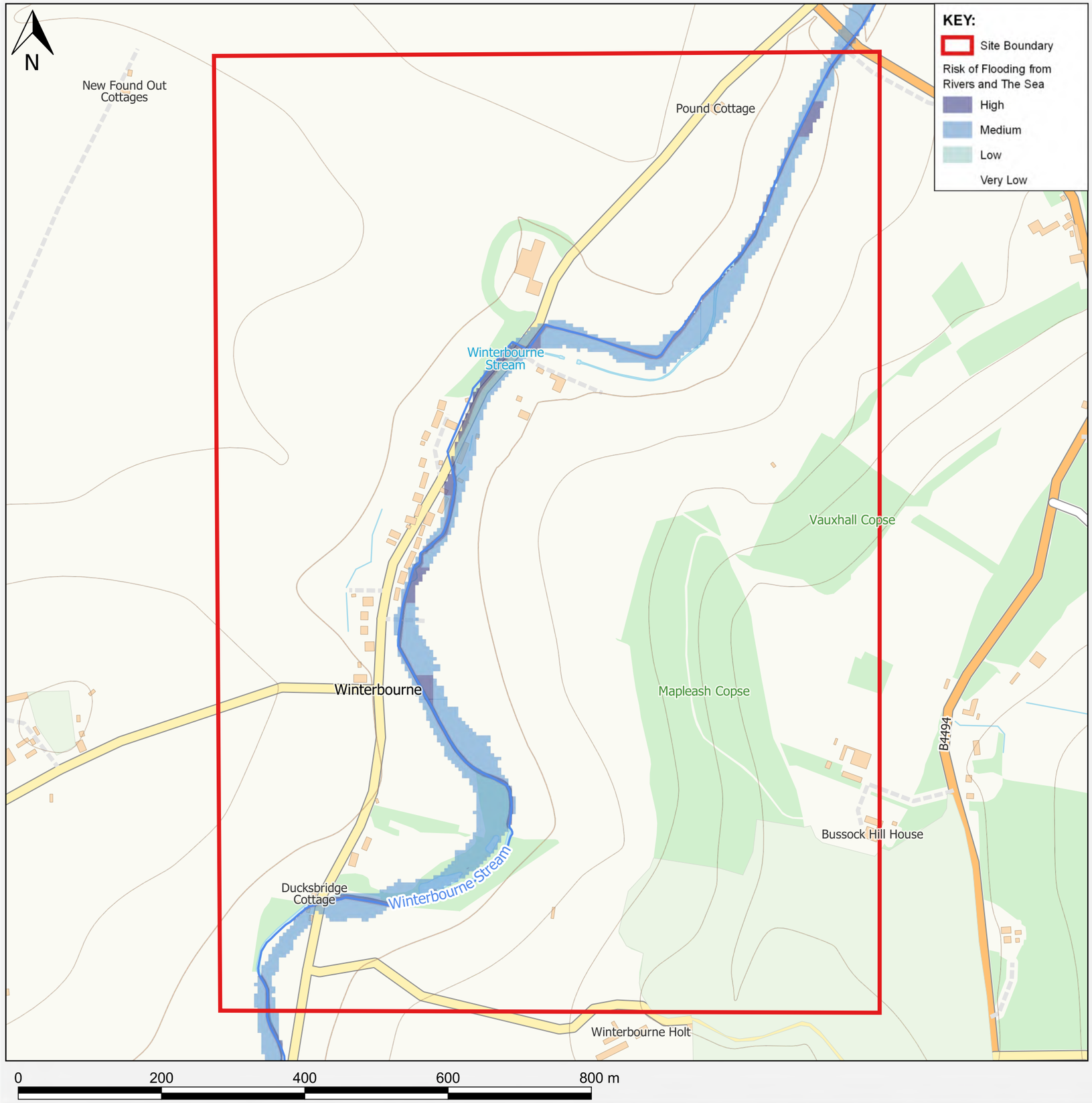

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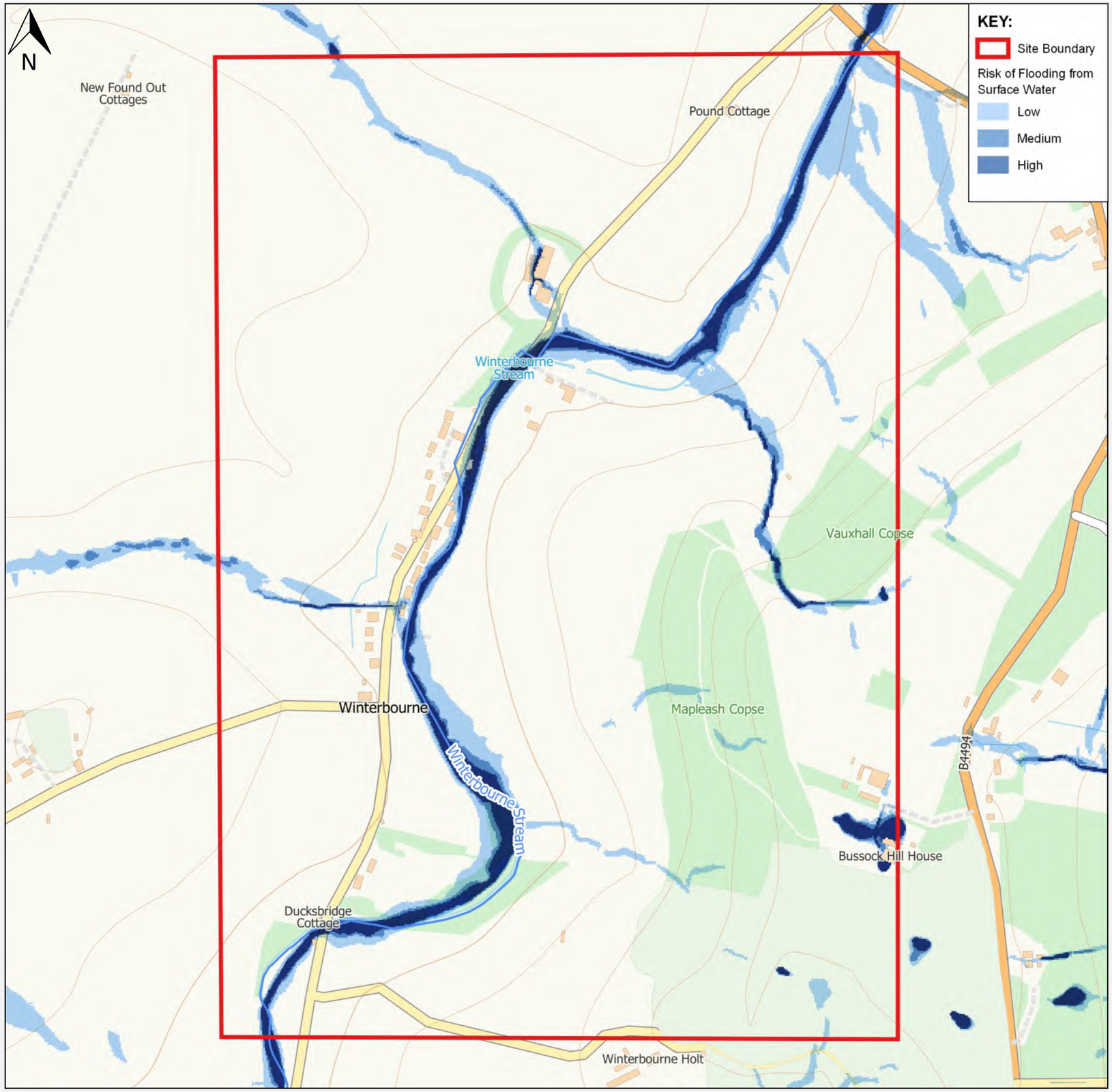

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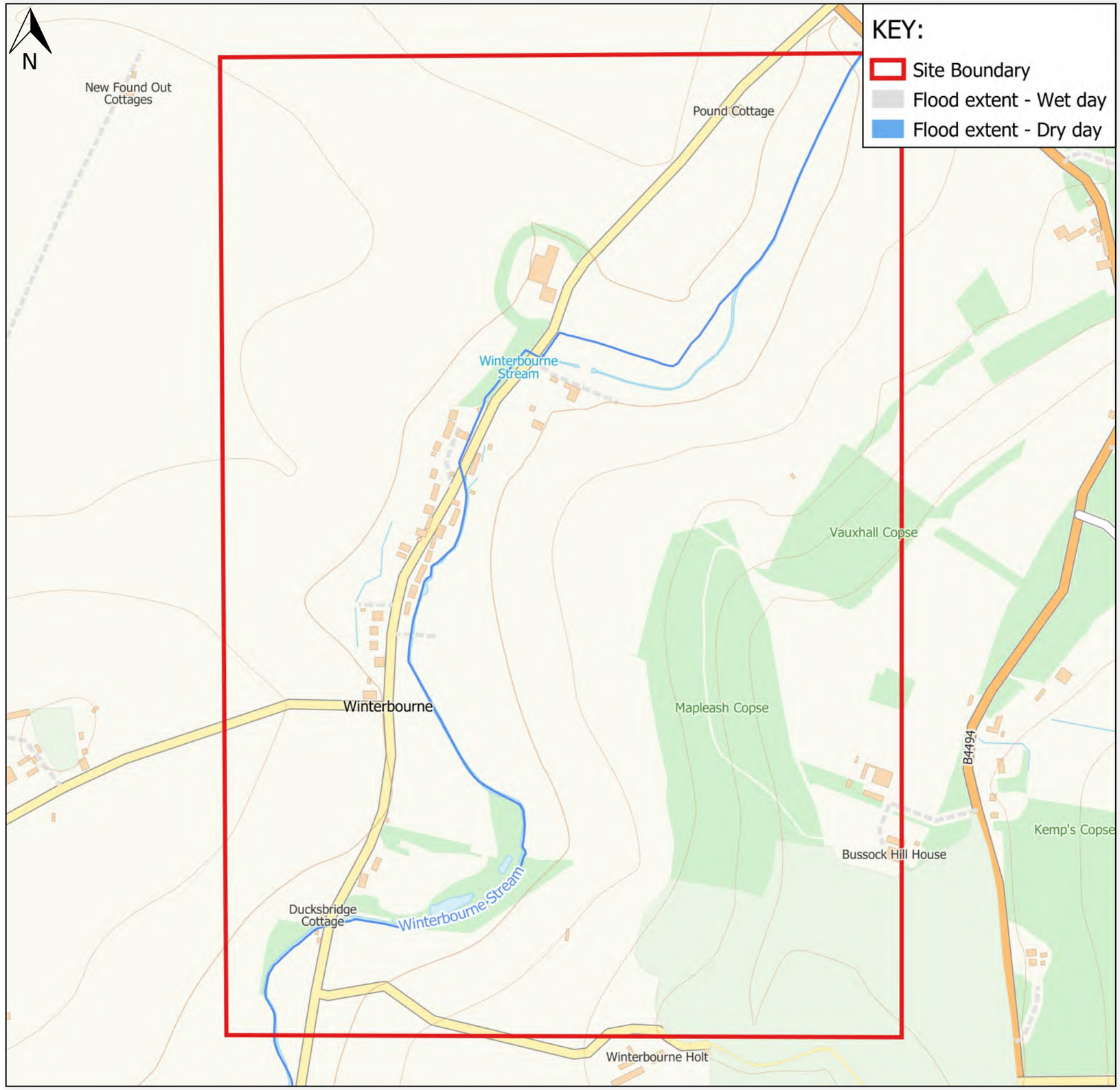

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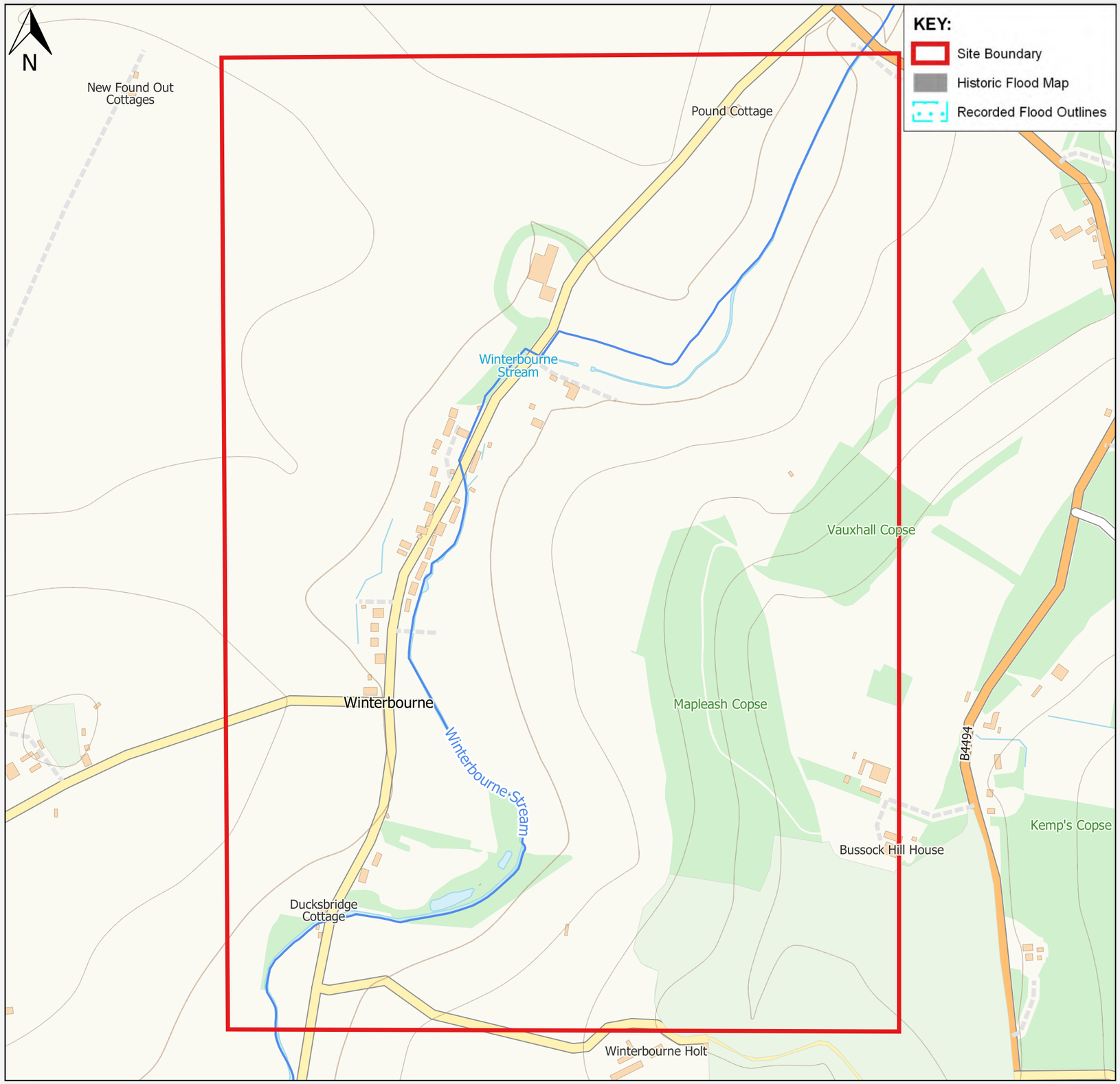

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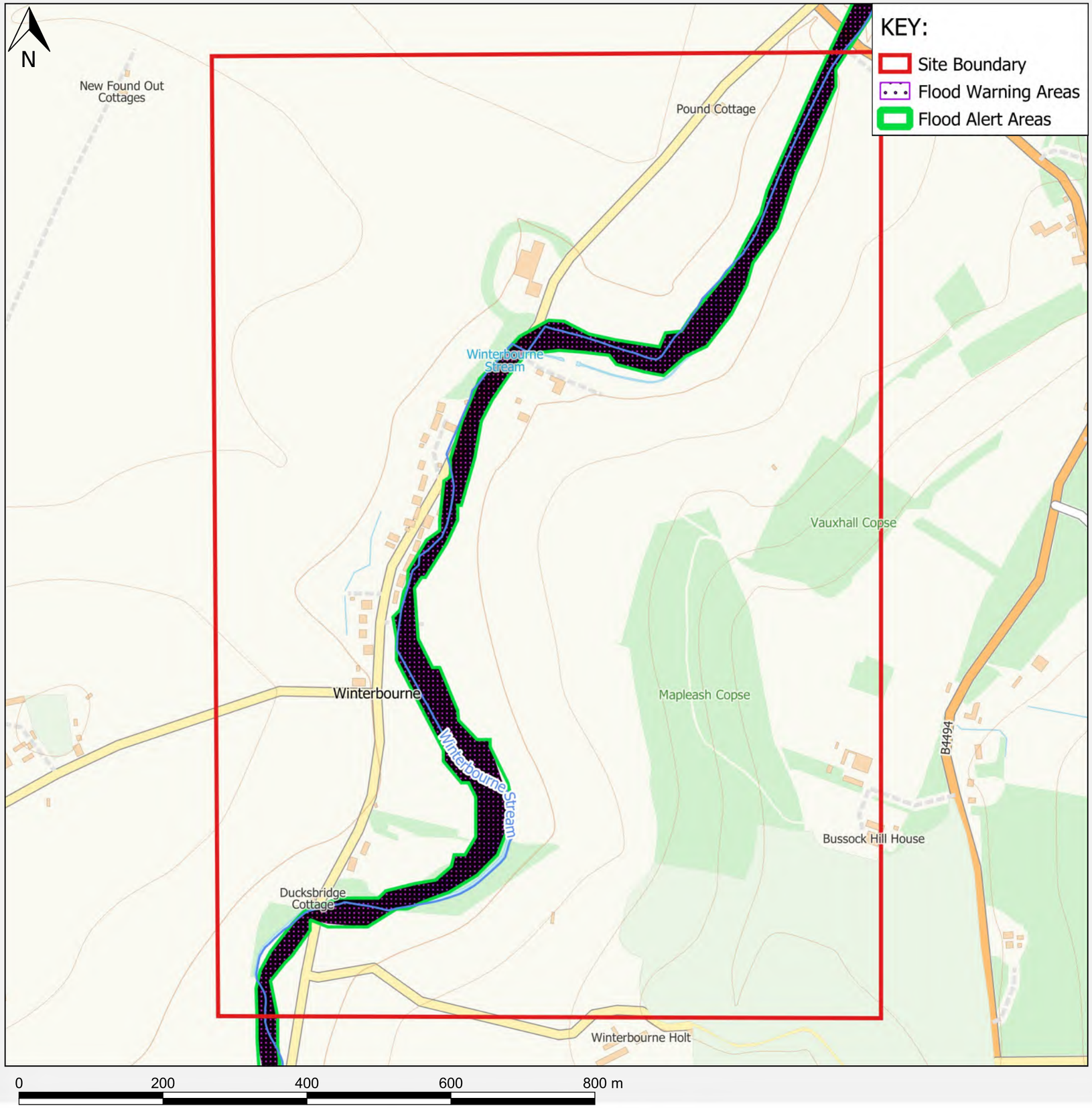

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Appendix F

RECOMMENDATIONS SUMMARY

Recommendations / Location	Burghfield Bridge	Pingewood	Sheffield Bottom	Eastbury	Great Shefford	Lambourn	Newbury (South)	Newbury (North)	Pangbourne	Purley on Thames	Streatley	Winterbourne
Implementation of property level resistance, e.g. flood doors, non-return valves, raised electrical sockets, use of sump pumps, tanking etc.	■	■	■	■	■	■	■	■	■	■	■	■
CCTV survey/investigation of highway drainage and remedial works.	■		■	■		■	■		■			■
Update of highway drainage maintenance schedule.	■		■	■		■	■		■		■	
Potential for implementation of flood alleviation scheme.	■					■	■				■	
Investigation of the condition and capacity of watercourse within the investigated location.	■											
Restoration of watercourse banks using Nature Based Solutions.	■							■				
Modelling of surface water runoff and implementation of highway drainage improvements (including retrofitting of SuDS features).		■				■						
Improved ditch maintenance.	■	■	■			■		■			■	
Culvert clearance/unblocking.		■										
Update of culvert maintenance schedule.		■										
Increase the number of flood wardens within the investigated location.		■	■				■				■	■
Regular clearance of debris and obstructions to watercourses.			■					■	■			■
Adaptations to existing flood alleviation scheme.				■						■		
Update of grip maintenance schedule.				■					■			■
Borehole installation for groundwater monitoring and preparation of a groundwater flood plan.				■				■			■	
CCTV survey of sewer network and remedial works.				■	■	■	■	■		■		
Relining of sewer network and sealing of manholes.				■	■	■		■		■		
Repair of groundwater monitoring gauge.					■							
Employment of new lock keeper.									■			

Recommendations / Location	Burghfield Bridge	Pingewood	Sheffield Bottom	Eastbury	Great Shefford	Lambourn	Newbury (South)	Newbury (North)	Pangbourne	Purley on Thames	Streatley	Winterbourne
Review of the levels that initiate a flood alert and flood warning.												
Improved communication across all risk management authorities.												

Appendix G

PHOTOS

Appendix G.1

BURGHFIELD

Play Space

Burghfield Bridge Photo Locations

3

2

Dewe Lane

River Kennet

Burghfield Road

Mill Road

Burghfield Farm

Green Lane

Appledown House

1

4

Pingewood Road North

0 100 200 m

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Photo 1, Burghfield Bridge

Photo 2, Burghfield Bridge

Photo 3, Burghfield Bridge

Photo 4, Burghfield Bridge

Photo 5, Burghfield Bridge (no GPS location)

Photo 6, Burghfield Bridge (no GPS location)

Appendix G.2

PINGEWOOD

Pingewood Photo Locations

Searles Farm

Cottage Lane

3

2

1

Kirtons Farm Road

Hanover House

Berrys Lane

Page 388

0 75 150 m

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Photo 1, Pingewood

Photo 2, Pingewood

Photo 3, Pingewood

Photo 4, Pingewood (no GPS location)

Photo 5, Pingewood (no GPS location)

Photo 6, Pingewood (no GPS location)

Appendix G.3

EASTBURY

Eastbury Photo Locations

St James's Church

Downs Close

3

2

Eastbury

Playing Field

Play Space

Straight Lane

1

0 75 150 m

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Photo 1, Eastbury

Photo 2, Eastbury

Photo 3, Eastbury

Photo 4, Eastbury (no GPS location)

Photo 5, Eastbury (no GPS location)

Photo 6, Eastbury (no GPS location)

Appendix G.4

GREAT SHEFFORD

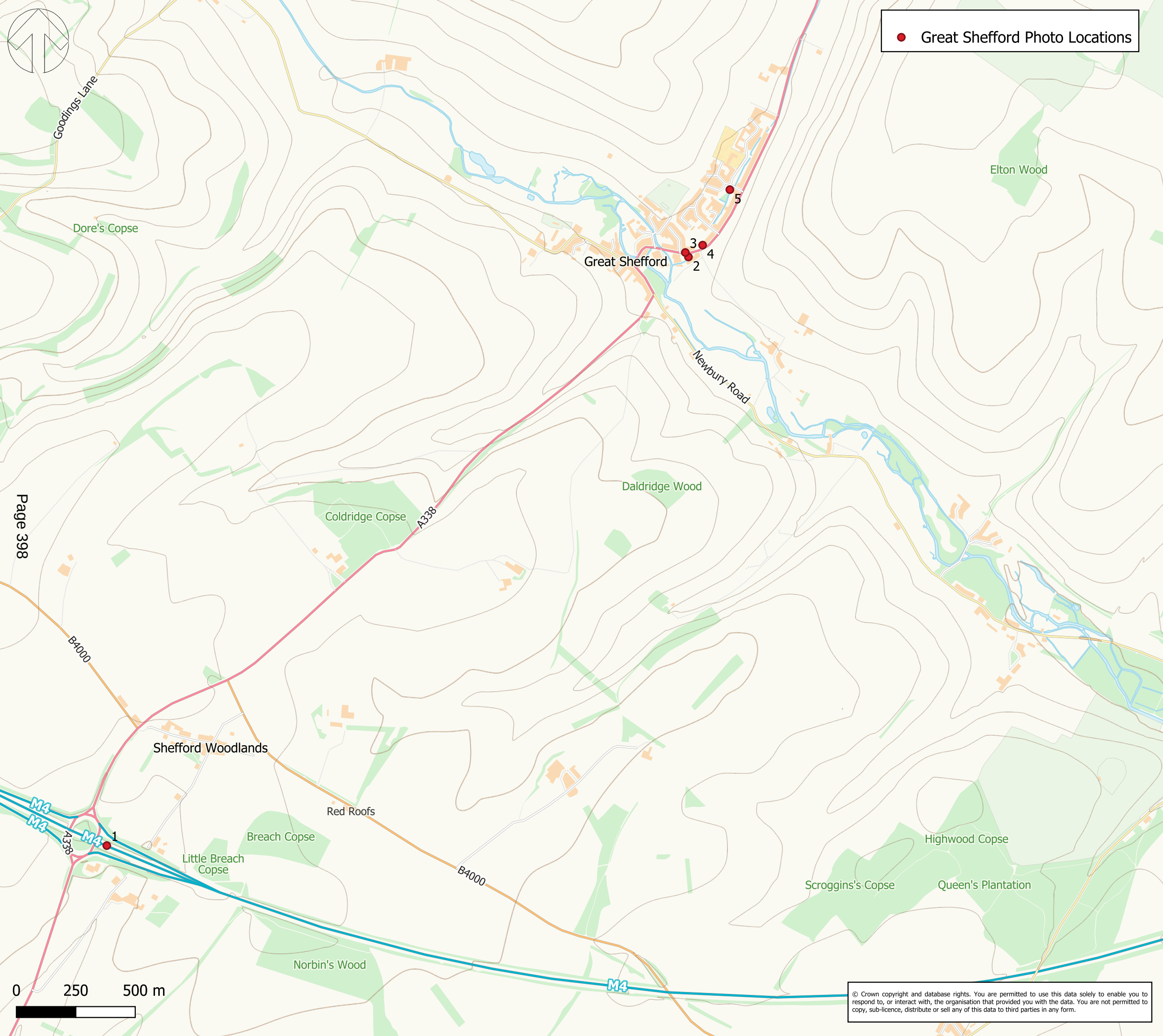

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Photo 1, Great Shefford

Photo 2, Great Shefford

Photo 3, Great Shefford

Photo 4, Great Shefford

Photo 5, Great Shefford

Appendix G.5

LAMBOURN

Lambourn Photo Locations

Atherton Place
Big Lane
Chapel Lane
The Broadway
B4001
3
Three Post Lane
Lambourn
B4000
Foxbury
Tubbs Farm Close
Gwyns Piece
Mill Lane
Millfield
Mill Lane
Playing Field
Play Space
Lambourn Centre
Close End
Station Road
Newbury Street
Aintree
Bodman Close
2
1
Southbank Gardens
Newbury Road
Edwards Hill
Bockhampton Road
Blind Lane
Beales Farm Road
Sheep Fair Way

0 50 100 m

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Photo 1, Lambourn

Photo 2, Lambourn

Photo 3, Lambourn

Appendix G.6

NEWBURY SOUTH

Newbury South Photo Locations

Digby Road
B4494
A4
A339
Play Space
Laburnum Grove
Speenhamland Primary School
Hawthorn Road
Playing Field
B4009
Speen Lane
Oxford Street
Park End
Hill Road
Croft Lane
Park Street
Park Way
Goldwell Park
Moor Lane
Play Space
Ampere Road
River Park
Play Space
Tennis Court
Bowling Green
Play Space
Northcroft Ditch
West Street
Northbrook Street
North Croft
Northcroft Lane
1
2
3
4
5
6
Public Park Or Garden
Wharf Road
Wharf Street
Newbury Canoe Club
Allotments
Playing Field
Bone Lane
B3421
Page 407
West Mills
Allotments
Bartholomew Street
Newbury
Denmark Road
Windsor Court
Arnhem Road
Russell Road
Berkeley Road
Gloucester Road
Craven Road
Railway Road
Boundary Road
Newbury
Station Road
Jubilee Road
Stanley Road
Queen's Road
Enborne Grove
Pound Street
Argyle Road
Newtown Road
Link Road
Public Park Or Garden
York Road
Rectory Close
A343
Tudor Road
Howard Road
Eekio Place
Enborne Road
0 100 200 m

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Photo 1, Newbury South

Photo 2, Newbury South

Photo 3, Newbury South

Photo 4, Newbury South

Photo 5, Newbury South

Photo 6, Newbury South

Appendix G.7

NEWBURY NORTH

Newbury North Photo Locations

B4494
A339
Allotments
Yew Gate
Donnington Park
Love Lane
Dene Way
3
2
Trinity School
Shaw Farm Road
Kingsley Close
Kingsley Close
Lamp Acres
B4009
Branch End
Pear Tree Lane
Sycamore Rise
Pine Ridge
Public Park Or Garden
Play Space
Church Road
Regnum Drive
Cromwell Road
Kiln Road
Riverside Lane
Hedgeway
Curling Way
River Lambourn
Walton Way
1
Hutton Close
Playing Field
Spout Ditch
Public Park Or Garden
Rowan Drive
Maple Crescent
The Winchcombe School
Cherry Close
A4
Laburnum Grove
Hawthorn Road
Speenhamland Primary School
Pelican Lane
Oxford Street
Park End
Park Street
Park Way
West Street
Play Space
Tennis Court
Bowling Green
Play Space
Ampere Road
Skylings
River Par
0
100
200 m

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Photo 1, Newbury North

Photo 2, Newbury North

Photo 3, Newbury North

Photo 4, Newbury North (no GPS location)

Photo 5, Newbury North (no GPS location)

Photo 6, Newbury North (no GPS location)

Appendix G.8

PANGBOURNE

Pangbourne Photo Locations

River Thames
Horshamlane Wood
Northridgehill Copse
Northridge Bottom Plantation
Northridgehill Shaw
Whitchurch-on-Thames
B471
1
Pangbourne
Pangbourne
Riverview Road
A329
Westbury Farm
Westbury Lane
Glebe Road
Beech Road
Green Lane
Moor Copse
Alder Copse
Further Moor Copse
Little Bowden Lane
Purley Hall
Mosshall Wood
Harry Jaw's Wood
Page 417
Gregory's Hill
Glebe House
A340
Sulham Lane
Bere Court Road
Bartholomew's Bottom Plantation
Bartholomew's Copse
Tidmarsh Lane
Tidmarsh
Mill Lane
Sulham Wood
Vicarage Copse
Sulham Hill
2
Peatpits Wood
Barefoots Copse
Glade House
Sulham
Furtherfield Shaw
Park Wood
Hogmoor Copse
Nunhide Lane
Clay Copse
Moor Copse
River Pang
0 250 500 m

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Photo 1, Pangbourne

Photo 2, Pangbourne

Photo 3, Pangbourne (no GPS location)

Photo 4, Pangbourne (no GPS location)

Photo 5, Pangbourne (no GPS location)

Photo 6, Pangbourne (no GPS location)

Appendix G.9

PURLEY ON THAMES

Purley on Thames Photo Locations

2
1

Wintringham Way

Chestnut Grove

Brading Way

River Gardens

River Gardens

0 25 50 m

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Photo 1, Purley on Thames

Photo 2, Purley on Thames

Photo 3, Purley on Thames (no GPS location)

Photo 4, Purley on Thames (no GPS location)

Photo 5, Purley on Thames (no GPS location)

Appendix G.10

STREATLEY

Streatley Photo Locations

1
2
3
4
5

Townsend Road
Three Gables Lane
A329
A417
Play Space
Playing Field
Allotments
St Mary's Church
Nun's Acre
Thames Road
Glebe Ride
B4009
Streatley
B4009

0 75 150 m

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Photo 1, Streatley

Photo 2, Streatley

Photo 3, Streatley

Photo 4, Streatley

Photo 5, Streatley

Photo 6, Streatley (no GPS location)

Appendix G.11

WINTERBOURNE

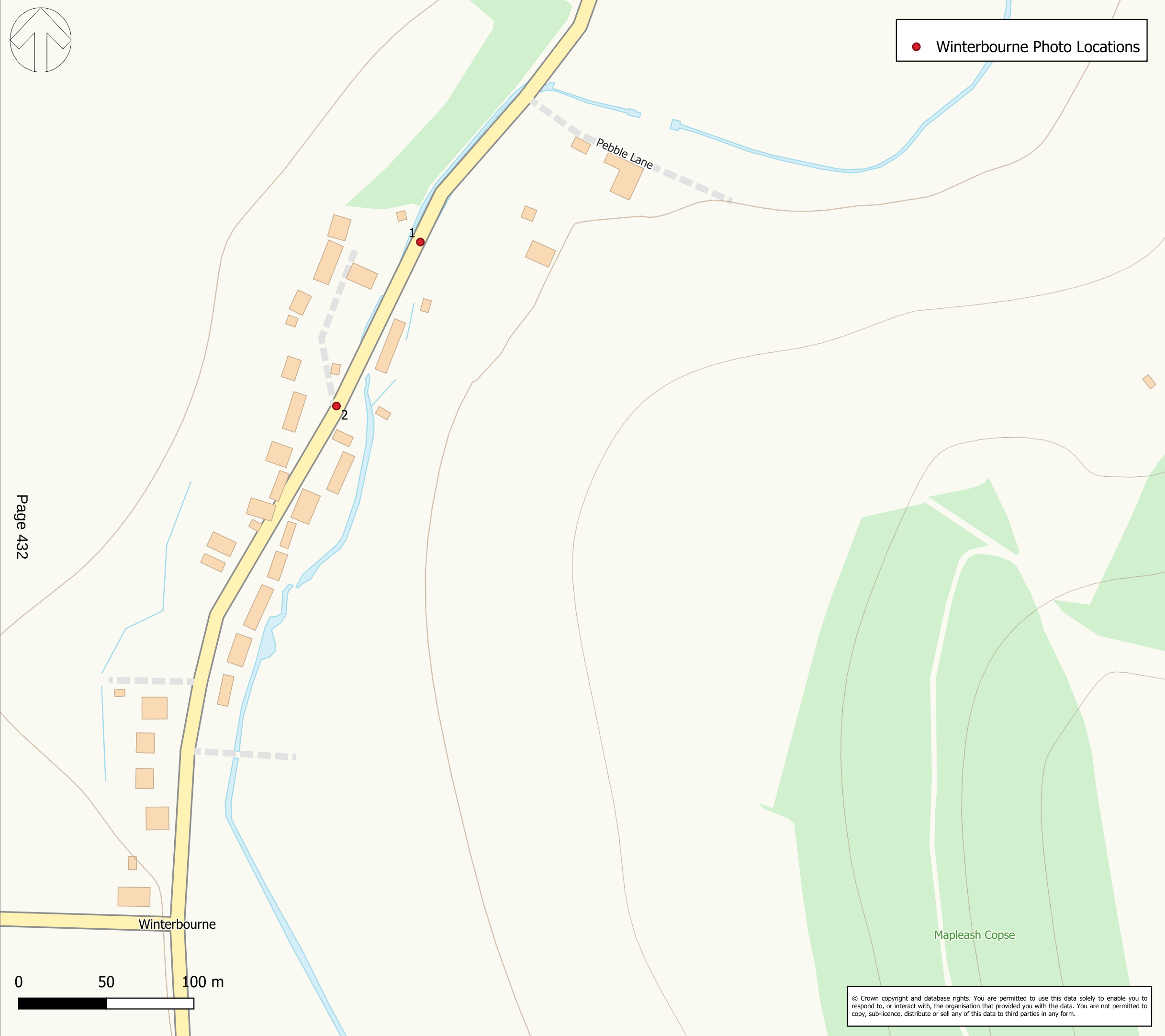

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Photo 1, Winterbourne

Photo 2, Winterbourne

Photo 3, Winterbourne (no GPS location)

Photo 4, Winterbourne (no GPS location)

Photo 5, Winterbourne (no GPS location)

Photo 6, Winterbourne (no GPS location)

Matrix House
Basing View
Basingstoke, Hampshire
RG21 4FF

wsp.com

Three-Year Highway Improvement Programme 2025/26 – 2027/28 – Summary Report

Committee considering report:	Individual Executive Member Decisions
Date of Committee:	28 March 2025
Portfolio Member:	Councillor Stuart Gourley
Report Author:	Andrew Reynolds
Forward Plan Ref:	ID4641

1 Purpose of the Report

1.1 To present the Three-Year Highway Improvement Programme for consideration by the Executive Member for Highways, Housing and Sustainable Travel.

2 Recommendation

2.1 That the Executive Member for Highways, Housing and Sustainable Travel approves Year 1 (2025/26) of the Three-Year Highway Improvement Programme 2025/26 – 2027/28.

3 Implications and Impact Assessment

Implication	Commentary
Financial:	The Highway Improvement Programme will be funded from existing capital budgets. It also forms part of the Council's approved Capital Programme. Financial Officer – Shannon Coleman-Slaughter.
Human Resource:	None arising from this report. HR Officer Lucinda Newbery
Legal:	The Council, as Highway Authority, have a number of statutory duties under Highways Act 1980 and Road Traffic Act 1988 including a duty to maintain a safe network and to

	reduce/prevent accidents. Failure to maintain the network would compromise that duty. Legal Officer – Sharon Armour			
Risk Management:	Failure to maintain the asset will affect availability, value, safety and the Council's ability to meet its legal duty to maintain a safe network under the Highways Act 1980.			
Property:	The public highway is an important and valuable asset. Failure to maintain it will devalue the asset and conflict with the Government's aim to implement Highway Asset Management and Whole Life Accounting.			
Policy:	The programme meets the requirements of the Council's Local Transport Plan 2011 – 2026 in that maintenance of the road network is not being considered in isolation. Many other transport policy links will be achieved in areas such as road safety and active travel. The programme contributes towards the Council's Strategic Priority **"a prosperous and resilient West Berkshire".**			
	Positive	**Neutral**	**Negative**	**Commentary**
Equalities Impact:				
A Are there any aspects of the proposed decision, including how it is delivered or accessed, that could impact on inequality?		X		See Appendix A – Equality Impact Assessment, Stage 1.
B Will the proposed decision have an impact upon the lives of people with protected characteristics, including employees and service users?		X		See Appendix A – Equality Impact Assessment, Stage 1.

Environmental Impact:		X		Highway Improvement works by their nature produce additional carbon emissions. Every effort will be made to try and minimise this by using alternative materials (low temperature asphalts for example) where possible, use of local recycled materials and the use of electric plant. The Highways Asset Management Plan is currently being updated with a view to assessing how highway operations can be delivered carbon neutral. Not maintaining the Highway Asset could result in key routes falling into disrepair and having to be restricted or closed altogether. This would result in longer journeys and increased carbon. It is therefore considered that maintaining the highway in line with good asset management will have an overall neutral effect on the environment.
Health Impact:		X		No major Health Implications arising from this report.
ICT Impact:				Not applicable.
Digital Services Impact:				Not applicable.
Council Strategy Priorities:	X			A well maintained and safe highway network for all road users, will provide an effective network to help stimulate movement across the district to enhance the local economy and help achieve the Strategic Priority **"a prosperous and resilient West Berkshire".**
Core Business:	X			The programme will contribute positively towards the following priorities, **"a prosperous and resilient West Berkshire"** and contribute towards **"Tackling the Climate and Ecological Emergency".**

Data Impact:		X		See Appendix B – Data Protection Impact Assessment.
Consultation and Engagement:	Consultation is not formally undertaken as the programme is based on objective data from technical surveys. However, any comments received from stakeholders during the previous 12-month period are considered and all local Ward Members and Town/Parish Councils are advised of scheme details in advance of work commencing. The full programme will also be published on the Council's website.			

4 Executive Summary

4.1 The Three-Year Highway Improvement Programme has been developed in accordance with highway asset management principles as detailed in the UKRLG/HMEP Asset Management Guidance, Code of Practice for Highway Maintenance Management "Well-managed Highways", the Transport Infrastructure Assets Code "Guidance to Support Asset Management", Financial Management and reporting and the Council's approved Highway Asset Management Plan (HAMP).

4.2 In accordance with the requirements of the Transport Infrastructure Assets Code, the improvement programme (structural repair, surfacing, surface dressing) is fully funded from the Capital Programme.

5 Introduction/Background

Introduction

5.1 Purpose of this report – the Executive Member for Highways, Housing and Sustainable Travel approves Year 1 (2025/26) of the Three-Year Highway Improvement Programme 2025/26-2027/28.

Background

5.2 The Three-Year Highway Improvement Programme will help contribute towards the Council Strategic Priority to **"a prosperous and resilient West Berkshire".** It will deliver key infrastructure projects in relation to the road network.

The Council's approach to highway maintenance and asset management is described in the Local Transport Plan 2011 – 2026 (LTP) and the Council's approved Highway Asset Management Plan (HAMP). The HAMP policy is currently under review. The new document will support the Corporate Strategy and will illustrate how highway asset management aligns to the West Berkshire Vision 2036 and its aspiration that West Berkshire is a place where everyone is given the chance to thrive, regardless of their background.

Adopting a best practice Highways Infrastructure Asset Management approach will assist West Berkshire's vision to be environmentally sustainable.

The Council's Environment Strategy 2020-2030 puts forward a range of actions setting the Council on the path to achieve its primary target of achieving carbon neutrality by 2030.

The asset management approach aligns to the Council's Environment Strategy 2020-2030 supporting a cross-department approach to achieving the Councils targets specifically contributing through;

- Recycling waste materials and use recycled material, both in the office and on site where practical within schemes adopting a circular economy approach.
- Supporting environmentally friendly methods of transport, such as bicycle and on-foot.
- Promoting the use of buses as a practical and attractive alternative to the car for more people.
- Working to ensure that West Berkshire's footways and cycleways are kept in good order.
- Prioritising investment in infrastructure that enables residents to use more sustainable transport options.
- Enabling a long-term approach to developing local cycling and walking networks.
- Ensuring the durability of the highway infrastructure especially given extreme weather events.
- Continuing to increase the number of charging points for electric vehicles in West Berkshire.
- Building carbon assessments into decision making tools for schemes.
- Identifying locations across the highway network where the Council can adjust operations to promote, protect or preserve the biodiversity of the natural habitats and ecological features of those sites.
- Undertaking research into biodiversity net gain in respect to the management of the highway asset, utilising this information to further shape the Council's approach to asset management.

There is predicted to be a transport modal shift away from single use car journeys, which may, in some areas, decrease demand on West Berkshire's roads. The Council will monitor this shift and, where necessary, will influence changes that promote environmental sustainability.

5.3 Highway maintenance and improvements is one of the six local transport goals set out in the LTP. The LTP also shows how this goal and the Council's sustainable approach helps to address other key issues identified in the plan such as safer travel, minimising the impact on the environment, and improving accessibility. The LTP confirms that the Council will continue to operate a rolling Highway Improvement Programme refreshed annually through its supporting Implementation Plan.

5.4 There are approximately 1302km of public highway in West Berkshire (more than Reading and Wokingham combined), comprising 117km of "A" roads, 75km of "B" roads, 399km of "C" roads and 711km of unclassified "U" roads. Consequently, maintenance of the road network presents real challenges. However, by adopting an asset management approach, the Environment Department can identify and treat roads

at the right time to maximise design life at minimum cost. This approach has enabled the Council to maintain and improve the condition of the classified road network at a consistent level since 2009/10. This can be seen in appendix D.

Programme Development

5.5 The Three-Year Highway Improvement Programmed detailed in Appendix C has been compiled using the results of technical surveys on the principal classified (A road), non-principal classified (B and C roads) and unclassified (U roads).

5.6 Since 2002, the Council has been carrying out a comprehensive programme of annual testing to determine the condition of the highway network and establish the Government's defined data sets for the condition of the principal classified, non-principal classified and unclassified road networks including skid resistance. For 2025/26, the national data sets are defined as follows and expressed as a % of road length under each class where maintenance should be considered:

130 – 01 Condition of Principal Roads

130 – 02 Condition of Non-Principal Roads

130 – 03 SCRIM (Side-way force Coefficient Routine Investigation Machine)

130 – 04 Carriageway work completed

5.7 Whilst there is no national requirement to report on the unclassified network, the Council continues to survey the unclassified network annually to establish its condition for the purpose of developing appropriate programmes of repair in accordance with current asset management guidance and best practice. For 2025/26, the local data set is defined as follows and expressed as a % of road length where maintenance should be considered:

BV224b Condition of Unclassified Roads

5.8 The condition of the classified network (A, B and C class roads) is measured using SCANNER (Surface Condition Assessment for the National Network of Roads) which was introduced in 2003/04. In 2010, SCANNER was also used to measure the condition of the unclassified road network (U roads). All surveys are performed in accordance with national standards and guidance.

5.9 The skid resistance of the busiest roads on the network (Maintenance Category 2, 3a and 3b) is measured using SCRIM (Side-way force Coefficient Routine Investigation Machine). Using SCRIM and wet injury accident data, skid deficient sites have been identified and programmed accordingly and these are shown in bold text within the programme.

5.10 Details of the survey methodology, coverage and the Council's approach to highway asset management are described in the LTP and in detail within the Council's Highway Asset Management Plan (HAMP). A summary of the methodology is provided in the following paragraphs.

5.11 The road maintenance approach adopted by the Council has been to tackle stretches of road that in terms of their condition, are showing as “amber” to bring them back to “green”. “Red sections are maintained in a safe condition and, subject to their size, are either repaired under a separate patching programme or are included as a larger highway improvement project. The approach aligns with the guidance given in the Code of Practice on Transport/Infrastructure Assets and delivers better value for money in the medium/long term for any defined level of service or condition. In fact, this approach has already resulted in improvements across the range of performance indicators demonstrating that West Berkshire Council is achieving good value for money in respect of its investment in highway maintenance.

5.12 The traffic light system of red, amber and green is a methodology adopted to categorise roads based on survey data relating to surface texture, cracking, rut depth and ride quality.

Three-Year Highway Improvement Programme 2025/26 – 2027/28

5.13 The programme provided in Appendix C covers the period 2025/26 – 2027/28 and lists in alphabetical order by Parish or Town those roads requiring treatment. The programme has been developed using cost estimates and a provisional annual capital budget of £10.15m for 2025/26.

5.14 It is important to note, that it may be necessary to make changes to the programme once detailed costings, available budgets and potential savings have been established.

5.15 The new Three-Year Highway Improvement Programme has been developed to deliver our set service levels of 3%, 3% and 5% (Principal Classified NI 130 – 01, non-principal classified NI 130 – 02 and unclassified BV224b respectively). These service levels are a %age of road that requires maintenance.

5.16 A range of different surface treatments will be used, depending on the type and location of each road being treated. This can vary from dense macadam’s on minor estate roads, surface dressing (sometimes referred to as “tar and chippings”) in rural areas through to resurfacing (overlay or inlay) and complete reconstruction. Where a pre-treatment is required to strengthen the road, for example deep machine patching, to gain optimum effectiveness and value for money, these will normally receive a proprietary surface dressing treatment the following financial year. This preventative maintenance approach is important to maintain the condition and value of the highway network within West Berkshire.

5.17 For skid deficient sites, it should be noted that they may not display any of the normal visible defects like rutting, cracking, lamination, or “potholes”. Treatments would include surface dressing, micro asphalt, and retexturing (an abrasive treatment that restores texture to the existing surface). The skid deficient sites are shown in bold text within the programme.

5.18 Wherever possible, roads in residential and built-up areas will be resurfaced using materials that exhibit low surface noise when trafficked. In addition, every effort will be made to use local and recycled materials to contribute towards the Council’s Corporate Priority **“Tackling the Climate and Ecological Emergency”.**

5.19 In line with the Council's agreed policy, any road included in the programme for resurfacing with traffic calming measure (speed cushions) will have those cushions reinstated to the current specification. The opportunity will also be taken, where appropriate, to review any existing other traffic management arrangements. This will normally involve consultation with residents, Ward Members and the Town or Parish Council.

5.20 Details of the annual programme are widely distributed to all local Town and Parish Councils and Ward Members. Regularly updated information is also available on the Council's website.

Programme Changes

5.21 From time to time, circumstances change which may necessitate alterations to the programme. Such circumstances may include unforeseen circumstances on site, utility activities and excessive demand on contractors and/or materials, new technical data or accelerated deterioration as a result of severe weather conditions. If a programmed scheme has to be deferred, where appropriate, a suitable replacement site will be selected from the programme in agreement with the Executive Member Highways, Housing and Sustainable Travel.

Proposals

5.22 By approving year one (2025/26) of the Three-Year Highway Improvement Programme, the Council will continue to meet its duty to maintain the highway in a safe and serviceable condition by undertaking the appropriate work on the network in a timely and cost-effective manner (Highway Act 1980). A well maintained and safe highway network for all road users, should result in reduced accidents/third party claims, a safer environment, and an effective network to help stimulate movement across the district to enhance the local economy.

6 Supporting Information

Appendices C, D and E (attached to report).

7 Options for consideration

7.1 Do nothing – Failure to undertake the Highway Improvement Programme will affect the availability, value, safety, and the Council's ability to meet its legal duty to maintain a safe network under the Highways Act 1980.

8 Conclusion

8.1 The Highway Improvement Programme has been developed in accordance with the Council's approved Highway Asset Management Plan (HAMP) using surveyed condition data and should be approved ready for implementation in April 2025.

9 Appendices

9.1 Appendix A – Equalities Impact Assessment.

9.2 Appendix B – Data Protection Impact Assessment.

9.3 Appendix C – Three-Year Improvement Programme 2025/26 – 2027/28.

9.4 Appendix D – Condition Indicators.

9.5 Appendix E – Summary of Members Comments.

Background Papers:

None.

Subject to Call-In:

Yes: ☒ No: ☐

The item is due to be referred to Council for final approval	☐
Delays in implementation could have serious financial implications for the Council	☒
Delays in implementation could compromise the Council's position	☒
Considered or reviewed by Scrutiny Commission or associated Committees or Task Groups within preceding six months	☐
Item is Urgent Key Decision	☐
Report is to note only	☐

Wards affected: Various Wards, Town and Parish Councils.

Officer details:

Name: Robin Mann
Job Title: Principal Engineer
Tel No: 01635 519842
E-mail: robin.mann@westberks.gov.uk

Appendix A

Equality Impact Assessment (EqIA) - Stage One

We need to ensure that our strategies, policies, functions and services, current and proposed have given due regard to equality and diversity as set out in the Public Sector Equality Duty (Section 149 of the Equality Act), which states:

(1) A public authority must, in the exercise of its functions, have due regard to the need to:
- ***(a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under this Act.***
- ***(b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it; This includes the need to:***
  - ***(i) remove or minimise disadvantages suffered by persons who share a relevant protected characteristic that are connected to that characteristic.***
  - ***(ii) take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it.***
- ***(c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it, with due regard, in particular, to the need to be aware that compliance with the duties in this section may involve treating some persons more favourably than others.***

(2) The steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities.

(3) Compliance with the duties in this section may involve treating some persons more favourably than others.

The following list of questions may help to establish whether the decision is relevant to equality:

- **Does the decision affect service users, employees or the wider community?**
- **(The relevance of a decision to equality depends not just on the number of those affected but on the significance of the impact on them)**
- **Is it likely to affect people with particular protected characteristics differently?**
- **Is it a major policy, or a major change to an existing policy, significantly affecting how functions are delivered?**
- **Will the decision have a significant impact on how other organisations operate in terms of equality?**
- **Does the decision relate to functions that engagement has identified as being important to people with particular protected characteristics?**
- **Does the decision relate to an area with known inequalities?**
- **Does the decision relate to any equality objectives that have been set by the council?**

Please complete the following questions to determine whether a full Stage Two, Equality Impact Assessment is required.

What is the proposed decision that you are asking the Executive to make:	That the Executive Member for Highways, Housing and Sustainable Travel approves Year 1 (2025/26) of the Three-Year Highway Improvement Programme 2025/26 – 2027/28.
Summary of relevant legislation:	Highway Act 1980.
Does the proposed decision conflict with any of the Council's priorities for improvement? • Ensure our vulnerable children and adults achieve better outcomes • Support everyone to reach their full potential • Support businesses to start develop and thrive in West Berkshire • Develop local infrastructure including housing to support and grow the local economy Maintain a green district • Ensure sustainable services through innovation and partnerships	**Yes ☐ No ☒** **If yes, please indicate which priority and provide an explanation**
Name of Budget Holder:	**Andrew Reynolds**
Name of Service/Directorate:	**Jon Winstanley**
Name of assessor:	Robin Mann
Date of assessment:	11/02/2025
Version and release date (if applicable):	

Is this a …. ?		**Is this policy, strategy, function or service …?**	
Policy	**Yes ☐ No ☒**	**New or proposed**	**Yes ☐ No ☒**
Strategy	**Yes ☐ No ☒**	**Already exists and is being reviewed**	**Yes ☒ No ☐**
Function	**Yes ☐ No ☒**	**Is changing**	**Yes ☒ No ☐**
Service	**Yes ☒ No ☐**		

(1) What are the main aims, objectives and intended outcomes of the proposed decision and who is likely to benefit from it?	
Aims:	To maintain the public highway in a safe and serviceable condition to comply with the Council's duty to maintain the highway as outlined in the Highways Act 1980.

Objectives:	To maintain the condition of the public highway in accordance with the service levels set out in the Council's Highway Asset Management Plan (HAMP). To comply with Government Guidance.
Outcomes:	The Council continues to meet its duty to maintain the highway in a safe and serviceable condition by undertaking the appropriate work on the network in a timely and cost-effective manner.
Benefits:	A well maintained and safe highway network for all road users, reduced accidents/third party claims, safer environment and an effective network to help stimulate movement across the district to enhance the local economy.

(2) Which groups might be affected and how? Is it positively or negatively and what sources of information have been used to determine this?

(Please demonstrate consideration of all strands – Age, Disability, Gender Reassignment, Marriage and Civil Partnership, Pregnancy and Maternity, Race, Religion or Belief, Sex and Sexual Orientation)

Group Affected	What might be the effect?	Information to support this
Age	The proposed improvement programme does not specifically impact on any "Age" groups.	N/A
Disability	The proposed improvement programme does not specifically impact on any "Disability" groups.	N/A
Gender Reassignment	No particular "Gender Reassignment" groups will be disadvantaged.	N/A
Marriage and Civil Partnership	No particular "Marriage and Civil Partnership" groups will be disadvantaged.	N/A
Pregnancy and Maternity	No particular "Pregnancy and Maternity" groups will be disadvantaged.	N/A
Race	No particular "Race" groups will be disadvantaged.	N/A
Religion or Belief	No particular "Religion or Belief" groups will be disadvantaged.	N/A

Sex	No particular "Sex" groups will be disadvantaged.	N/A
Sexual Orientation	No particular "Sexual Orientation" groups will be disadvantaged.	N/A
Further Comments:		
Highway Improvement works affect all users equally. However, provisions will be made on a scheme-by-scheme basis, to ensure that all users can access the highway in a safe and appropriate manner in accordance with current Health and Safety Legislation.		

(3) Result	
Are there any aspects of the proposed decision, including how it is delivered or accessed, that could contribute to inequality?	**Yes ☐ No ☒**
Due to the nature of the works, minor disruption could result and affect the public, but this will be mitigated by maintaining access to private properties and businesses (whenever possible) during the work and providing the necessary signage to divert traffic.	
Will the proposed decision have an adverse impact upon the lives of people, including employees and service users?	**Yes ☐ No ☒**
Due to the nature of the works, minor disruption could result and affect the public, but this will be mitigated by maintaining access to private properties and businesses (whenever possible) during the work and providing the necessary signage to divert traffic.	

If your answers to question 2 have identified potential adverse impacts and you have answered 'yes' to either of the sections at question 3, or you are unsure about the impact, then you should carry out a EqIA 2.

If an EqIA 2 is required, before proceeding you should discuss the scope of the Assessment with service managers in your area. You will also need to refer to the EqIA guidance and template – http://intranet/index.aspx?articleid=32255.

(4) Identify next steps as appropriate:	
EqIA Stage 2 required	**Yes ☐ No ☒**
Owner of EqIA Stage Two:	
Timescale for EqIA Stage Two:	

Name: **Andrew Reynolds** **Date:**

Please now forward this completed form to Pamela Voss, Equality and Diversity Officer (pamela.voss@westberks.gov.uk), for publication on the WBC website.

Appendix B

Data Protection Impact Assessment – Stage One

The General Data Protection Regulations require a Data Protection Impact Assessment (DPIA) for certain projects that have a significant impact on the rights of data subjects.

Should you require additional guidance in completing this assessment, please refer to the Information Management Officer via dp@westberks.gov.uk

Directorate:	Place
Service:	Environment
Team:	Asset Management
Lead Officer:	Robin Mann
Title of Project/System:	Three-Year Highway Improvement Programme 2025/26 – 2027/28
Date of Assessment:	

Do you need to do a Data Protection Impact Assessment (DPIA)?

	Yes	No
Will you be processing SENSITIVE or "special category" personal data? Note – sensitive personal data is described as "*data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a natural person, data concerning health or data concerning a natural person's sex life or sexual orientation*"	☐	☒
Will you be processing data on a large scale? Note – Large scale might apply to the number of individuals affected OR the volume of data you are processing OR both	☐	☒
Will your project or system have a "social media" dimension? Note – will it have an interactive element which allows users to communicate directly with one another?	☐	☒
Will any decisions be automated?	☐	☒

	Yes	No
Note – does your system or process involve circumstances where an individual's input is "scored" or assessed without intervention/review/checking by a human being? Will there be any "profiling" of data subjects?		
Will your project/system involve CCTV or monitoring of an area accessible to the public?	☐	☒
Will you be using the data you collect to match or cross-reference against another existing set of data?	☐	☒
Will you be using any novel, or technologically advanced systems or processes? Note – this could include biometrics, "internet of things" connectivity or anything that is currently not widely utilised	☐	☒

If you answer "Yes" to any of the above, you will probably need to complete Data Protection Impact Assessment - Stage Two. If you are unsure, please consult with the Information Management Officer before proceeding.

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3 Year Highway Improvement Programme 2025/26 to 2027/28 **Appendix C**

YEAR 1 (2025/26)

Parish	Road Name	Start Location	End Location	Length (m)	Recommended Treatment
Aldermaston	**A340 Mulfords Hill**	**District Boundary at Tadley**	**T.L. Junction with Aldermaston Road**	**304**	**40/50mm HRA/SMA Inlay/Overlay**
Basildon	A329 Reading Road	Park Wall Lane	Mead Lane	890	40/50mm HRA/SMA Inlay/Overlay
Basildon	Aldworth Road	Long Bottom Road	Gardeners Lane	1212	Surface Dressing
Basildon	Gardeners Lane	Pangbourne Road	Buckhold Hill	776	Surface Dressing
Beech Hill	Trowes Lane	Beech Hill Road	District Boundary	1179	Surface Dressing
Boxford	High Street	Roodhill	Baydon Road	1668	Surface Dressing
Bradfield	Back Lane	Ashampstead Road	Cock Lane	3045	Surface Dressing
Brightwalton	**B4494 Wantage Road**	**Catmore Road**	**Sparrowbill**	**1172**	**Surface Dressing**
Brimpton	Wasing Lane	Brimpton Lane	Surface Change at Tarkwa	400	Surface Dressing
Bucklebury	Briff Lane	Byles Green	UNR from Burntbush Lane to Manor Farm Road	1894	Surface Dressing
Bucklebury	Hatch Lane	Kiff Green	Broad Lane	1179	Surface Dressing
Burghfield	Pingewood Road South	Amners Farm Road	Rail Bridge Traffic Lights	900	90 -110mm Inlay/Overlay

3 Year Highway Improvement Programme 2025/26 to 2027/28 **Appendix C**

YEAR 1 (2025/26)

Parish	Road Name	Start Location	End Location	Length (m)	Recommended Treatment
Burghfield	Reading Road	Holly Bush Lane	Goring Lane Mini Roundabout	463	40/50mm HRA/SMA Inlay/Overlay
Burghfield	**The Hatch**	**70m SW of Theale Road jct.**	**70m NE of Theale Road jct.**	**140**	**40/50mm HRA/SMA Inlay/Overlay**
Chaddleworth	Hangmans Stone Lane	Sheephouse Way	UNR from Hill Green Lane to Hangmans Stone Lane	2777	Surface Dressing
Chieveley	Arlington Lane	Oxford Road	B4494	900	Surface Dressing

Chieveley	Chieveley Services Roundabout Link Road	Northern Access Roundabout	Southern Access Roundabout	164	40/50mm HRA/SMA Inlay/Overlay
Chieveley	East Lane	High Street	End of FP o/s Surgery	170	40mm DBM Inlay/Overlay
Cold Ash	Ashmore Green Road	Bowling Green Road	Hermitage Road	1208	Surface Dressing
Cold Ash	Cold Ash Hill	The Ridge	Vicarage Lane	315	40/50mm HRA/SMA Inlay/Overlay
Cold Ash	Hatchgate Close	Cold Ash Hill	End	135	40mm DBM Inlay/Overlay
Cold Ash	Willis Close	Hermitage Road	End	34	40mm DBM Inlay/Overlay
Combe	Church Lane	District Boundary	St Swithuns Church	1430	Surface Dressing
Englefield	**Common Hill**	**no. 2 Bradfield Lodges**	**30m SE of Bradfield Lodges**	**50**	**Re-Texturing/Rejuvenation**

3 Year Highway Improvement Programme 2025/26 to 2027/28 **Appendix C**

YEAR 1 (2025/26)

Parish	Road Name	Start Location	End Location	Length (m)	Recommended Treatment
Farnborough	Copperage Road	B4494	130m North of Furze Lane track	1551	Surface Dressing
Great Shefford	A338 UNR from Jct 14 to Ermin St	Jct. 14	B4000 Ermin Street	416	40/50mm HRA/SMA Inlay/Overlay
Great Shefford	Newbury Road	Elton Lane	East Shefford Mill Entrance	700	Surface Dressing
Greenham	**A339 Basingstoke Road**	**Swan Rbt**	**40m east of Brackenhurst**	**1438**	**40/50mm HRA/SMA Inlay/Overlay**
Greenham	**A339 Basingstoke Road**	**Give Way marking Greenham Business Park rbt**	**50m east of Give Way marking**	**50**	**Re-Texturing/Rejuvenation**
Hamstead Marshall	Park Lane	Craven Keep	Give Way Markings	517	Surface Dressing
Hermitage	Deacons Lane	Yattendon Road	Chapel Lane	354	40mm DBM Inlay/Overlay
Hermitage	Lipscomb Close	Marlston Road	End	270	40mm DBM Inlay/Overlay
Hungerford	A338 Hungerford	A4 Junction	Upper Eddington	250	HardiPave
Hungerford	A338 Salisbury Road	Kennedy Meadow Rbt	District Boundary	2747	40/50mm HRA/SMA Inlay/Overlay

Hungerford	A4 Bath Road	30mph Speed Limit Signs East of Hungerford	Kintbury Crossroads	3991	40/50mm HRA/SMA Inlay/Overlay
Inkpen	Craven Road	Weavers Lane	Sadlers Road	1349	Surface Dressing

3 Year Highway Improvement Programme 2025/26 to 2027/28 **Appendix C**

YEAR 1 (2025/26)

Parish	Road Name	Start Location	End Location	Length (m)	Recommended Treatment
Inkpen	Rooksnest Lane	UNR from Rooksnest Lane to Walbury Hill	Trapps Hill	1164	Surface Dressing
Inkpen	UNR from Spray Road to Upper Green	Spray Road	Stop Sign - Crossroads	419	Surface Dressing
Kintbury	Bradley Close	Inkpen Road	End	100	Slurry Seal
Lambourn	Long Hedge	Newbury Road	End	768	Re-Texturing/Rejuvenation
Lambourn	Uplands Lane & Drain Hill	Upper Lambourn Road	End	733	Surface Dressing
Mortimer	**Goring Lane**	**250m east of Lockram Lane jct.**	**300m east of Lockram Lane jct.**	**50**	**Re-Texturing/Rejuvenation**
Newbury	**A339 Southbound**	**Surface Change nr Lighting Column 026/01**	**o/s Telecoms Mast**	**100**	**Re-Texturing/Rejuvenation**
Newbury	**A4 Benham Hill**	**50m west of Hambridge Rd jct**	**Hambridge Rd jct**	**50**	**Re-Texturing/Rejuvenation**
Newbury	A4 London Road	End of Faraday Road Dual Carriageway	B&Q Roundabout	615	40/50mm HRA/SMA Inlay/Overlay
Newbury	**A4 London Road/Newbury Bus. Park Rbt**	**A4 London Rd/Newbury Bus. Park Rbt, Newbury**	**A4 London Rd/Newbury Bus. Park Rbt, Newbury**	**100**	**HardiPave**
Newbury	**B3421 Mill Lane**	**A339 Roundabout**	**Boundary Road**	**458**	**40/50mm HRA/SMA Inlay/Overlay**
Newbury	Buckingham Road	A343 Andover Road	Enborne Road	412	40mm DBM Inlay/Overlay

3 Year Highway Improvement Programme 2025/26 to 2027/28 **Appendix C**

YEAR 1 (2025/26)

Parish	Road Name	Start Location	End Location	Length (m)	Recommended Treatment
Newbury	Charmwood Close	B4494 Oxford Road	End	184	Slurry Seal
Newbury	Charter Road/Rupert Road/Byran Close	Chandos Road	Chandos Road	575	Slurry Seal

Newbury	Gloucester Road	Chalfont Road	Blenheim Road	378	40mm DBM Inlay/Overlay
Newbury	Laburnum Grove	Chestnut Crescent	End	152	Concrete Joint Treatment
Newbury	Lingfield Road/Sedgefield Road/Sandown Way	Westwood Road	New Road	609	Slurry Seal
Newbury	Livingstone Road/Railway Road	Boundary Road	Queens Road	326	40mm DBM Inlay/Overlay
Newbury	**Oxford Street**	**Oxford Street/London Road Mini Rbt**	**Oxford Street/London Road Mini Rbt**	**150**	**Re-Texturing/Rejuvenation**
Newbury	Pinchington Lane	Deadmans Lane Roundabout	Tesco Roundabout	244	40/50mm HRA/SMA Inlay/Overlay
Newbury	Queens Road/Greenham Road DC'Way & Mini Rbt	A339 Roundabout	Queens Road	140	40/50mm HRA/SMA Inlay/Overlay
Newbury	Willowmead Close	Normay Rise	End	130	Slurry Seal
Peasemore	Princes Lane	Mud Lane	Northfields	568	Surface Dressing
Purley-on-Thames	A329 Purley Rise	Surface Change 100m West of Beech Road	Sherwood Rise Roundabout	702	MilePave Type Inlay

YEAR 1 (2025/26)

Parish	Road Name	Start Location	End Location	Length (m)	Recommended Treatment
Purley-on-Thames	Glebe Road	Reading Road	Westbury Lane	310	40mm DBM Inlay/Overlay
Purley-on-Thames	Highfield Road/ Orchard Close	Long Lane	End	480	Slurry Seal
Speen	Valley Road	Priddle's Farm	Track to Woodspeen Farm	590	Surface Dressing
Stratfield Mortimer	Birch Lane	West End Road	End	165	40mm DBM Inlay/Overlay
Stratfield Mortimer	Nightingale Lane	Brewery Common	Mortimer Lane	1428	Surface Dressing
Streatley	**B4009 Aldworth Road**	**745m SW of Lewendon Hill**	**695m SW of Lewendon Hill**	**50**	**Re-Texturing/Rejuvenation**
Streatley	Bennets Wood	UNR from Aldworth Road to Southridge Farm	Hook End Lane	3461	Surface Dressing
Streatley	Lewendon Hill	B4009 Aldworth Road	Bennets Wood	2014	Surface Dressing

Streatley	Streatley Hill	Lewendon Hill	Streatley Crossroads	1249	Surface Dressing
Sulhamstead	Three Firs Way/Normoor Road/Brocas Road	Reading Road	End	761	Slurry Seal
Thatcham	**A4 London Road**	**Hambridge Rd jct**	**70m east of Hambridge Rd jct**	**70**	**Re-Texturing/Rejuvenation**
Thatcham	Bodmin Close	Ilkley Way	End	81	Slurry Seal

3 Year Highway Improvement Programme 2025/26 to 2027/28 **Appendix C**

YEAR 1 (2025/26)

Parish	Road Name	Start Location	End Location	Length (m)	Recommended Treatment
Thatcham	Glenmore Close	Ilkley Way	End	32	Slurry Seal
Thatcham	Grassington Place/Westerdale	The Moors	End	282	Slurry Seal
Thatcham	Northfield Road	A4 Bath Road	Heath Lane	656	40/50mm HRA/SMA Inlay/Overlay
Theale	Meadow Way	o/s No. 66	Station Road	250	40mm DBM Inlay/Overlay
Tidmarsh	Mill Lane	A340 Tidmarsh Road	Nunhide Lane	1251	Surface Dressing
Tilehurst	Goodliffe Gardens (Whole Estate)	Knowsley Road	End	449	Slurry Seal
Tilehurst	**Overdown Road**	**Dark Lane Rbt**	**50m north of Rbt**	**50**	**Re-Texturing/Rejuvenation**
Tilehurst	Scafell Close	Fairford Road	End	52	Slurry Seal
Tilehurst	Warbreck Drive/Marten Place/Laytom Rise/Lucey Close	Knowsley Road	End	501	90 -110mm Inlay/Overlay
Ufton Nervet	Harts Lane	Church Lane	Sulhamstead Road	865	40/50mm HRA/SMA Inlay/Overlay
Welford	B4000 Baydon Road	240m West Of Welford Crossroads (LHD Private Road)	A338 Wantage Road	3245	Surface Dressing
Woolhampton	A4 Bath Road	Start of 30mph Zone	End of 30mph Zone	777	40/50mm HRA/SMA Inlay/Overlay

3 Year Highway Improvement Programme 2025/26 to 2027/28 **Appendix C**

YEAR 2 (2026/27)

Parish	Road Name	Start Location	End Location	Length (m)	Recommended Treatment

Aldermaston	Reading Road (inc. rbt)	Surface Change nr 40mph Limit	70m east of Winkworth Lane	619	40/50mm HRA/SMA Inlay/Overlay
Basildon	Ashampstead Road/Beckfords/Maple Lane/Darby Lane/Gardeners Lane	Long Bottom Road	Pangbourne Road	1700	Surface Dressing
Basildon	Bethesda Street	Aldworth Road	Blandys Lane	867	Surface Dressing
Basildon	Mead Lane	Blandys Lane	A329	2809	Surface Dressing
Brimpton	Hyde End Lane	Crookham Common Road	End	785	Surface Dressing
Bucklebury	Hillfoot	Pease Hill	Broad Lane	2918	Surface Dressing
Burghfield	Sulhamstead Road	Clayhill Road	Theale Road	310	40/50mm HRA/SMA Inlay/Overlay
Cold Ash	B4009 Long Lane	Fishers Lane	Curridge Road	1499	Surface Dressing
East Garston	Hillside	o/s House No. 16	Bus Stop east of Humphreys Lane	171	40mm DBM Inlay/Overlay
East Garston	Newbury Road	Bus Stop east of Humphreys Lane	A338 Wantage Road	2591	Surface Dressing
Englefield	A340 Pangbourne Road	A4 Rbt	50m North of Common Hill	389	40/50mm HRA/SMA Inlay/Overlay
Tawley	Wellhill Road	Dogkennel Lane	The Greenway	1025	Surface Dressing

3 Year Highway Improvement Programme 2025/26 to 2027/28 **Appendix C**

YEAR 2 (2026/27)

Parish	Road Name	Start Location	End Location	Length (m)	Recommended Treatment
Greenham	A339 Basingstoke Road	Bishops Green Rbt	District Boundary	1122	40/50mm HRA/SMA Inlay/Overlay
Greenham	A339 Basingstoke Road	40m east of Brackenhurst (extent of previous scheme)	Bishops Green Rbt (inc. Rbt)	938	40/50mm HRA/SMA Inlay/Overlay
Hampstead Norreys	UNR from Ilsley Road to Newbury Hill	Uplands	Newbury Hill	1056	Surface Dressing
Hamstead Marshall	Watery Lane	UNR to District Boundary	Redhill	1441	Surface Dressing
Hungerford	A4 Charnham Street	Start of Dual C'Way West of B4192	Charnham Street Roundabout	1244	40/50mm HRA/SMA Inlay/Overlay
Hungerford	Chestnut Walk	Coldharbour Road	End	119	40mm DBM Inlay/Overlay

Inkpen	Folly Road/Kintbury Road	Robins Hill	Blandys Hill	1617	40mm DBM Inlay/Overlay
Inkpen	UNR from Rooksnest Lane to West Woodhay	Rooksnest Lane	The Green	1993	Surface Dressing
Kintbury	High Street & Station Road	60m NE of Templeton Road	Newbury Street	698	40mm DBM Inlay/Overlay
Lambourn	Ermin Street	District Boundary	Baydon Road	900	40/50mm HRA/SMA Inlay/Overlay
Lambourn	Long Hedge	Newbury Road	End	768	40mm DBM Inlay/Overlay
Lambourn	Straight Lane	Newbury Road	Ermin Street	2940	Surface Dressing

YEAR 2 (2026/27)

Parish	Road Name	Start Location	End Location	Length (m)	Recommended Treatment
Lambourn	The Park	B4000 Upper Lambourn Road	End	298	40mm DBM Inlay/Overlay
Midgham	Birds Lane	School Hill	Cox's Lane	1069	Surface Dressing
Midgham	Migham Green	Kiff Green	School Hill	554	Surface Dressing
Newbury	A4 London Road	A4 Robin Hood Roundabout	End of Faraday Dual C'Way	658	40/50mm HRA/SMA Inlay/Overlay
Newbury	Gorselands	Andover Road	End	481	40mm DBM Inlay/Overlay
Newbury	Lipscombe Close (All legs)	Chalford Road	End	452	Slurry Seal
Pangbourne	Bere Court Road	Tidmarsh Lane	Pangbourne Hill	2036	Surface Dressing
Peasemore	Hailey Lane	Field Road	Heath Lane	1310	Surface Dressing
Speen	Chapel Road	Rookswood	B4000	420	40mm DBM Inlay/Overlay
Speen	UNR from A4 near Nalderhill Road to Milkhouse Road	Milkhouse Road	A4 Bath Road	1148	Surface Dressing
Streatley	A329 Reading Road	50m south of Crossroads	Hook End Lane	1949	40/50mm HRA/SMA Inlay/Overlay
Sulhamstead	Sulhamstead Road	Shortheath Lane	Clayhill Road	2185	Surface Dressing

YEAR 2 (2026/27)

Parish	Road Name	Start Location	End Location	Length (m)	Recommended Treatment
Thatcham	A4 Bath Road	Pipers Way Roundabout (Incl. Rbt)	Cremetorium Roundabout	1118	40/50mm HRA/SMA Inlay/Overlay
Thatcham	Crookham Hill	Pipers Way Roundabout	Chamberhouse Mill Lane	274	40/50mm HRA/SMA Inlay/Overlay
Thatcham	Park Lane	A4 Bath Road	Floral Way	908	40mm DBM Inlay/Overlay
Thatcham	The Moors	Station Road	A4 Chapel Street	226	MilePave Type Inlay
Theale	Arrowhead Road	Station Road	End	662	MilePave Type Inlay
Woolhampton	Station Road	Wasing Road	Bath Road	2090	Surface Dressing

YEAR 3 (2027/28)

Parish	Road Name	Start Location	End Location	Length (m)	Recommended Treatment
Brimpton	Brimpton Road	Crookham Common Road	Bath Road	2336	Surface Dressing
Bucklebury	Tylers Lane	nr. Beechlyn	Burntbush Lane	1882	Surface Dressing
Burghfield	Deans Copse Road	Hose Hill	Burghfield Road	2455	Surface Dressing
Chieveley	B4494 Wantage Road	Oxford Road	School Road	4607	Surface Dressing
Chieveley	Old Street	Priors Court Road	End	1662	Surface Dressing

Chieveley	School Road	B4494 Wantage Road	Gidley Lane	1152	Surface Dressing
Compton	Wilson Close	School Road	End	105	40mm DBM Inlay/Overlay
Enborne	Enborne Street	Redhill	UNR from Enborne St to Wash water	1713	Surface Dressing
Englefield	A340 Pangbourne Road	50m north of Common Hill	Tidmarsh Lane	3694	Surface Dressing
Farnborough	UNR from B4494 to Copperage Road	Copperage Road	B4494	1303	Surface Dressing
Great Shefford	A338 Hungerford Hill	Ermin Street	Lambourn Road	2873	Surface Dressing
Great Shefford	A338 Wantage Road	Surface Change at North End of Village	Dogkennel Lane	3386	Surface Dressing

YEAR 3 (2027/28)

Parish	Road Name	Start Location	End Location	Length (m)	Recommended Treatment
Greenham	A339 Swan Rbt & B4640	District Boundary	Swan Rbt (inc. Rbt)	171	HardiPave
Greenham	Bishops Green	A339	District Boundary	465	Surface Dressing
Hampstead Norreys	B4009 Wyld Court Hill	50m north of bend	Aldworth Road	3132	Surface Dressing
Hamstead Marshall	Holtwood Road	Watery Lane	UNR from Craven Arms to Holtwood Road	1050	Surface Dressing
Hermitage	B4009 Hampstead Norreys Road	Manor Lane	New SD near Eling Road	2126	Surface Dressing
Hungerford	A338 Wantage Road	New Hayward Bottom	M4 Jct. 14	1277	Surface Dressing
Hungerford	Smitham Bridge Road	Marsh Lane	Church Way	461	40mm DBM Inlay/Overlay
Kintbury	Templeton Road	Hungerford Road	Inkpen Road	3073	Surface Dressing
Kintbury	Wallingtons Road	High Street	End	568	Surface Dressing
Lambourn	B4001 Wantage Road	Northfields	Surface change 500m north of Seven Barrows	2206	Surface Dressing
Lambourn	Ermin Street	Ramsbury Road	Hungerford Hill	570	40/50mm HRA/SMA Inlay/Overlay

Lambourn	UNR from High Street to Hangmans Stone	High Street	End	916	Surface Dressing

3 Year Highway Improvement Programme 2025/26 to 2027/28 **Appendix C**

YEAR 3 (2027/28)

Parish	Road Name	Start Location	End Location	Length (m)	Recommended Treatment
Midgham	School Hill	Migham Green	Birds Lane	1326	Surface Dressing
Newbury	B4009 Long Lane	Love Lane	Fishers Lane	2945	Surface Dressing
Padworth	Bath Road Service Road, Beenham DC'Way	A4	A4	494	Slurry Seal
Pangbourne	A329 Shooters Hill	Start of 30mph Zone	Railway Bridge	991	40/50mm HRA/SMA Inlay/Overlay
Purley-on-Thames	Cecil Aldin Drive/Clairmore Gardens	Long Lane	End	423	Slurry Seal
Sulham	Sulham Lane	Mill Lane	Purley Rise	2092	Surface Dressing
Thatcham	Bowling Green Road/Heath Lane	Ashmore Green Road	Lawrences Way Roundabout	1375	40/50mm HRA/SMA Inlay/Overlay
Thatcham	Coniston Close/Rydal Drive	Derwent Road	End	138	Slurry Seal
Thatcham	Parkside Road & Hazel Grove	Park Lane	End	213	40mm DBM Inlay/Overlay
Thatcham	Sagecroft Road	Northfield Road	Park Lane	997	40mm DBM Inlay/Overlay
Thatcham	Scrivens Mead	Falmouth Way	Raised level near no. 33	170	Slurry Seal
Thatcham	St Johns Road/St Marks Close	A4 Bath Road	A4 Bath Road	375	40mm DBM Inlay/Overlay

3 Year Highway Improvement Programme 2025/26 to 2027/28 **Appendix C**

YEAR 3 (2027/28)

Parish	Road Name	Start Location	End Location	Length (m)	Recommended Treatment
Tilehurst	Boundary Close	Firs Road	End	130	Concrete Joint Treatment
Tilehurst	Clarence Way	Royal Avenue	Surface Change	155	Concrete Joint Treatment
Tilehurst	Compton Avenue	Warborough Avenue	Longworth Avenue	344	90 -110mm Inlay/Overlay

Tilehurst	Marlborough Way	Royal Avenue	End	49	Slurry Seal
Tilehurst	Yew Tree Rise (Whole Estate)	Langley Hill	End	1118	40mm DBM Inlay/Overlay
Ufton Nervet	Padworth Road (inc double rbt and approaches)	UNR from Padworth Road along District Boundary	50m east of double rbt	1577	Surface Dressing
Winterbourne	Winterbourne Road	Road to Boxford	B4494	1167	40/50mm HRA/SMA Inlay/Overlay

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Appendix D

Road Condition Indicators

	BVPI's			NI's				130's												
	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
130-01 (NI 168/BV223 Pre2012/13) A Roads	5%	7%	5%	6%	5%	5%	5%	4%	3%	3%	2%	3%	3%	2%	2%	3%	3%	3%	3%	4%
130-02 (NI 169/BV224a Pre2012/13) B & C Roads	11%	9%	7%	9%	9%	9%	9%	6%	7%	6%	3%	3%	4%	3%	3%	2%	2%	3%	3%	3%
BV224b U Roads	26%	20%	14%	21%	12%	11%	12%	3%	8%	3%	3%	3%	3%	2%	2%	1%	5%	2%	5%	4%
BV187 Footways	26%	3%	4%																	

Notes:

* Not reported as a National Indicator. Based on 85% of Network as no Cul-de-Sacs under approx. 150m are SCANNER'd.

** Only 50% of the U road network was surveyed due to severe winter. The surveyed coverage was predominately urban, therefore results were better than expected.

*** The reported figure in 2015/16 is the 2014/15 figure as no SCANNER surveys were carried out on the U roads in 2015/16 due to adverse weather.

**** The percentages shown above relate to the amount of carriageway in need of repair. The lower the figure the better the condition of the carriageway.

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Summary of Member Comments

APPENDIX E

Ref Number	Name / Organisation	Date Received	Comments	Response Issued	Action
	Cllr Tony Vickers	14/02/2025	Thank you very much for inviting us to comment on the Highway Improvement Programme. It was on my mind today as I drove to Inkpen. Blandys Hill in Kintbury from the 30mph limit south to Pebble Hill at its junction with Rooksnest Lane is in need of some work – more than pothole filling – in my opinion. It is a C class road and bus route as well as a main route between A4 to the Hampshire border via Kintbury. Compared to High Street Boxford from Valley Road to B4000, which is scheduled to be done by Volkers next month, I'd say this is in a far worse condition. I have not yet looked at what is planned but I thought I feed this comment back before I do that.	No	Blandys Hill to be reviewed for possible inclusion in 2025-29 HIP.
	Cllr Denise Gaines	14/02/2025	Thanks for this. Some good options for my ward over the next three years so very happy. I did wonder why some of the lines are highlighted?	Yes	Advised that the lines in bold were skid sites.
	Cllr Stuart Gourley	16/02/2025	Thanks for sharing this. Couple of questions:	No	Equality Impact marked negative in error and has now been corrected.

			Under section 3, and the Equality Impact section B - why is this negative? And should there be some commentary? Does this HIP include the updated recommendations from the review WSP did on asset management around Nov 2023? I think there were 7 recommendations, one of which was implemented straight away which was reducing investigatory level. Does this HIP include feedback and direction of travel from LTP4? It references LTP.		Q's 2 & 3 to be discussed at individual decision meeting.