

Section 19 Flood Investigation Report

Date: 25 February 2025

**Section 19 Flood Investigation Report Addendum:
Nash Drive and surrounding roads, Abingdon**

Date of Flood Incident: 24-26 September 2024 and 25-26 November 2024

**Based upon a flood investigation by
Oxfordshire County Council**

Revision Schedule

Version	Date	Details	Author	Checked	Approved
1.0	25/02/2025	First Issue	LP	CB	CM

Executive summary

This Section 19 Flood Investigation has been produced following two further periods of serious flooding of Nash Drive and surrounding roads, Abingdon on 24-26 September 2024 and 25-26 November 2024. Approximately 30 properties are believed to have flooded internally in both September and November. Tesco Abingdon, just upstream on the opposite side on the River Ock was also flooded on both occasions and forced to shut.

The flooding of the Nash drive area in September and November was primarily caused by flooding from the River Ock and Sandford Brook (main river watercourses), which flooded because of a wet September followed by particularly heavy rainfall on 22-23 September. Heavy rainfall also fell on 23 and 24 November. As the rain was so heavy, especially on 22-23 September surface water run-off from the estate may have added to the flooding as surface water was unable to drain freely to the river because the water level in the river was so high.

These floods were slightly more extensive than the flood that impacted this area in January 2024. Although the rainfall was heavier in September than November, the flooding of November 2024 was the largest of the three floods in 2024. This is believed to be because it followed so soon after the September flood and the catchment was still very wet, and rivers already high.

The repeat flooding of 2024 has forced many residents to leave their homes for long periods, and caused significant disruption, financial loss and distress.

Although the risk of flooding to the properties in this area from these rivers cannot be removed, there are recommendations that could reduce the impact of any future floods. **This report makes the following main recommendations with the full list, and further details on the recommendations in Section 4.**

This report expands and strengthens the recommendations made in the Section 19 flood report written after the January 2024 flood.

Main Recommendations

Recommendation	Lead Stakeholders	Consulting stakeholders
Progress plan to improve community sandbag and equipment store	-Abingdon Town Council	-Vale of White Horse District Council (Drainage and Emergency Planning Teams)
Refresh and improve community awareness, resilience and preparation for flooding, including production of community emergency plan and supporting community flood group and flood wardens	-Environment Agency -Abingdon Town Council -Community Flood Wardens -Residents	-Oxfordshire County Council (Resilience Team) -Vale of White Horse (Emergency Planner) -Oxfordshire County Council (Flood Risk Management Team)
Consider property level resistance and resilience measures	-Residents	-Oxfordshire County Council (Flood Risk Management Team) -Environment Agency
Review flood alleviation schemes if/when funding arrangements change	-Environment Agency	-Oxfordshire County Council (Flood Risk Management Team) -Vale of White Horse (Drainage Team)

Assess low-cost options for improving conveyance and storage within the floodplain adjacent to the estate including; -Management of floodplain meadows -Removal of floodplain obstructions close to homes at risk of flooding -Maintaining flood arch capacity of Drayton Road Bridge. -Raising low spots into the estate	-Environment Agency -Oxfordshire County Council (Flood Risk Management Team) -Vale of White Horse (Drainage Team) -Abingdon Town Council	-Community flood group
Sign up for Flood Alerts and Warnings, and develop a personal flood plan	-Residents	

CONTENTS

1. INTRODUCTION.....	1
1.1. Lead Local Flood Authority Investigation	1
1.2. Site Location and context	2
1.3. Previous flood events	5
2. RECENT FLOOD ISSUES AND INVESTIGATION	6
2.1. Recent flood events	6
2.2. Rainfall data analysis	8
2.3. Existing Level information	8
2.4. Hydrology	9
2.5. Hydraulic Assessment.....	11
3. CONCLUSIONS.....	14
4. RECOMMENDATIONS.....	15
4.1. General	15
4.2. Communities and Residents	17
4.3. Environment Agency	19
4.4. Lead Local Flood Authority (LLFA) (Oxfordshire County Council).....	21
4.5. Oxfordshire County Council (Resilience Team)	21
4.6. Highway Authority (Oxfordshire Highways).....	21
4.7. Water Authority Thames Water Utilities (TW).....	21
4.8. Vale of White Horse District Council	22
4.9. Landowners and Developers.....	22
4.10. Ock Catchment Partnership.....	22
5. DISCLAIMER.....	23
USEFUL LINKS	24
USEFUL CONTACTS	24

APPENDIX A - Photos of flooding September 2024

APPENDIX B - Photos of flooding November 2024

1. INTRODUCTION

1.1. Lead Local Flood Authority Investigation

Section 19 of the Flood and Water Management Act, 2010 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
 - c. 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.

The Lead Local Flood Authority have set criteria which determines when a Section 19 flood report is required. The criteria is set out below.

Oxfordshire County Council Lead Local Flood Authority Criteria

- Internal flooding (excluding to basements) to five or more residential properties or businesses within an area of 1km².
- Internal flooding of a business premises employing more than 10 people within an area of 1km².
- Internal flooding (excluding to basements) of at least one property or business for one week or longer.
- Flooding of one or more items of critical infrastructure, which could include hospitals, health centres, clinics, surgeries, colleges, schools, day nurseries, nursing homes, emergency services (police, fire, ambulance) stations, utilities and substations.

Caused a transport link to be impassable:

- Motorways, trunk roads, Class A and B highway closures shall all be investigated.
- Class C highways – 10 hours or more unless the route is the only means of access or is primary route for critical infrastructure then reduce to 4 hours.
- Class U highways – 24 hours or more unless the route is the only means of access or is primary route for critical infrastructure then reduce to 4 hours.
- All rail link closures shall be investigated.

1.2. Site Location and context

The Nash Drive area that flooded is shown as being in an area at high risk of flooding from rivers by the Risk of Flooding from Rivers and Sea map produced by the Environment Agency, see Figure 1. High risk means that an area has a chance of flooding from rivers of greater than 3.3% in each year.

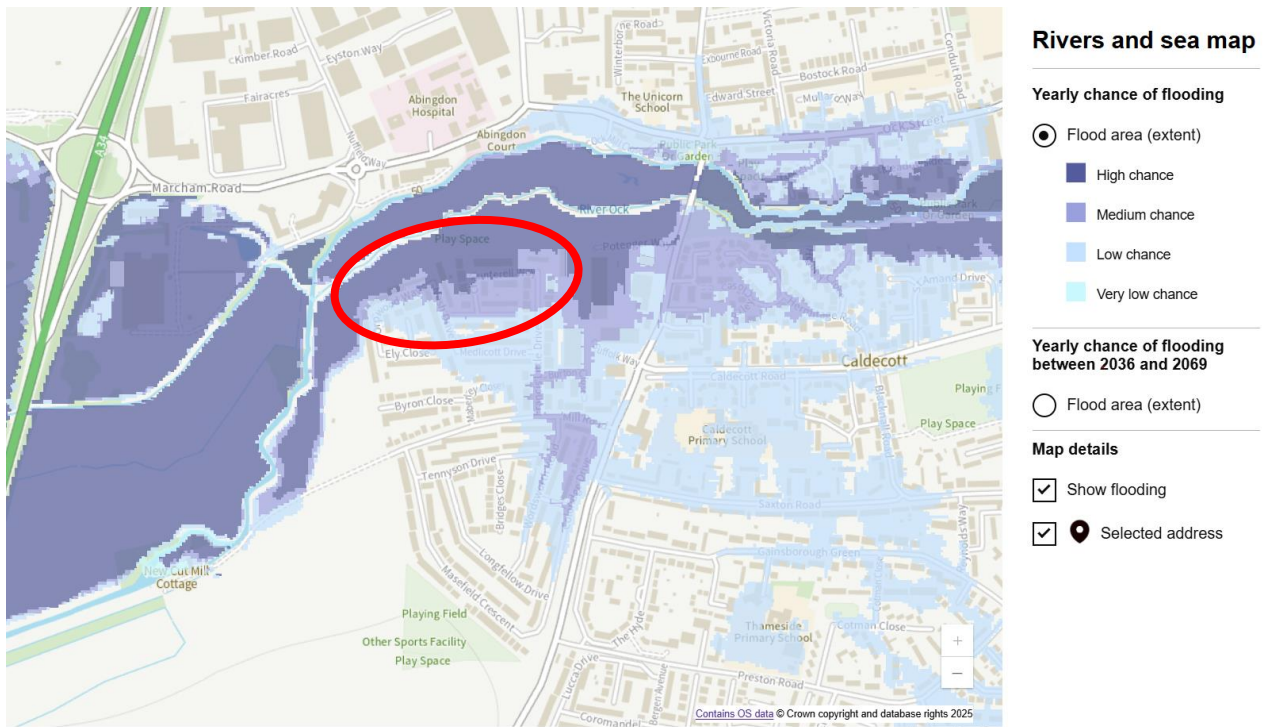


Figure 1: Environment Agency - Risk of flooding from rivers and the sea with Nash Drive area circled in red - using OS base mapping under license © Crown copyright and database rights 2025 Ordnance Survey AC0000851087

The flooding of September and November 2024 mainly came from the River Ock and Sandford Brook.

The Nash Drive area lies on the western edge of Abingdon, at the downstream end of the large River Ock catchment. The Sandford Brook catchment flows into the River Ock catchment just upstream of the Nash Drive area, see Figure 2. The channel of the Sandford Brook passes under the River Ock in a siphon before they then flow almost parallel past the Nash Drive area, see Figure 3.

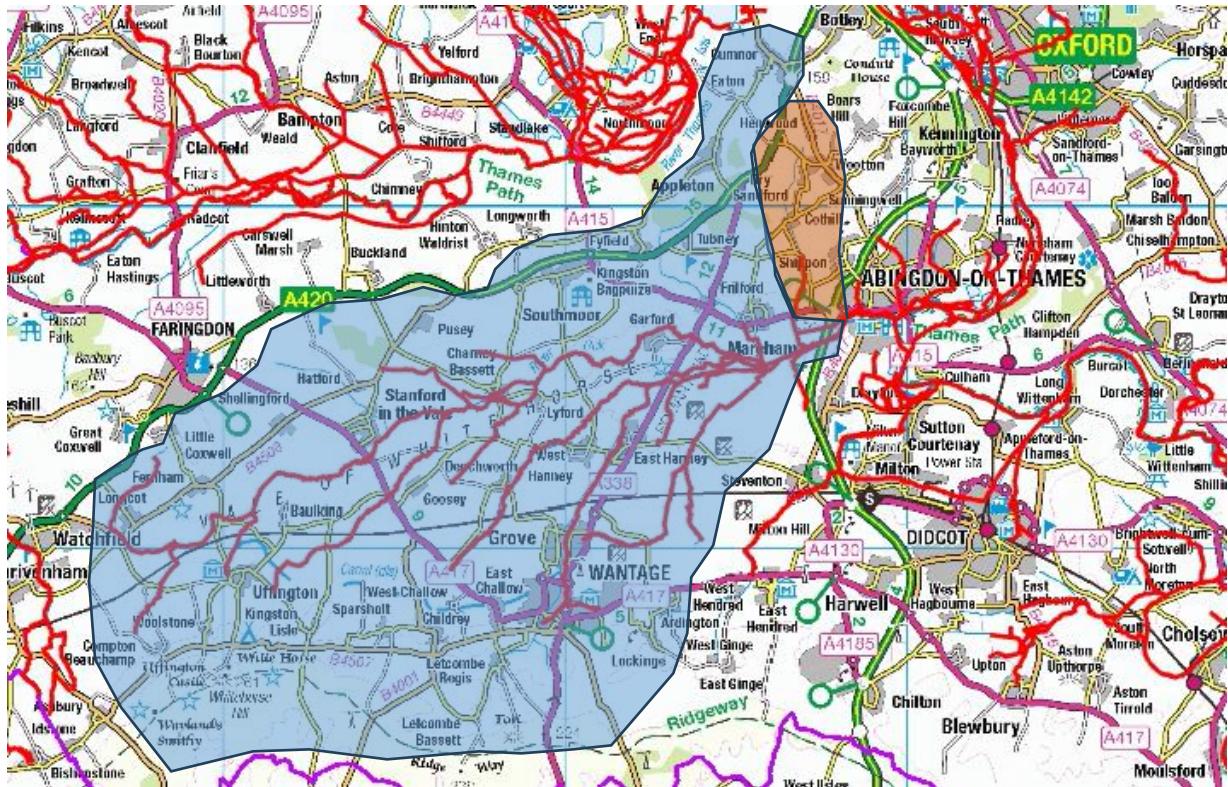


Figure 2: Catchment map of River Ock (blue) and Sandford Brook (orange) upstream of Nash Drive area - using OS base mapping under license © Crown copyright and database rights 2024 Ordnance Survey AC0000851087

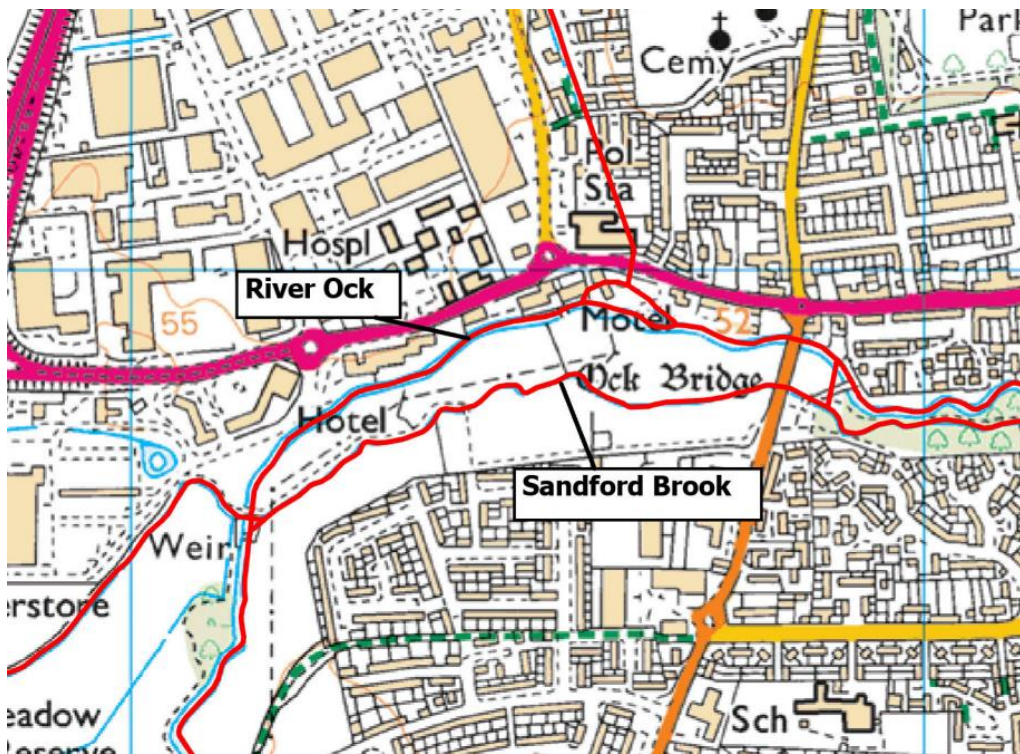


Figure 3: Location of River Ock and Sandford Brook passing Nash Drive area - using OS base mapping under license © Crown copyright and database rights 2024 Ordnance Survey AC0000851087

Beyond the Nash Drive area the River Ock and Sandford Brook flow on through Abingdon, before joining and flowing into the River Thames. A map of the Nash drive area is shown in Figure 4.



Figure 4: Map of Nash Drive area including Chaunterell Way and Orpwood Way - using OS base mapping under license © Crown copyright and database rights 2024 Ordnance Survey AC0000851087

1.3. Previous flood events

Previous floods have affected this area in 2007, 2014 and January 2024. Detailed information on the flooding of 2007 is recorded in Abingdon Floods Review July 2007 by the Environment Agency (November 2007). This report is an addendum to the report produced after the January 2024 flood by Oxfordshire County Council.



Figure 5: Flooding on the River Ock, Abingdon, July 2007 – source Environment Agency

Since the flooding of July 2007, the Environment Agency working with partners has considered several physical works to reduce the risk of flooding in this area. Unfortunately, these are not currently able to be built. The Environment Agency has explained the reasons for not being able to build these schemes in various communications and updates. This report recommends a summary of these options is produced and publicly communicated, and that the assessment of these options is updated following the repeat flooding in 2024.

2. RECENT FLOOD ISSUES AND INVESTIGATION

2.1. Recent flood events

September 2024

The flooding of 24-26 September happened very swiftly due to the intensity of the rainfall on 22-23 September, which then passed down the Sandford Brook and River Ock. The Environment Agency issued a Flood Alert for the River Ock on 23 September. A Flood Warning was issued on 24 September for properties closest to the River Ock from Tesco to St. Helen's Wharf, followed by a Flood Warning on 25 September for the wider area of River Ock at Abingdon and Caldecott. These are summarised in Figure 6.

Flood water entered Nash Drive and surrounding roads from the north, across the floodplain, overtopping the north end of Nash Drive and Chaunterell Way. Water also backed up through the highway drainage, with water reported as coming out of road gullies in Chaunterell Way.

It also flooded across low spots into property gardens along the north side of Orpwood Way and Chaunterell Way. It is believed approximately 30 properties flooded internally in Nash Drive, Orpwood Way and Chaunterell Way.

Ponding of surface water and water backing up in the highway drains led to road flooding in Shepherd Gardens, which came close to flooding further properties.

There were also anecdotal reports of restricted toilets and drains in Shepherd Gardens but this has not yet been confirmed by Thames Water.

23/09/2024	061WAF17Ock	River Ock from Watchfield to Abingdon, and also the Letcombe Brook at Wantage, Grove and East Hanney	Flood Alert
24/09/2024	061FWF17XAbngOck	Properties closest to the River Ock from Tesco to St. Helen's Wharf	Flood Warning
25/09/2024	061FWF17AbgdnOck	River Ock at Abingdon and Caldecott	Flood Warning

Figure 6: Table of Flood Alerts and Warnings Issued between 23 and 25 September 2024 – source Environment Agency.

November 2024

The flooding of 25 -26 November happened nearly as swiftly as the flooding in September, despite there being less rainfall. This was due to the ground already being saturated, and river levels being already higher than before the September flood. The River Ock was at 0.45m on 24 November compared to only 0.24m on 22 September. The Environment Agency issued a Flood Alert for the River Ock on 24 November. Flood Warnings were issued on 25 November for properties closest to the River Ock from Tesco to St. Helen's Wharf, and for the wider area of River Ock at Abingdon and Caldecott. These are summarised in Figure 7. Between 24 and 25 November water levels on the River Ock rose by nearly 0.4m. Between the 25 and 26 November the water level rose by another 0.66m.

The flood water route was similar but not exactly the same as September. Flood water entered Nash Drive and surrounding roads from the north, across the floodplain and overtopping the north end of Nash Drive and Chaunterell Way. Water also backed up the highway drainage again and flowed into gardens along Orpwood Way and Chaunterell Way from the north.

As the flood levels continued rising water then flowed east along the alley between Nash Drive and Chaunterell Way, joining flood water which had already reached there via the north end of Chaunterell Way.

It is believed that again approximately 30 properties flooded internally in Nash drive, Orpwood Way and Chaunterell Way. The worst affected were flooded internally to approximately 30cm.

14/10/2024	061WAF17Ock	River Ock from Watchfield to Abingdon, and also the Letcombe Brook at Wantage, Grove and East Hanney	Flood Alert
24/11/2024	061WAF17Ock	River Ock from Watchfield to Abingdon, and also the Letcombe Brook at Wantage, Grove and East Hanney	Flood Alert
25/11/2024	061FWF17XAbngOck	Properties closest to the River Ock from Tesco to St. Helen's Wharf	Flood Warning
25/11/2024	061FWF17AbgdnOck	River Ock at Abingdon and Caldecott	Flood Warning

Figure 7: Table of Flood Alerts and Warnings Issued between 14 October and 25 November 2024 – source Environment Agency.

The repeat flooding of 2024 has forced many residents to leave their homes for long periods, and caused significant disruption, financial loss and distress. The recommendations of this report therefore build upon and strengthen the recommendations of the Section 19 flood report produced after the January 2024 flood. It is considered important that actions are taken by all relevant parties including residents to support and rebuild resilience in the community and take all reasonable steps to manage and reduce the risk of flooding in this area.

2.2. Rainfall data analysis

The Met Office reported that England, and more specifically southern England, had a particularly wet September.

The Met Office reported that September 2024 was Oxfordshire's wettest calendar month, based on records dating back to 1836. Oxfordshire recorded 185.2mm of rain, more than 3 times its average September rainfall. Many parts of the county received particularly heavy rainfall on the 22 and 23 September. At the Abingdon gauge 92mm of rainfall was recorded on 22 and 23 September. Upstream in the catchment at Stanford in Vale 260mm of rainfall was recorded but this has not yet been checked by the Environment Agency and may be an inaccurate reading. However, surrounding gauges support that very heavy rainfall fell across the wider area.

On 23-24 November 46mm of rain fell at Abingdon but only 12mm of rain at Stanford in the Vale.

2.3. Existing Level information

Lidar (Laser Imaging, Detection and Ranging) data from 2022 has been used to assess ground levels in the area. This shows that the ground levels between the River Ock and Sandford Brook, and the estate are extremely flat with no more than about 50cm height change between the top of the river bank and the level of the ground in the Nash drive area.

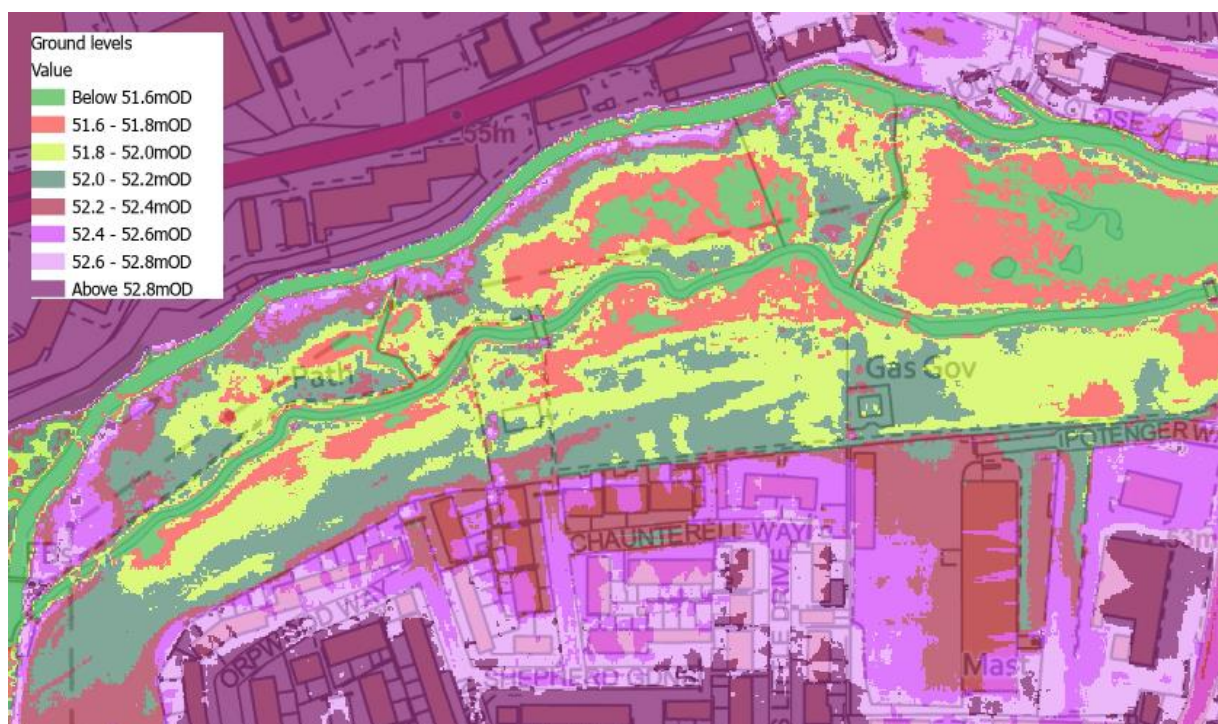


Figure 8: Lidar ground level data – source Lidar data (2022) Environment Agency

2.4. Hydrology

September 2024

The exceptionally wet weather in September and heavy rainfall on 22 -23 September led to surface water runoff. Many streams and rivers across the county rose to exceptionally high levels including the River Ock and Sandford Brook. Rainfall and river level data for the Abingdon area for the September and November floods is shown in Figures 9 and 10.

Date	Stanford Rain gauge (mm)	Abingdon Rain gauge (mm)	Flow at Abingdon Ock gauge (cubic metres/second)	Levels at Abingdon Ock gauge (m)
22 September 2024	52.11	43.98	1.68	0.24
23 September 2024	210.09*	47.75	3.55	0.27
24 September 2024	0.88	1.82	11.92	0.407

25 September 2024	4.68	12.46	16.95	1.46
26 September 2024	4.65	5.33	12.90	1.26
27 September 2024	0.02	1.22	9.77	1.02
28 September 2024	0.00	0.00	7.39	0.85

Figure 9: Table of rainfall and river levels 22 -28 September 2024 – source Environment Agency.

**suspected incorrect reading still to be confirmed although rainfall across the area was intense.*

November 2024

Date	Stanford Rain gauge	Abingdon Rain gauge	Flow at Abingdon Ock gauge	Levels at Abingdon Ock gauge
18 November 2024	10.71	15.84	1.97	0.23
19 November 2024	2.84	5.04	3.98	0.32
20 November 2024	0.01	0.15	4.40	0.43
21 November 2024	0.00	0.02	4.23	0.42
22 November 2024	0.94	2.18	3.60	0.40
23 November 2024	1.12	19.05	3.65	No data
24 November 2024	11.17	27.27	5.46	0.45
25 November 2024	0.00	0.00	10.98	0.82
26 November 2024	6.88	9.71	16.13	1.48
27 November 2024	0.02	0.01	12.09	1.25
28 November 2024	0.00	0.16	9.47	1.03

29 November 2024	0.00	0.00	6.40	0.81
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Figure 10: Table of rainfall and river levels 18 -29 November 2024 – source Environment Agency.

No single critical factor has been identified that made a difference to the amount of run-off from the catchment in September and November. Previous work by the Environment Agency has shown that using natural flood management alone to reduce run-off from the Ock catchment is not a viable way of managing flood risk to Abingdon. However, it is recommended that projects seeking to reduce run-off from the catchment are still supported, as any reduction in the speed and volume of water reaching this part of Abingdon during a flood will help to reduce risk.

2.5. Hydraulic Assessment

In both the September and November floods the primary pathway for flooding was from the River Ock and Sandford Brook overtopping their banks and flooding across the floodplain towards, and into, Nash Drive and surrounding roads. Water entered homes and gardens along a long section of the northern edge of the estate, from the west end of Orpwood Road to the east end of Chaunterell Way and beyond at Jewson's yard. The first points where water entered the estate over land are the informal footpath at the north end of Nash Drive, the gate at the north end of Chaunterell Way and the alley that gives access to the rear gardens of properties in Chaunterell Way.

The secondary effect of this was water backed up through the surface water and highway drains, with water appearing in the road at Chaunterell Way and other streets further from the river.

The flood water remained in and around houses for approximately 48-72 hours. Water generally entered properties quickly once it reached a level where it overtopped door steps or garage thresholds. However, many residents also reported water entering separately up through floors, backing up through drains and seeping through walls.

Residents have regularly raised concerns about fallen trees and rubbish in the River Ock and Sandford Brook reducing their capacity and increasing flood risk. These concerns have been reported to the Environment Agency. Following the January 2024 flood Oxfordshire County Council reviewed the condition of the channels and concluded "some natural woody material and silt was visible in the channel but not to an extent that would be likely to make a measurable difference to the level of flooding to properties or roads".

Following the September and November floods further site visits were undertaken. The repeated flooding of 2024 is unprecedented in this location since the effected properties were built. Some obstructions in the channels have also got worse since March 2024. We therefore recommend that all reasonable measures are taken to ensure the efficient passage of water along this section of the Sandford Brook and

River Ock, this includes the removal of any large obstructions in the river channels. Otherwise they will become worse and increase future flood risk. The Environment Agency have been contacted and they are undertaking their annual maintenance of these sections of the river in January 2025, when they will review and where possible remove any obstructions. It is recommended that these sections are reviewed by the Environment Agency following this maintenance and any remaining areas of concern raised with landowner (as the riparian owners) to address.

It is also recommended that measures are considered by the Environment Agency, in partnership with the councils, and landowners to maintain and maximise floodplain capacity alongside these sections of river.

Flood alleviation schemes have previously been assessed by the Environment Agency and found not to be viable. Given the unprecedented repeat flooding of 2024 it is recommended that the Environment Agency produces an updated summary of these options. This should explain why they were not viable, and where appropriate review these options.

A review of options to reduce flood risk by the Environment Agency, assisted by the councils, should also consider options for raising, or providing barriers, at the lowest points of entry for flood water into the estate. Low points identified by this investigation are the north end of Nash Drive, the north end of Chaunterell Way and to the rear of the gardens of the properties on the north of Chaunterell Way.

Property Flood Resilience Measures

Some properties in the affected area had fitted property flood resilience measures before the September and November floods. Generally, resistance measures, which aim to stop water entering properties seem to have been ineffective in this area. This seems to mainly be due to water entering properties from several points, including up through or around floors. The combination of a relatively quick rise in flood waters and a relatively long duration of flooding of 48 hours or more makes it particularly challenging to fit effective flood resistance measures to keep water out. The quick rise means there may not be much warning to put out measures that need deploying such as door guards. The long duration means water has time to seep into properties through gaps, such as where services enter the property and through brickwork. It is likely that any resistance measures need to be based on a detailed professional survey and to be fitted to a high standard to prevent or reduce the amount of water that might enter a home in the highest risk areas.

Resilience measures, which do not prevent water from entering a home but which reduce the impact of water once in a home seem to have been more successful. These include raising electrically sockets, and using water resistant material for construction work, fixtures and fittings, as well as raising or protecting valuable or expensive items. We therefore recommend that home owners in the areas at risk of flooding take action to improve the resilience of their homes, by creating a personal flood plan and taking steps to increase the resilience of their homes to flooding.

Suggested causes/factors

While undertaking this investigation a number of repeat suggestions relating to the cause of this and previous flooding were put forward.

Oxfordshire County Council along with the Environment Agency have investigated suggestions that pumping by upstream businesses contributed to the flooding and found no evidence of this. Tesco confirmed they cleared their carpark drains to allow water to drain away after the flood but did not pump water away.

We do not believe any significant pumping of water upstream took place during the September or November flooding. Even if it had this would have been moving flood water that was already in the floodplain. It is worth noting that the maximum capacity of a standard hire pump is approximately 17 litres per second. This is compared to a maximum recorded peak flow on the River Ock alone during the November flood of 16950 litres per second. Moving these kinds of volumes of water within the floodplain some way upstream would not be increasing flood risk even if pumping had taken place.

Suggestions of sluices or flood gates being opened to cause the flooding is a common suggestion when flooding occurs but is very rarely the true cause. However, at the request of residents this has been investigated and there are no flood gates, and no large sluices upstream of Abingdon which can meaningfully control the overall volume of water during a flood. Specific suggestions that sluices at Denman College (also known as Marcham Park) Marcham contributed to flooding in Abingdon have been disproved through an inspection by the Environment Agency. There is only one small moveable sluice approximately 40cm square (see Figure 11), which is left open all winter and only closed to retain levels in the lake during the summer. All other flow through the site is through static structures or open channels and is not manually controlled. There is no evidence that the operation of any upstream structures would make a meaningful difference to flood risk in the Nash Drive area, especially given the distance upstream and size of floodplain in between.



Figure 11: Photo of only sluice gate control at Denman College, Marcham (source Environment Agency)

3. CONCLUSIONS

The flooding of the Nash Drive area in September and November was primarily caused by flooding from the River Ock and Sandford Brook (main river watercourses), which flooded because of a wet September followed by particularly heavy rainfall on 22-23 September. Heavy rainfall also fell on 23-24 November. This was not as heavy as September, and had it been the only recent rainfall would not have caused such significant flooding. However, the catchment was still saturated from the wettest September on record, meaning little of the heavy rainfall of 23-24 November was able to soak into the ground, and instead ran straight into the streams and rivers.

Heavy rain, especially on 22-23 September meant that surface water run-off from the estate would have added to the flooding as surface water was unable to drain away freely as the water level in the river was so high.

The repeat flooding of 2024 has forced many residents to leave their homes for long periods, and caused significant disruption, financial loss and distress. The recommendations of this report therefore build upon and strengthen those of the Section 19 flood report produced after the January 2024 flood. It is considered important that actions are taken by all relevant parties including residents to support and rebuild resilience in the community and take all reasonable steps to manage and reduce the risk of flooding in this area.

4. RECOMMENDATIONS

4.1. General

Listed below are the recommendations from this formal Section 19 Flood Investigation Report.

It is important to note that it is for the relevant responsible organisation or persons to assess each recommendation in terms of the legal obligation, funding, resource implications, priority and cost/benefit analysis of undertaking such action.

The recommendations may be included within the action plan linked to the Local Flood Risk Management Strategy or in the relevant risk management authority's future work programmes, as appropriate.

The table below gives a summary of recommendations with further detail given in Sections 4.2 onwards.

Summary of recommendations

Recommendation	Lead Stakeholders	Consulting stakeholders
Progress plan to improve community sandbag and equipment store	-Abingdon Town Council	-Vale of White Horse District Council (Drainage and Emergency Planning Teams) -Oxfordshire County Council (Resilience Team)
Refresh and improve community awareness, resilience and preparation for flooding including production of community emergency plan and supporting community flood group and flood wardens	-Abingdon Town Council -Oxfordshire County Council (Resilience Team) -Environment Agency -Community Flood Wardens -Residents	-Oxfordshire County Council (Flood Risk Management Team) - Vale of White Horse (Emergency Planner)
Consider property level resistance and resilience measures	-Residents	-Oxfordshire County Council (Flood Risk Management Team)

		-Environment Agency
Produce and communicate a summary of flood risk management options considered to date and their current status	-Environment Agency	
Review flood alleviation schemes if/when funding arrangements change	-Environment Agency	-Oxfordshire County Council (Flood Risk Management Teams) -Vale of White Horse (Drainage Team)
Assess low-cost options for improving conveyance and storage within the floodplain including: -Management of floodplain meadows, including improvement or storage and conveyance -Management or removal of floodplain obstructions -Maintaining flood arch capacity of Drayton Road Bridge. - Raising low spots into the estate	-Environment Agency -Oxfordshire County Council (Flood Risk Management Teams) -Vale of White Horse (Drainage Teams) - Abingdon Town Council -Highway Authority (Oxfordshire Highways)	-Landowners
Regular river maintenance and prompt removal of significant obstructions	-Riparian (river) Landowners -Environment Agency	
Support and encourage initiatives to reduce and slow surface water runoff in the catchment	-Ock Catchment Partnership	-Oxfordshire County Council (Flood Risk Management Teams) -Environment Agency - Vale of White Horse (Drainage Team) -Upstream landowners

Manage new development in accordance with national and local planning policy in the Ock and Sandford Brook Catchments to prevent an increase in surface water runoff or flood risk	-Vale of White Horse (Planning Team)	-Oxfordshire County Council (Flood Risk Management Team) - Environment Agency
Provide information to show surface water and foul water sewers in the area are in good working order	-Thames Water	-Oxfordshire County Council (Flood Risk Management Team)
Sign up for Flood Alerts and Warnings, and develop a personal flood plan	-Residents	
Farmers and landowners upstream should carry out works to their land to manage surface water runoff. These include following principles of good soil management https://www.gov.uk/guidance/create-and-use-a-soil-management-plan .	-Upstream landowners	-Ock Catchment Partnership

4.2. Communities and Residents

Abingdon Town Council

- Progress plan to improve community sandbag and equipment store.

At the time of the September flood the sandbag store had not been finished and was not stocked. In the November flood, residents raised concerns that the sandbag store quickly became inaccessible due to flood water surrounding it. It is therefore recommended that the location, access arrangements and equipment stored is reviewed to make sure it is as beneficial as possible for the community.

- Refresh and improve community awareness, resilience and preparation for flooding including production of community emergency plan and supporting community flood group and flood wardens

The Town Council have committed to produce an emergency plan for the town including for flooding. Oxfordshire County Council Resilience Team have committed to provide support and guidance to help with this. It is recommended this is developed in collaboration with the Environment Agency, and residents including local flood groups and flood wardens.

- Assess low-cost options for improving conveyance and storage within the floodplain including:
 - Management of floodplain meadows, including improvement or storage and conveyance
 - Management or removal of floodplain obstructions
 - Maintaining flood arch capacity of Drayton Road Bridge.
 - Raising low spots into the estate

One option already identified on land managed by Abingdon Town Council is the removal of an earth mound that was placed across an informal footpath. The mound was put there to prevent unauthorised access but Lidar ground level data from 2022, and observations made during the flooding, shows that the mound is obstructing part of a flood flow route across the floodplain. The ground level data shows the mound was raised in an area where water would otherwise have been able to flow as flood waters rise. Removing this and other obstructions along this hedge line, including a broken fence and large tree trunk (also shown by part of the pink and purple colours to the left of the playground on Figure 12) will reinstate this flow route encouraging water to flow through the floodplain rather than being held in this area, close to properties.

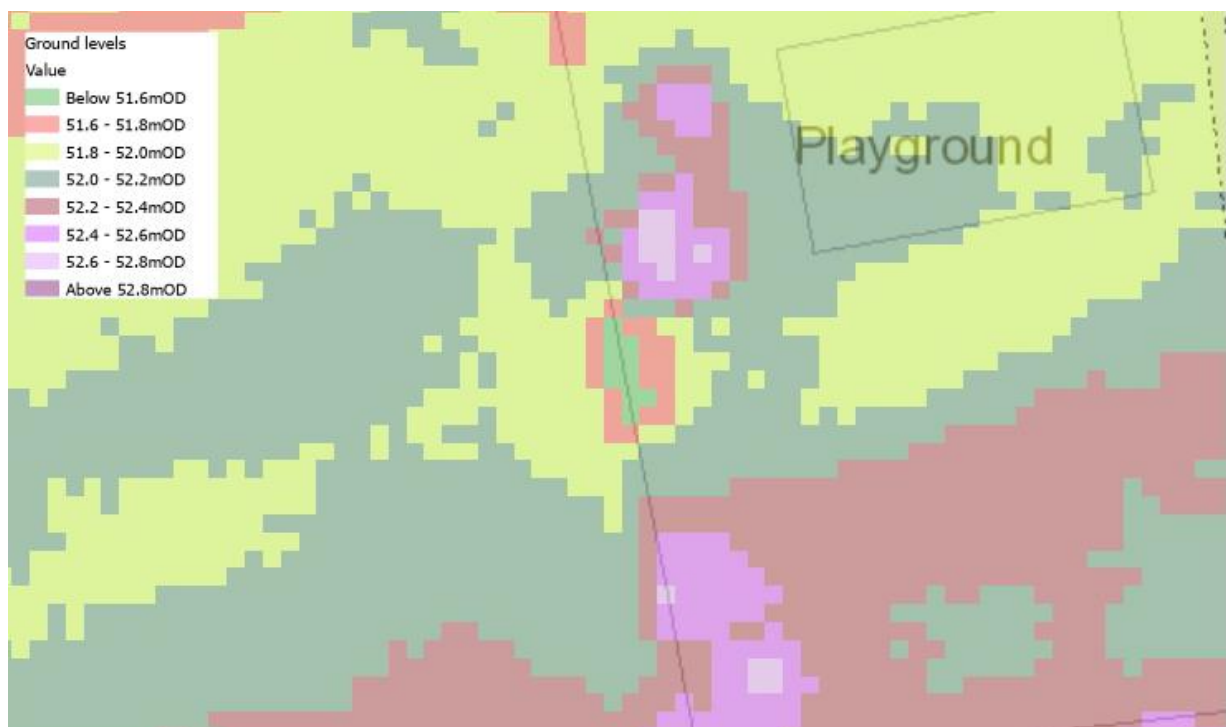


Figure 12: Ground level data around playground and earth mound north of Nash Drive and Chuanterell Way - using OS base mapping under license © Crown copyright and database rights 2024 Ordnance Survey AC0000851087

Residents

- Consider property level resistance and resilience measures.

Resilience measures which reduce the impact of water once in a home seem to have been more successful in this area than resistance measures that aim to stop water entering. Resilience measures include raised electrical sockets and raising valuable or expensive items, although many other options are also available. We therefore recommend that home owners in the areas at risk of flooding take action to improve the resilience of their homes, by creating a personal flood plan and taking steps to increase the resilience of their homes to flooding. Resistance measures, that aim to prevent water entering a property would need to be based on a detailed professional survey and to be fitted to a high standard to prevent or reduce the amount of water that might enter a home in the highest risk areas due to the speed and duration of flooding.

Advice can be found on the following links:

[Preparing for a flood - Oxfordshire Flood Toolkit](#)
[BeFloodReady – Property Flood Resilience \(PFR\) | Helping Reduce Flood Risk](#)

- Sign up for Flood Alerts and Warnings, and develop a personal flood plan

An important step in improving resilience is signing up for the Environment Agency's flood warning service, therefore we recommend all residents check their flood risk and sign up for Flood Alerts and Warnings using the following links:

[Check the long term flood risk for an area in England - GOV.UK](#)
[Sign up for flood warnings - GOV.UK](#)

Community Flood Wardens

- Refresh and improve community awareness, resilience and preparation for flooding including production of community emergency plan and supporting community flood group and flood wardens

We recommend the newly trained (2024) flood wardens in this area are closely involved in the development of the proposed town emergency plan.

4.3. Environment Agency

- Refresh and improve community awareness, resilience and preparation for flooding including production of community emergency plan and supporting community flood group and flood wardens

We recommend the Environment Agency are closely involved in the development of the proposed town emergency plan.

- Produce and communicate a summary of flood risk management options considered to date and their current status.

There appears to be a lack of awareness and misunderstanding in the community of what options have been looked at previously and why these have not been constructed or delivered. It is recommended a new summary of the options considered is published to clarify this and ensure a consistent understanding between all organisations and the community.

- Review flood alleviation schemes if/when funding arrangements change

The repeat flooding of 2024 may require the assumptions made previously about the level of risk to this area to be revisited. There is also a Department for Environment Food and Rural Affairs (DEFRA) consultation planned on changes to the flood risk project funding in 2025. These changes may alter the amount of funding available for flood alleviation schemes for Abingdon. It is recommended that if this is the case the options should be reviewed and the findings announced. It should be noted these changes could reduce or increase funding available.

- Assess low-cost options for improving conveyance and storage within the floodplain including:
 - Management of floodplain meadows, including improvement or storage and conveyance
 - Management or removal of floodplain obstructions
 - Maintaining flood arch capacity of Drayton Road Bridge.
 - Raising low spots into the estate

Flood alleviation schemes have previously been assessed by the Environment Agency and found not to be viable. Therefore, it is recommended that smaller lower cost options are considered by a partnership between the Environment Agency, Lead Local Flood Authority (Oxfordshire County Council), Vale of White Horse District Council, Abingdon Town Council and residents (represented by the community group).

- Regular river maintenance and prompt removal of significant obstructions

The repeat flooding in this area in 2024 highlighted it as one of the most vulnerable areas in the county. It is therefore recommended that river maintenance in this area is prioritised by riparian (river) landowners, and the Environment Agency using their permissive powers. It would provide reassurance and useful information to residents if the Environment Agency published its plans for maintenance in the area.

4.4. Lead Local Flood Authority (LLFA) (Oxfordshire County Council)

- Assess low-cost options for improving conveyance and storage within the floodplain including:
 - Management of floodplain meadows, including improvement or storage and conveyance
 - Management or removal of floodplain obstructions
 - Maintaining flood arch capacity of Drayton Road Bridge.
 - Raising low spots into the estate

Flood alleviation schemes have previously been assessed by the Environment Agency and found not to be viable. Therefore, it is recommended that smaller lower cost options are considered by a partnership between the Environment Agency, Lead Local Flood Authority (Oxfordshire County Council), Vale of White Horse District Council, Abingdon Town Council and residents (represented by the community flood group).

4.5. Oxfordshire County Council (Resilience Team)

- Work with residents (including community groups), the Town Council and other stakeholder to refresh and improve community awareness, resilience and preparation for flooding including training of flood wardens

The town council have committed to produce an emergency plan for the town including for flooding. Oxfordshire County Council Resilience Team have committed to provide support and guidance to help with this. It is recommended this is developed in collaboration with the Environment Agency, and residents including local flood groups and flood wardens.

4.6. Highway Authority (Oxfordshire Highways)

- Maintaining flood arch capacity of Drayton Road Bridge.

It is recommended that Oxfordshire Highways ensures the capacity of the arches under Drayton Road bridge is maintained to preserve the free flow of water.

4.7. Water Authority Thames Water Utilities (TW)

- Provide information to show surface water and foul water sewers in the area are in good working order

Although we have seen no evidence to show any defects with the foul or surface water drainage system in this area, water does back up through these systems when there is flooding in this area. It is recommended that Thames Water confirm their

system is in good working order to ensure it is not making the flooding or drainage issues worse.

4.8. Vale of White Horse District Council

- Manage new development in accordance with national and local planning policy in the Ock and Sandford Brook Catchments to prevent an increase in surface water runoff or flood risk

This is a statutory requirement but has been included as a recommendation so that the planning authority are notified of this flood report, and because the risk of new development increasing flood risk was raised regularly as a concern amongst residents while gathering information for this report.

4.9. Landowners and Developers

- Regular river maintenance and prompt removal of significant obstructions

The repeat flooding in this area in 2024 highlighted it as one of the most vulnerable areas in the county. It is therefore recommended that river maintenance in this area is prioritised by riparian (river) landowners, and the Environment Agency using their permissive powers.

- Farmers and landowners upstream should carry out works to their land to manage surface water runoff. These include following principles of sustainable farming. Guidance can be found via the link below

[Sustainable Farming Incentive: guidance for applicants and agreement holders - GOV.UK](#)

4.10. Ock Catchment Partnership

- Support and encourage initiatives to reduce and slow surface water runoff in the catchment

As in any catchment it is recommended that the land upstream is managed to control run-off. This is linked to the recommendation below and is probably best coordinated and promoted by the Ock Catchment Partnership. The Ock Catchment Partnership protects and restores freshwater and wetland habitats and manages the catchment to reduce flooding and diffuse pollution.

It is therefore well placed to promote the message of improved land management in the catchment, and work with landowners to reduce downstream flood risk.

5. DISCLAIMER

The findings of the report are based on a subjective assessment of the information available by those undertaking the investigation and therefore may not include all relevant information. As such it should not be considered as a definitive assessment of all factors that may have triggered or contributed to the flood event.

Any recommended actions outlined in this flood investigation report will be for the relevant responsible body or persons to assess in terms of resource implications, priority and cost/benefit analysis of the proposal. Moving forward, these may be included in the Action Plan linked to the Local Flood Risk Management Strategy or in the relevant risk management authority's future work programme as appropriate.

The opinions, conclusions and any recommendations in this report are based on information provided to Oxfordshire County Council, Environment Agency, and Vale of White Horse District Council

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the time of preparation. Oxfordshire County Council expressly disclaims responsibility for any error in, or omission from, this report arising from or in connection with those opinions, conclusions and any recommendations.

The implications for producing Flood Investigation Reports and any consequences of blight have been considered. The process of gaining insurance for a property and/or purchasing/selling a property and any flooding issues identified are considered a separate and legally binding process placed upon property owners and this is independent of and does not relate to the information in this report highlighting flooding to properties at a street level.

Oxfordshire County Council do not accept any liability for the use of this report or its contents by any third party.

USEFUL LINKS

- Water Resources Act 1991 www.legislation.gov.uk/ukpga/1991/57/contents
- Land Drainage Act 1991 www.legislation.gov.uk/ukpga/1991/59/contents
- Flood and Water Management Act 2010
www.legislation.gov.uk/ukpga/2010/29/contents
- Environment Agency - Prepare your Property for Flooding:
-How to reduce flood damage Flood protection products and services
www.gov.uk/government/publications/prepare-your-property-for-flooding
- Environment Agency - Long term flood risk service:
<https://www.gov.uk/check-long-term-flood-risk>
- Environment Agency - Sign up for flood warnings:
[Sign up for flood warnings - GOV.UK \(www.gov.uk\)](http://www.gov.uk/sign-up-for-flood-warnings)
- Environment Agency - Up to date information on flood alerts & warnings:
[Check for flooding - GOV.UK \(www.gov.uk\)](http://www.gov.uk/check-for-flooding)
- Oxfordshire County Council flood management Web Pages:
www.oxfordshirefloodtoolkit.com
<https://www.oxfordshire.gov.uk/residents/fire-and-public-safety/emergency-planning/community-resilience>
- Thames Water www.thameswater.co.uk/help-and-advice/bursts-and-leaks/report-a-leak-orburst-pipe

USEFUL CONTACTS

Oxfordshire County Council - Lead Local Flood Authority Team

Website: www.oxfordshirefloodtoolkit.com

Email: floodmanagement@oxfordshire.gov.uk

Oxfordshire County Council - Highways:

Tel: 0345 310 1111

Website: www.fixmystreet.oxfordshire.gov.uk

Email: highwaysengagement@oxfordshire.gov.uk

Environment Agency:

General Tel: 03708 506 506 (Mon-Fri 8-6) Call charges apply.

Incident Hotline: 0800 807060 (24 hrs)

Floodline: 0345 988 1188

Email: enquiries@environment-agency.gov.uk

Thames Water

Emergency Tel: 0800 316 9800 (select option 1)

Email: Customerservices@thameswater.co.uk

Appendix A – Photos of flooding September 2024



Figure A1- Flooding Chaunterell Way (source Oxfordshire County Council)



Figure A2 – Flooding Shepherd Gardens (source Oxfordshire County Council)



Figure A3 – Flooding of Chaunterell Way (source Oxfordshire County Council)



Figure A4 – Flooding of Tesco Abingdon carpark and store (source Oxfordshire County Council)

Appendix B – Photos of flooding November 2024



Figure B1 – Flooding Chaunterell Way (source Oxfordshire County Council)



Figure B2 – Flooding Nash Drive (source Oxfordshire County Council)



Figure B3 – Flooding Nash Drive (source Oxfordshire County Council)