



# River Pinn and Cannon Brook flood reduction proposals

## Consultation document

14 March 2018

We are the Environment Agency. We protect and improve the environment.

We help people and wildlife adapt to climate change and reduce its impacts, including flooding, drought, sea level rise and coastal erosion.

We improve the quality of our water, land and air by tackling pollution. We work with businesses to help them comply with environmental regulations. A healthy and diverse environment enhances people's lives and contributes to economic growth.

We can't do this alone. We work as part of the Defra group (Department for Environment, Food & Rural Affairs), with the rest of government, local councils, businesses, civil society groups and local communities to create a better place for people and wildlife.

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# Overview

The River Pinn catchment is in the west of the Greater London area. It flows through the London boroughs of Harrow and Hillingdon before joining the Frays River in Uxbridge. The Pinn is joined by several smaller rivers along its length, including the Cannon Brook in Ruislip. It is also fed by numerous outfalls which convey excess rainwater to the river. The rivers flow generally in open channels made of earth, passing through various bridges and culverts.

Communities in the River Pinn catchment have experienced flooding several times, most recently in June 2016. We have been working with Hillingdon and Harrow Councils to better understand the causes of this flooding and identify actions that could reduce the risk in the future.

## Our objectives

### We want to:

- We will better understand the risk of flooding in the River Pinn and Cannon Brook catchments
- We will collaborate with others to develop flood reduction proposals which maximise benefits for people and the environment
- We will work with local communities to ensure they understand our proposals and the actions they can take to be more prepared for flooding
- We will work with our partners to find funding from other sources to help us deliver viable flood reduction proposals

### **Our proposals will not eliminate the risk of flooding, only lessen it.**

We need to continue to work with our partners and communities to find funding for these proposals. The project is currently partly funded by central government and local levy, but there is still a need to find more funding, for example from organisations and businesses that will benefit. We can only progress proposals if they are fully funded.

We are running 3 drop-in sessions whilst the consultation is open where you will be able to discuss the options we have developed to manage flood risk for the whole of the River Pinn and Cannon Brook catchment. Each session will focus on the area geographically closest to the venue but if you can't attend the closest one then we will have all of the information to hand at all of the sessions.

We will provide a full summary of the consultation responses on our website within 6 weeks from the end of consultation, and before the proposals we decide to take forward are selected.

## Why We Are Consulting

We want to get feedback from our partners and local communities who will benefit or be impacted by our initial flood reduction proposals. The feedback provided by this consultation will help us identify which proposals to take forwards for further development.

# About this consultation

This section is designed to help you respond to the consultation on our preliminary options to reduce manage flooding from the River Pinn and corridor. It explains why we are consulting you and what we are consulting you about.

We would like to hear your views on which options you like best and why. This is an opportunity for you to provide us with information and knowledge on your local area. Following the consultation,

we will combine this information alongside other factors such as landowner views and technical constraints to develop our final plan for the catchment.

## Who should respond?

This consultation will be of particular interest to anyone who lives, owns land or property or works along the River Pinn and Cannon Brook corridor. This includes residents, businesses, environmental groups, charities and statutory organisations.

We would like to know which options you prefer and hear your thoughts, comments and opinions about these.

## About our proposals

Communities in the River Pinn catchment have experienced flooding several times, most recently in June 2016. According to our records, flooding has affected different parts of the catchment in 1947, 1968, 1977, 1984, 1986, 1987, 1988, 1992, 1993, 2000, 2002, 2009, 2012, 2013 and 2014. We have recently been working with Hillingdon and Harrow Councils as well as Thames Water to better understand the causes of this flooding and identify actions that could reduce the risk in the future.

Our recent work has focussed on drawing together what we know about the catchment to identify the potential options for managing the risk of flooding. This includes looking at previous studies and gathering knowledge about the flooding issues. We have looked at the catchment in detail to better understand the risks and opportunities across the study area.

We are primarily focussing on areas at risk of flooding in Pinner, Hatch End, Ruislip, Ickenham and Yiewsley and are working with partners to identify the best options to reduce the risk of flooding across the River Pinn catchment.

## What are we consulting on?

We are consulting on the list of options to reduce flood risk from the River Pinn and several other rivers along its length, including the Cannon Brook. When we first started developing our proposals we came up with over 50 ideas which might help to reduce flood risk. Our work so far has brought this down to around 25 options - these are what we are consulting on now.

To make it easier to understand which options are relevant in which parts of the catchment, we have split our proposals into six areas. These areas are shown on the map below. A brief overview of the types of options we are considering in each area are shown in the table below. It is also important to note that some of the options also help to reduce flood risk further downstream of the area they are located within.

*Table 1 - brief overview of options being considered in the different areas*

	New flood storage areas	Change to existing flood storage areas	Walls and embankments	Natural flood management
1. Pinner and Hatch End	Y	Y	Y	Y
2. East Ruislip	Y		Y	Y
3. West Ruislip	Y		Y	
4. Ickenham	Y		Y	
5. Uxbridge	Y		Y	
6. Yiewsley	Y		Y	



## River Pinn Flood Reduction Proposals - overview map

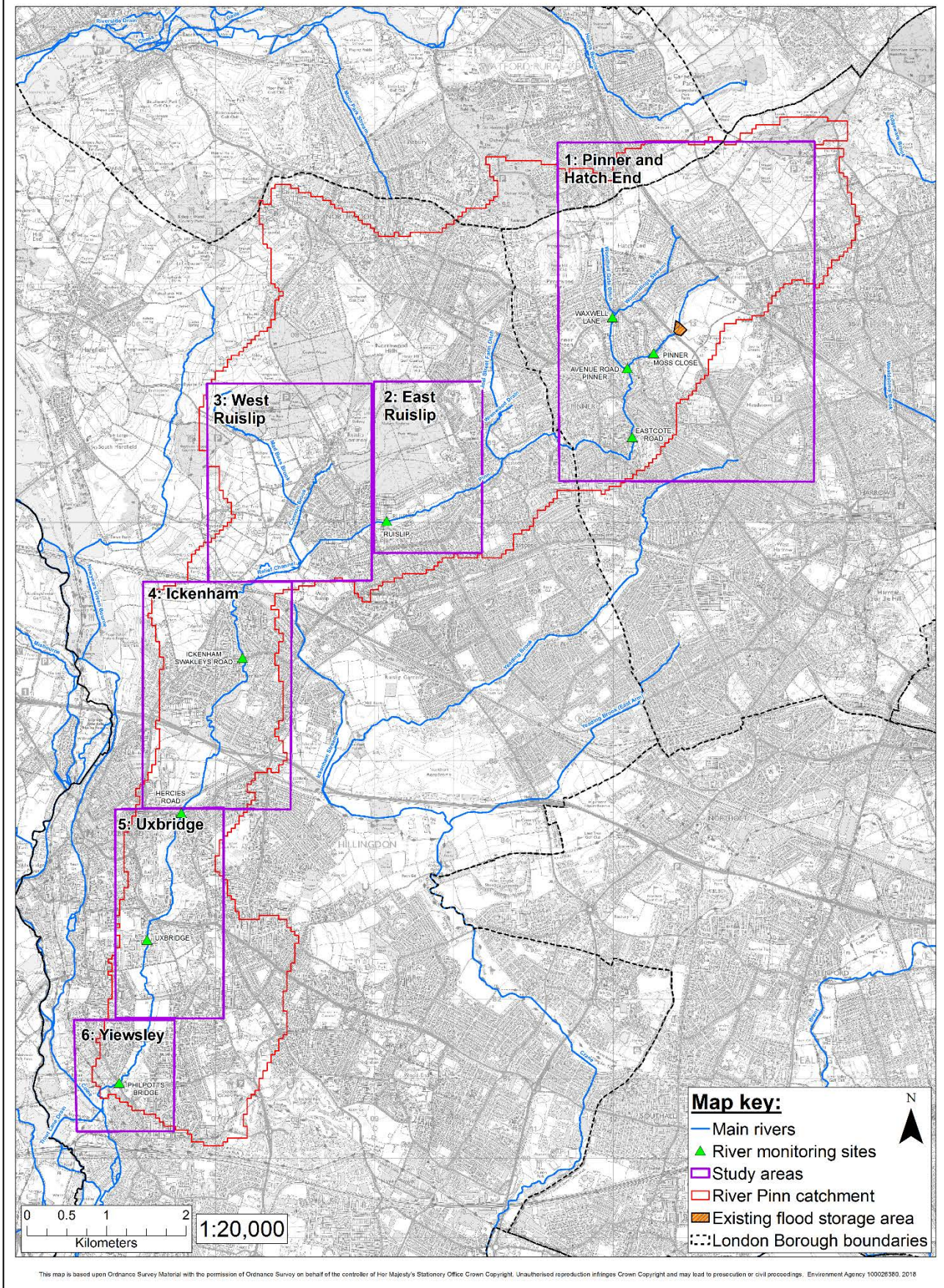


Figure 1: Overview of the location of the River Pinn catchment and the areas we focussing on



## What will the responses be used for?

We will use the responses from this consultation to help decide which options to take forward for further development. Environment Agency staff working on this consultation will see all responses.

We will provide a full summary of the responses on our website by the 21 May 2018. When we have summarised the responses we will also produce a briefing confirming which options we plan to take forward to the next stage.

# About you

## How will we use your information?

Throughout the consultation we will make all comments (excluding personal information) publicly available on the Environment Agency's online consultation portal. This includes comments received online, by email, post fax, unless you have specifically requested that we keep your response confidential. We will not publish names of individuals who respond, but we will publish the name of the organisation for those responses made on behalf of organisations.

If you provide us with an email address, we will acknowledge your response. After the consultation has closed a summary of the responses will be published on our website. We will contact you to let you know when this is available. We will also notify you of any other forthcoming consultations regarding the Pinn and Cannon Brook flood reduction proposals unless you tell us otherwise.

In accordance with the Freedom of Information Act 2000, we may be required to publish your response to this consultation, but will not include any personal information. If you have requested your response to be kept confidential, we may still be required to provide a summary of it.

### 1. Have you been flooded before?

Please tick	
Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

If yes, please tell us your postcode

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Approximately how many times have you flooded and in what years (to the best of your knowledge).

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**2. Do you support a scheme to reduce flood risk in principle?**

Please tick	
Yes	<input type="checkbox"/>
No	<input type="checkbox"/>
Don't know	<input type="checkbox"/>

Please explain your answer

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**3. What is your email address?**

If you provide us with your email address you will receive an acknowledgement email after you've submitted your response.

We can also use it to send you updates about our flood reduction proposals if you would like us to.

Your email address:

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**4. Can we publish your response? We will not publish any personal information or parts of your response that will reveal your identity.**

Please tick	
Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

If you would not like us to publish your response, you need to tell us why

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# Pinner and Hatch End flood reduction options

In this area we are considering a combination of different types of options. The location of these can be seen on the maps here. Please have a look at these maps and then answer the questions below:

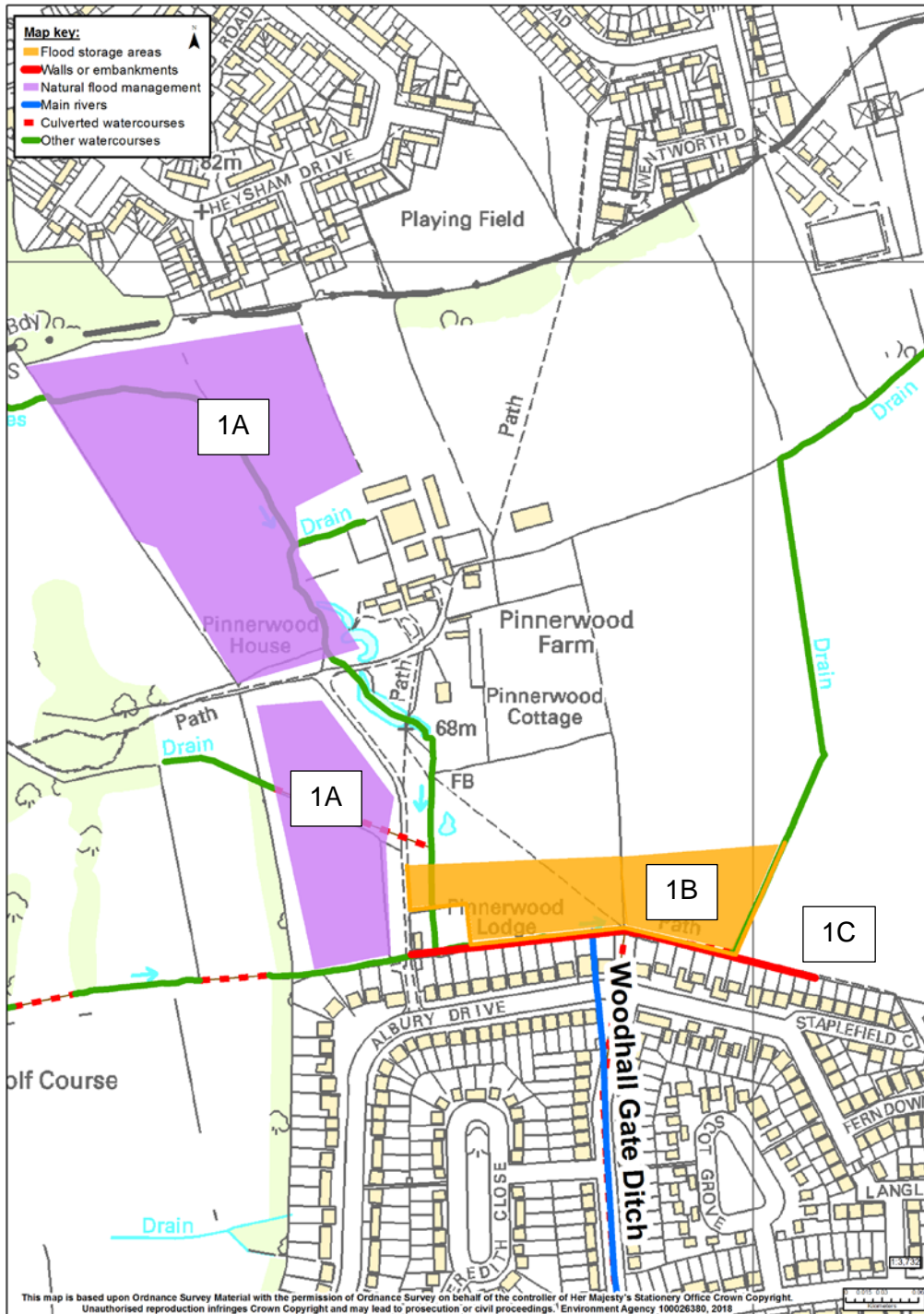


Figure 2 - Pinner and Hatch End Map 1



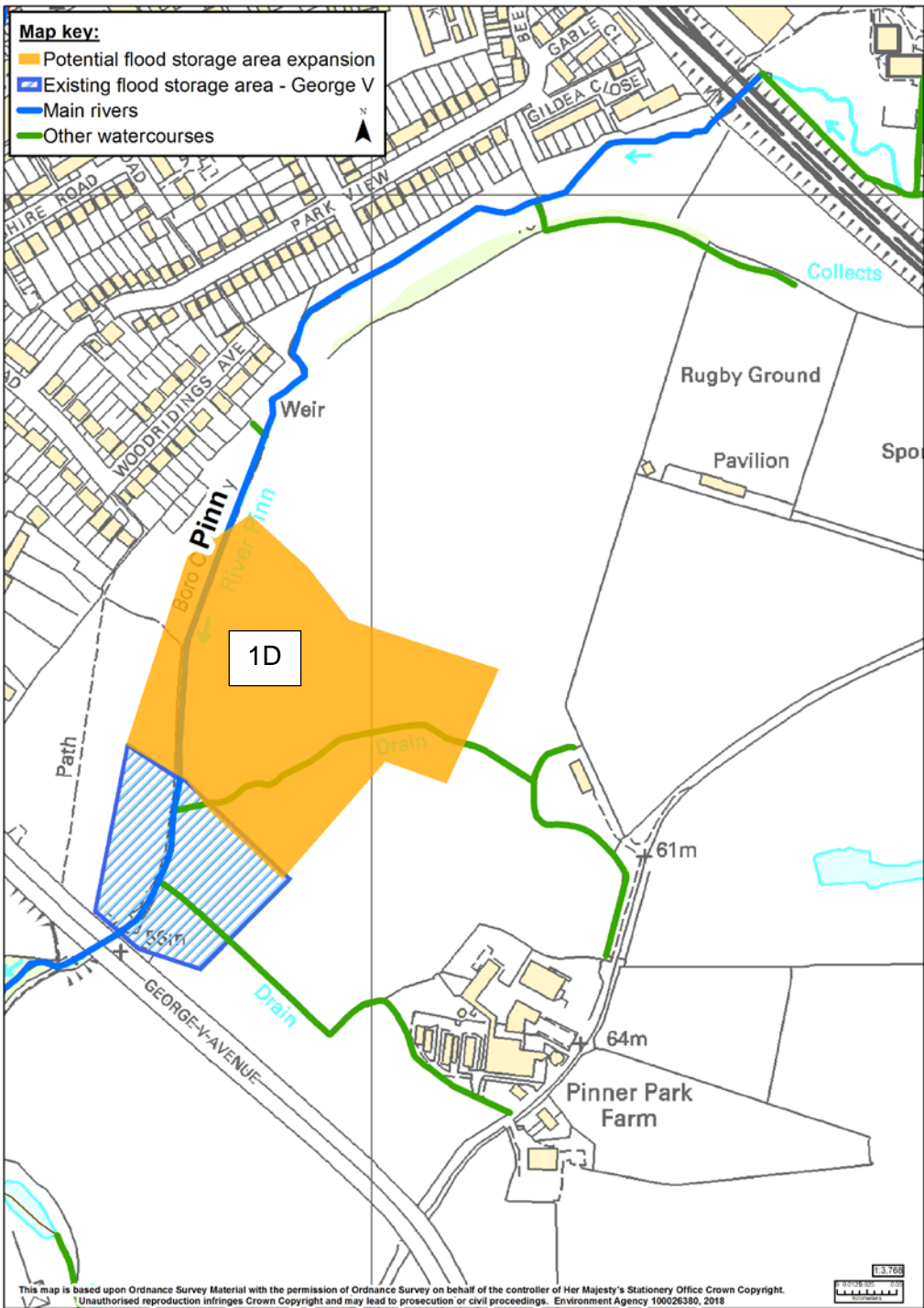


Figure 3 - Pinner and Hatch End Map 2

In reference to Figures 2 and 3 above, please answer the following question:

**5. Which of the options would you like to see taken forward for further analysis and investigations?**

Please tick all which apply

Option reference	Option type	Option description	Yes	No	Don't know
1A	Natural flood management (NFM)	Consisting of leaky log dams and other NFM measures to slow flows from drainage ditches entering the Woodhall Gate Ditch above Albury Drive.			
1B	New flood storage area	Storage of flood water in fields above Albury Drive to control the flows into the Woodhall Gate Ditch.			
1C	Embankment	As an alternative to 5D. Instead of a flood storage area, this would be an earth embankment to prevent a smaller amount of runoff from the fields entering gardens and homes.			
1D	Existing flood storage area	Modification of the existing flood storage area at George V Avenue to store more flood water during high flows.			

**6. Do you currently use or access the open space above Albury Drive, near Pinnerwood Farm where we are proposing the Pinner and Hatch End options listed in question 5?**

Please tick	
Yes	
No	

**7. If you answered YES in your response to question 6 which of the following do you see as being an important use of this area?**

Please tick all which apply	
Access to green spaces (for example using local footpaths)	
Dog walking	
Formal recreation (for example taking part in a sport)	
Other (please specify)	

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# East Ruislip flood reduction options

In this area we are considering a combination of different types of options. The location of these can be seen in the map below. Please have a look at the map and then answer the questions.

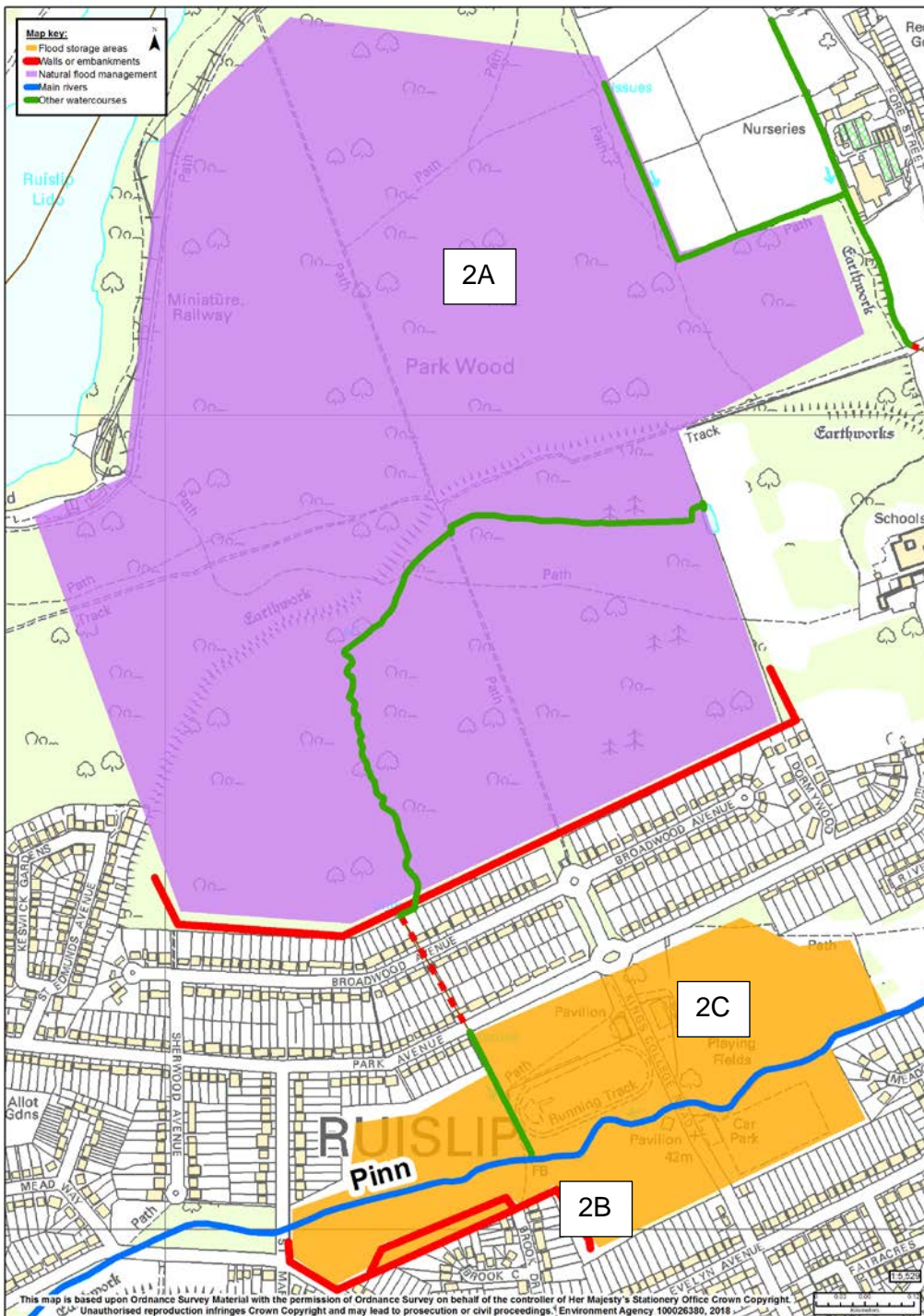


Figure 4 - East Ruislip



In reference to Figure 4, please answer the following question:

**11. Which of the options would you like to see taken forward for further analysis and investigations?**

Please tick all which apply

Option reference	Option type	Option description	Yes	No	Don't know
2A	Natural flood management (NFM) and flood storage	Consisting of leaky log dams and other NFM measures to slow flows from ditches draining from Park Woods. Includes an area for flood water storage in the southern area of Park Woods.			
2B	Embankment	An earth embankment to retain flood water on the playing fields, in combination with 2C.			
2C	New flood storage area	Storage of flood water in parts of Kings College Playing Fields during high river flows.			

**12. Do you currently use or access Kings College Playing Fields where we are proposing options 2B and 2C listed in question 11?**

Please tick	
Yes	
No	

**13. If you answered YES in your response to question 12 which of the following do you see as being an important use of this area?**

Please tick all which apply	
Access to green spaces (using local footpaths for example)	
Dog walking	
Formal recreation (for example taking part in a sport)	
Other (please specify)	

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**14. Do you currently use or access Park Wood where we are proposing the ooptions listed in question 11?**

Please tick	
Yes	
No	



# West Ruislip flood reduction options

In this area we are looking at a combination of different types of options. The locations of these can be seen on the map below. Please have a look at the map and answer the questions.

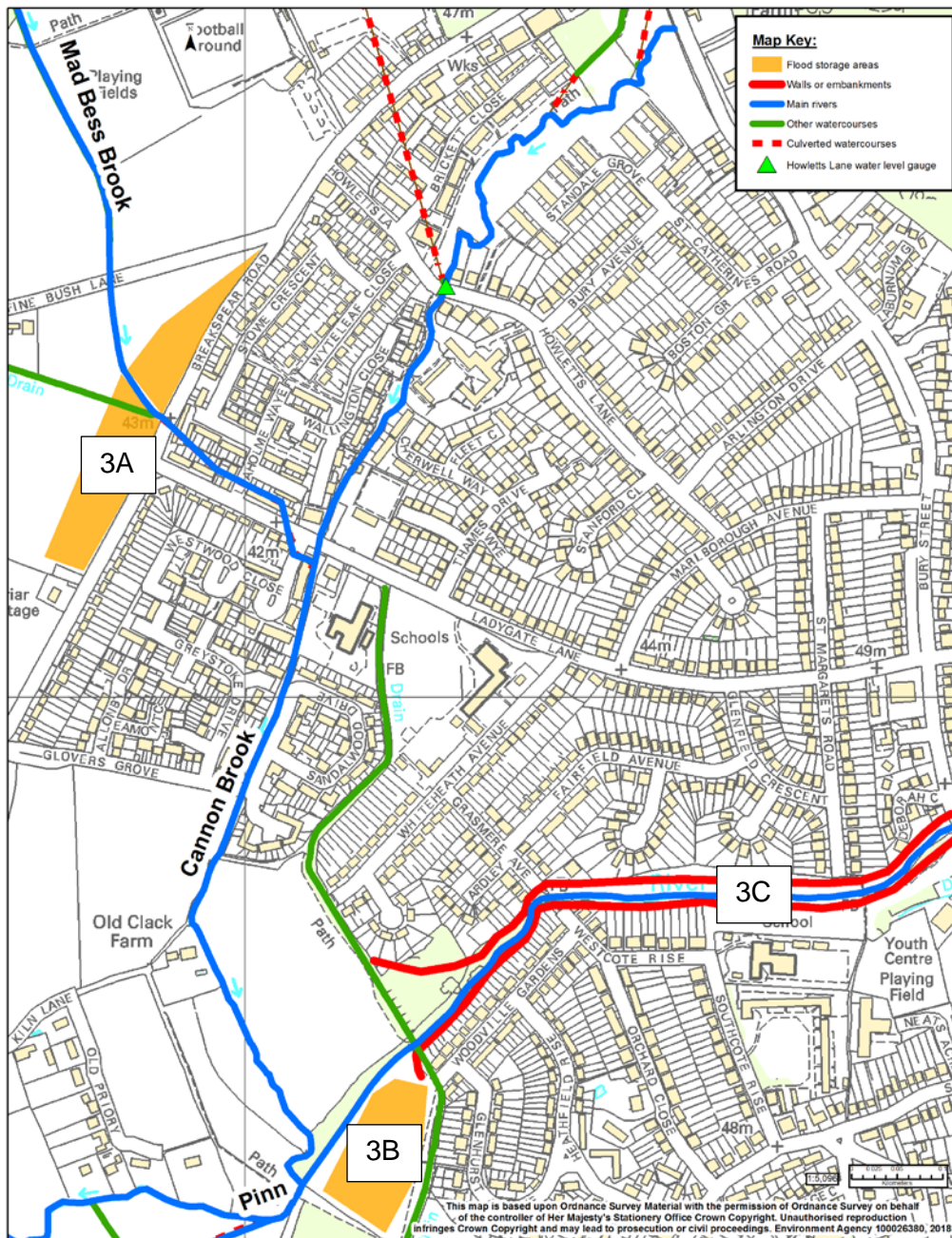


Figure 5 - West Ruislip

In reference to Figure 5, please answer the following question:

**17. Which of the options would you like to see taken forward for further analysis and investigations?**

Please tick all which apply

Option reference	Option type	Option description	Yes	No	Don't know
3A	New flood storage area	Storage of flood water in fields to the west of Breakspear Road and south of Fine Bush Lane during high river flows.			
3B	New flood storage area	Storage of flood water in fields close to where the Cannon Brook and River Pinn join in Ruislip.			
3C	Walls and embankments	A combination of improving current riverside embankments and creating new ones to keep water in the river corridor for longer.			

**18. Do you currently use or access any of the open spaces where we are proposing options listed in question 17?**

Please tick	
Yes	
No	

**19. If you answered YES in your response to question 18 which of the following do you see as being an important use of these areas?**

Please tick all which apply	
Access to green spaces (using local footpaths for example)	
Dog walking	
Formal recreation (for example taking part in a sport)	
Other (please specify)	

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**20. Please add any further comments on the options proposed for West Ruislip here:**

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# Ickenham flood reduction options

In this area we are considering a combination of options. The location of these can be seen on the maps below. Please have a look at the maps and answer the questions.

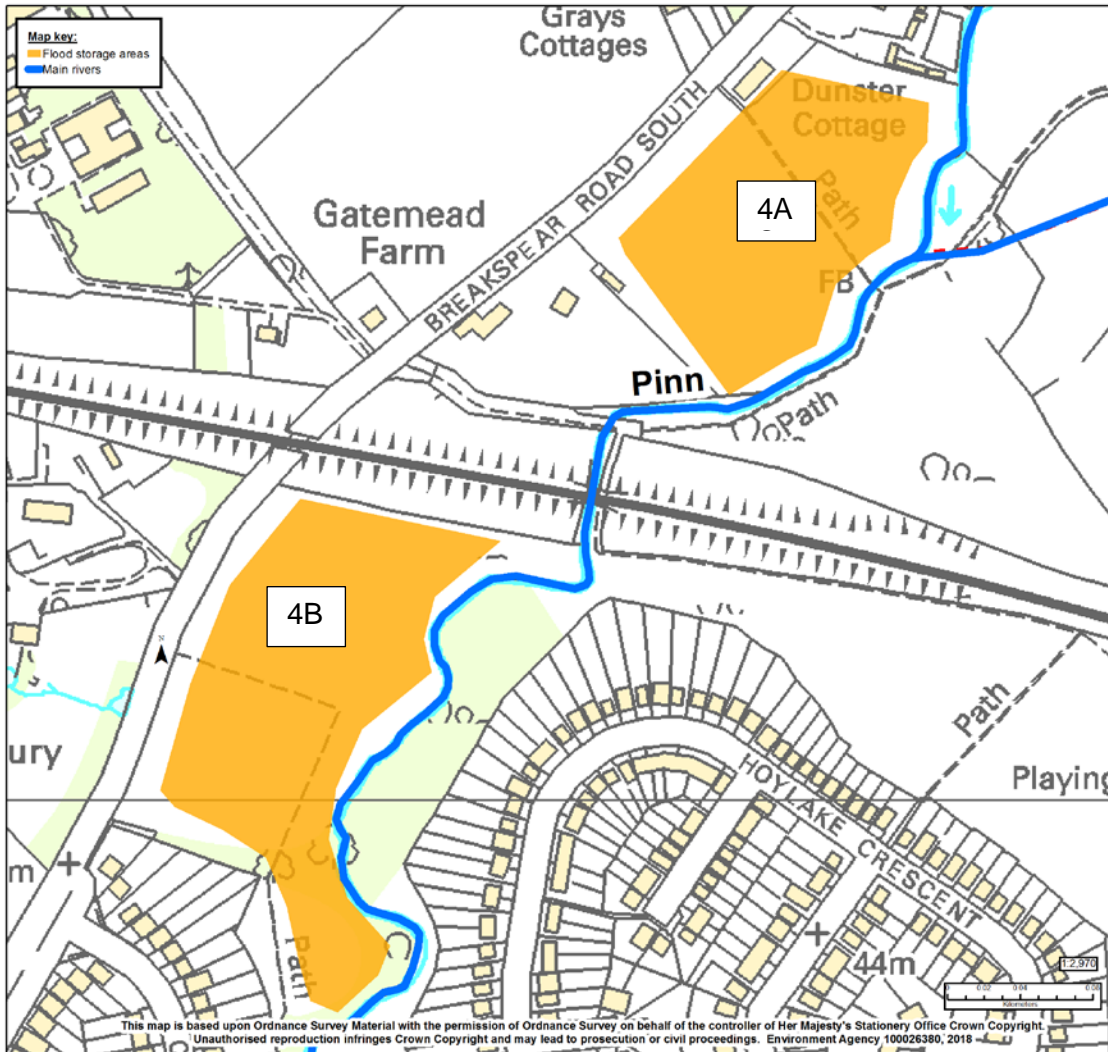


Figure 6 - Ickenham Map 1

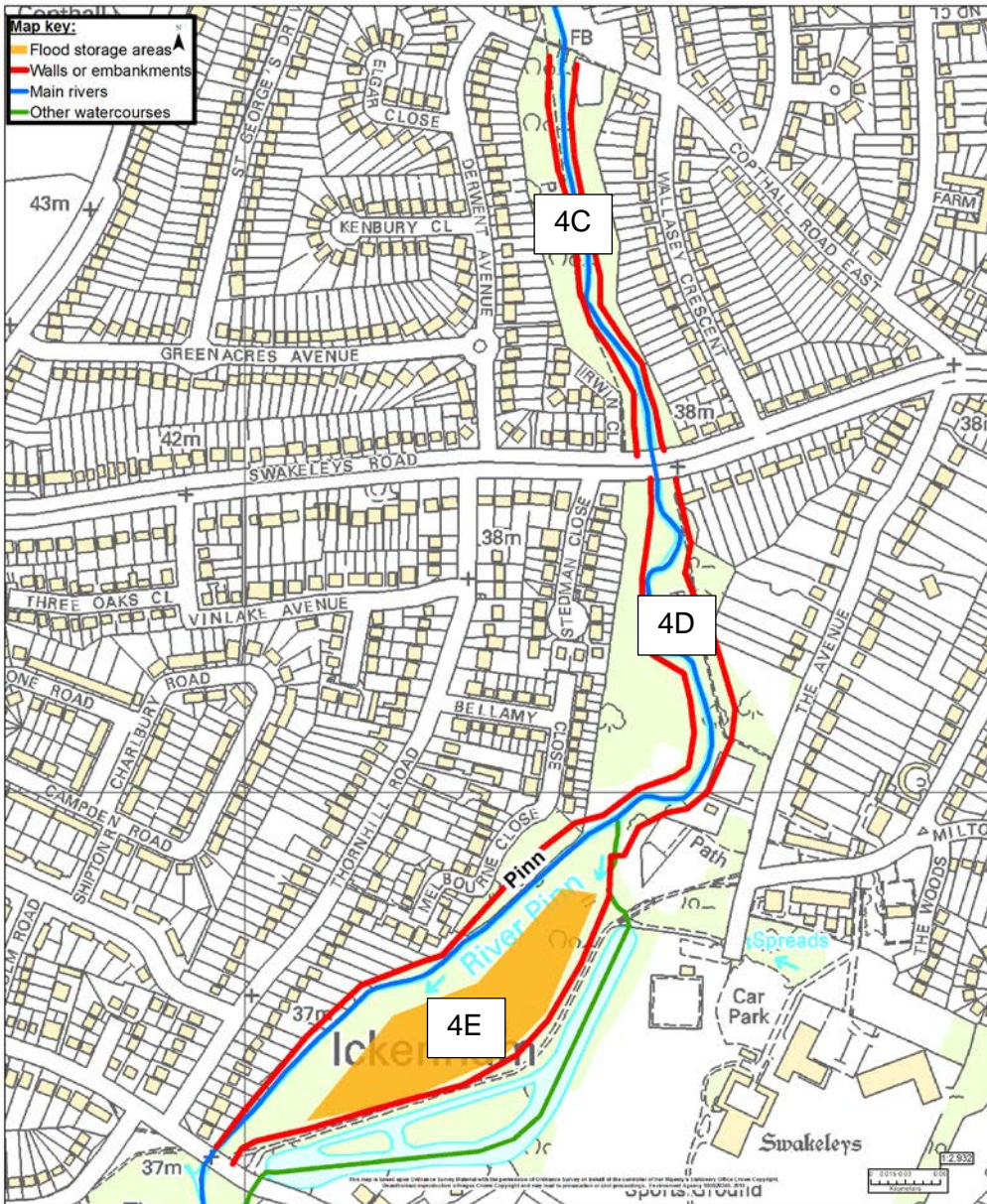


Figure 7 - Ickenham Map 2



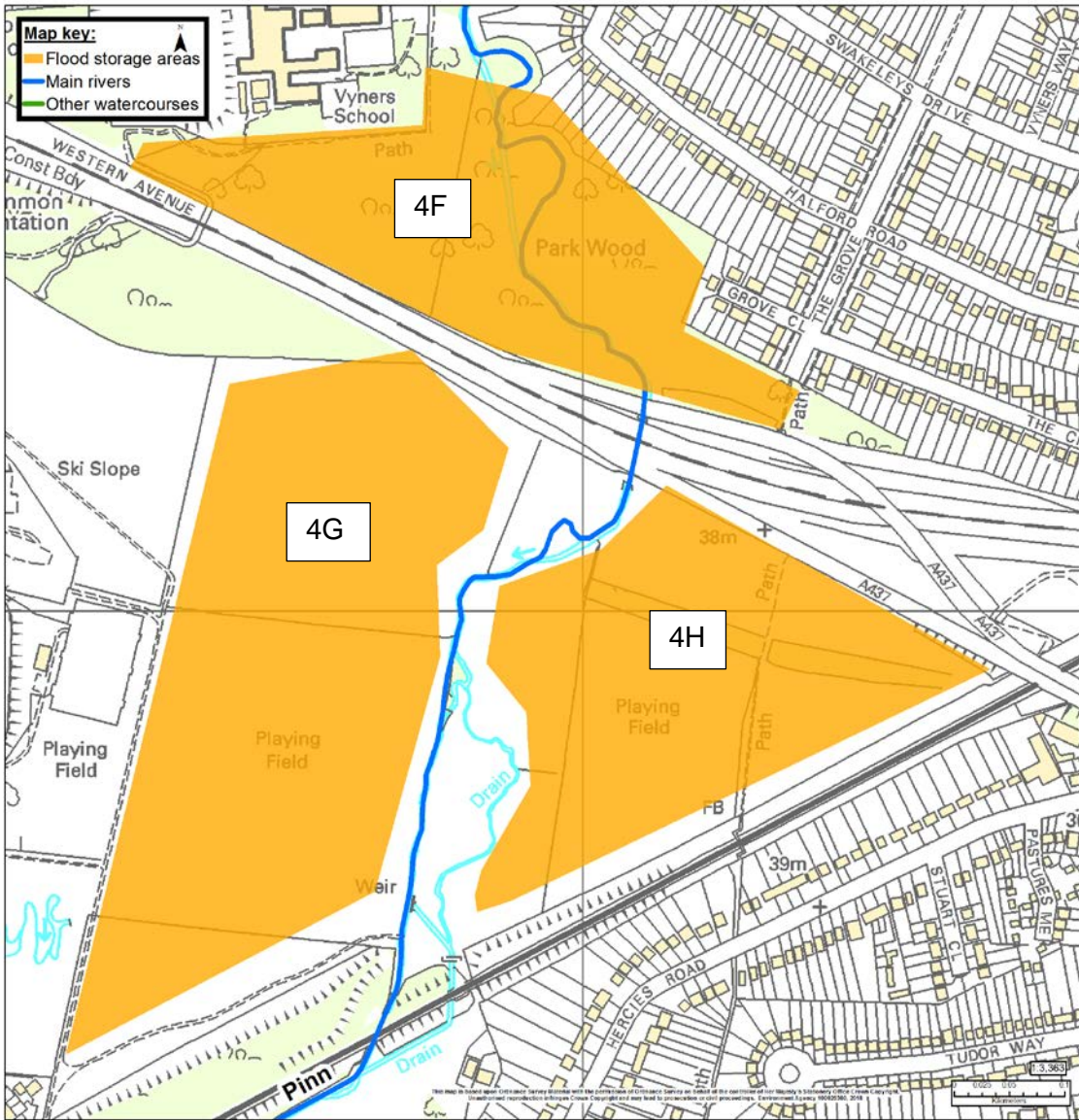


Figure 8 - Ickenham Map 3



In reference to Figures 6, 7 and 8, please answer the following question:

**21. Which of the options would you like to see taken forward for further analysis and investigations?**

Please tick all which apply

Option reference	Option type	Option description	Yes	No	Don't know
4A (map 1)	New flood storage area	Utilising open space to the north of the River Pinn, across from Ruislip golf course to store flood water during high river flows.			
4B (map 1)	New flood storage area	Storage of water in fields to the south west of where the railway line crosses the River Pinn during high river flows.			
4C and 4D (map 2)	Walls and embankments	Earth embankments or walls to keep water in the river corridor for longer during high river flows			
4E (map 2)	New flood storage area	Utilising open space in Swakeleys Park to store flood water during high river flows.			
4F (map 3)	New flood storage area	Utilising woodland as an area for flood storage during high river flows.			
4G and 4H (map 3)	New flood storage areas	Utilising open space south of the A40 to store flood water during high river flows.			

**22. Do you currently use or access any of the open spaces where we are proposing options listed in question 21?**

Please tick	
Yes	
No	

**23. If you answered yes in your response to question 22 which of the following do you see as being an important use of these areas?**

Please tick all which apply	
Access to green spaces (using local footpaths for example)	
Dog walking	
Formal recreation (for example taking part in a sport)	
Other (please specify)	

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# Hillingdon and Uxbridge flood reduction options

In this area we are considering a combination of options. The location of these can be seen on the map below. Please have a look at the map and then answer the questions.

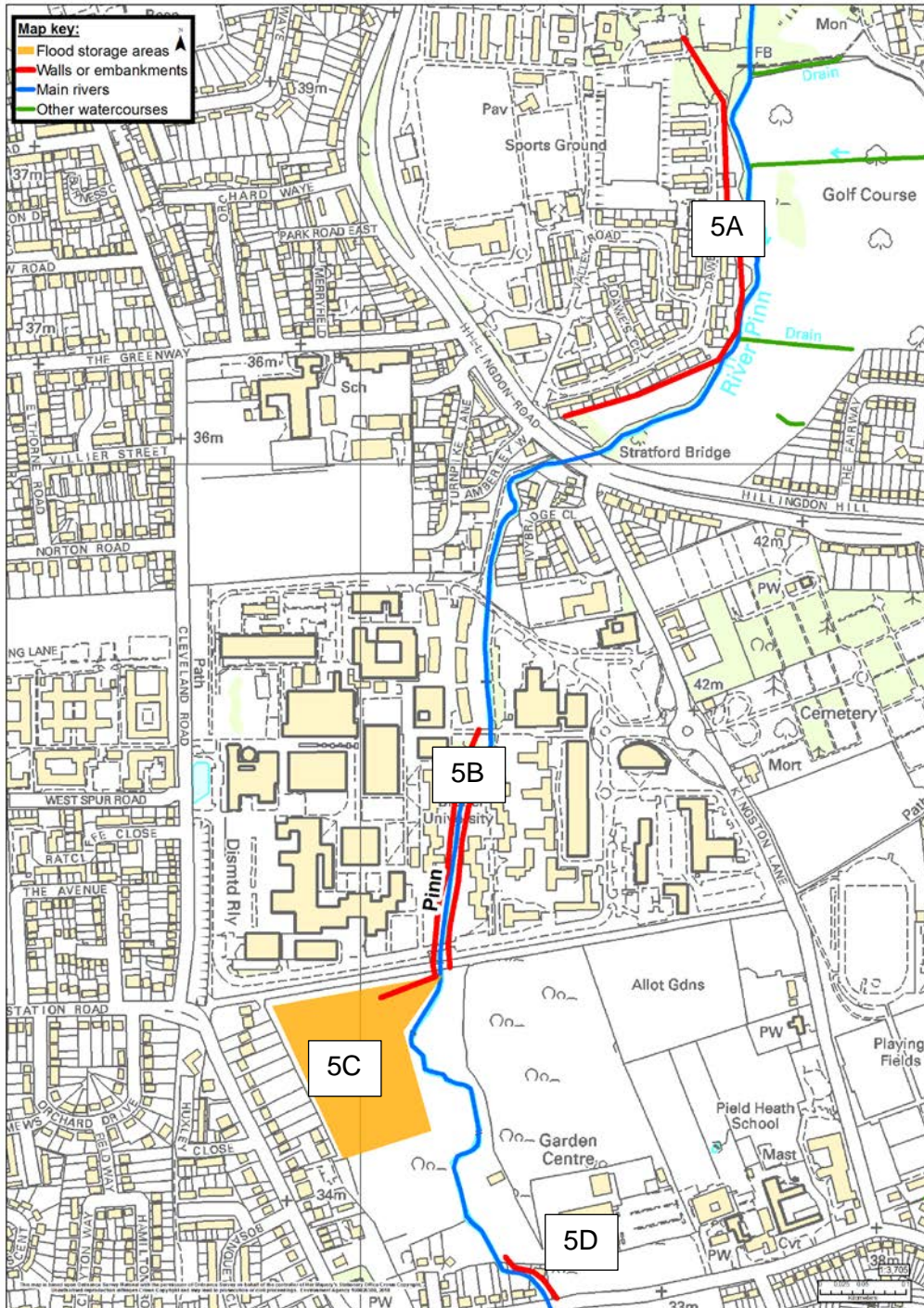


Figure 9 - Hillingdon and Uxbridge

In reference to figure 9, please answer the following question:

**25. Which of the options would you like to see taken forward for further analysis and investigations?**

Please tick all which apply

Option reference	Option type	Option description	Yes	No	Don't know
5A	Walls and embankments	Construction of an embankment to reduce the risk of flooding to properties locally.			
5B	Walls and embankments	Construction of an embankment to reduce the risk of flooding to Brunel University.			
5C	New flood storage area	Utilising open space to the south of Brunel University to store flood water during high river flows.			
5D	Walls and embankments	Construction of an embankment to reduce the risk of flooding to properties locally.			

**26. Do you currently use or access any of the open spaces where we are proposing options listed in question 25?**

Please tick	
Yes	
No	

**27. If you answered YES in your response to question 26 which of the following do you see as being an important use of these areas?**

Please tick all which apply	
Access to green spaces (using local footpaths for example)	
Dog walking	
Formal recreation (for example taking part in a sport)	
Other (please specify)	

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**28. Please add any further comments on the options proposed for Uxbridge below:**

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# Yiewsley flood reduction options

In this area we are considering a combination of different types of options. The location of these can be seen on the map here. Please have a look at the map and then answer the questions.

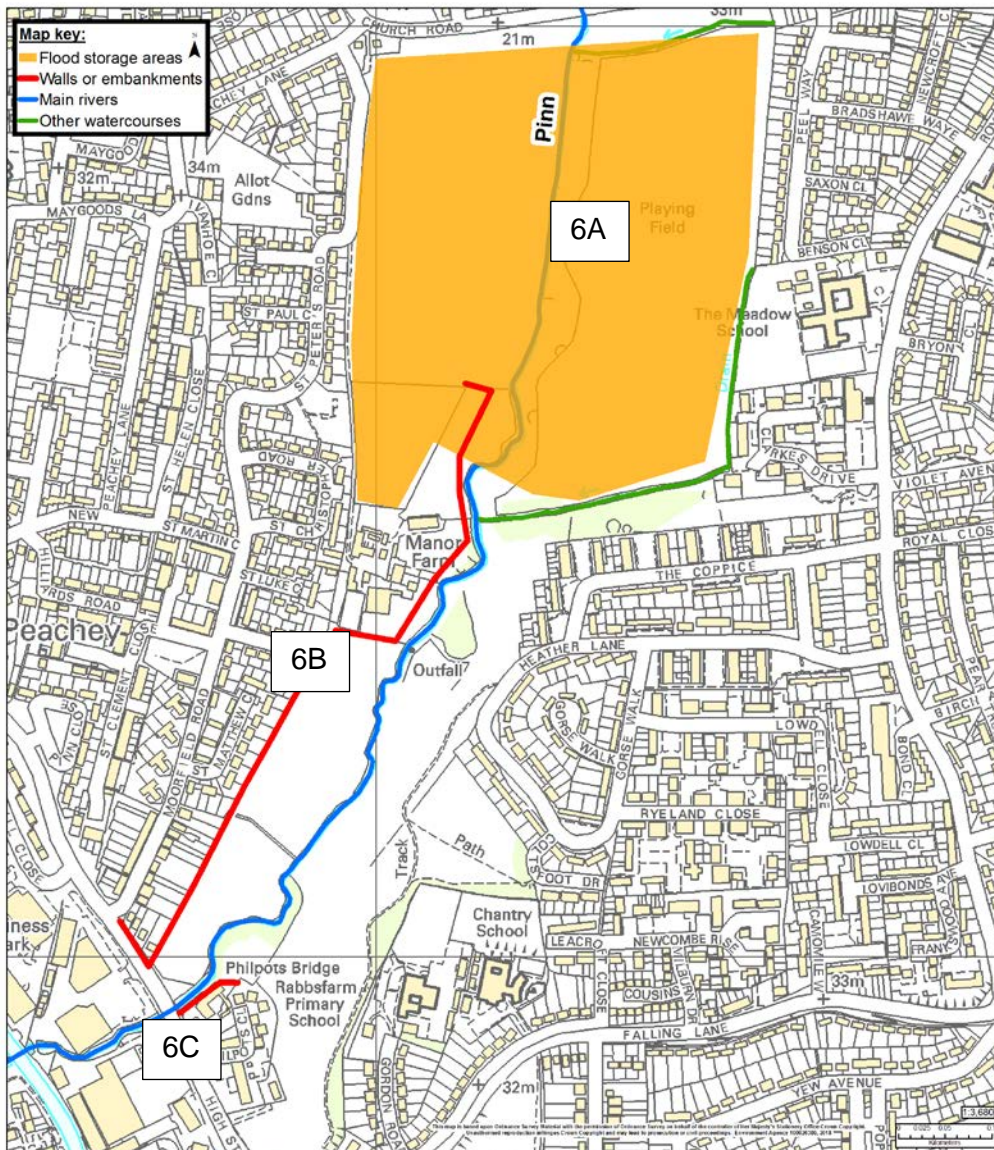


Figure 10 - Yiewsley

In reference to Figure 10, please answer the following question:

**29. Which of the options would you like to see taken forward for further analysis and investigations?**

Please tick all which apply

Option reference	Option type	Option description	Yes	No	Don't know
6A	New flood storage area	Utilising open space south of Church Road to store flood water during high river flows on both sides of the river.			
6B and 6C	Walls and embankments	Construction of embankments through open space and along the perimeter of Grange School to reduce the risk of flooding to the school and properties locally.			

**30. Do you currently use or access any of the open spaces where we are proposing options listed in question 29?**

Please tick	
Yes	
No	

**31. If you answered YES in your response to question 30 which of the following do you see as being an important use of these areas?**

Please tick all which apply	
Access to green spaces (using local footpaths for example)	
Dog walking	
Formal recreation (for example taking part in a sport)	
Other (please specify)	

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**32. Please add any further comments on the options proposed for Yiewsley below:**

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# Please tell us if you have changed your views

**33. Having read the information in this consultation, have you changed your views on our River Pinn and Cannon Brook flood reduction proposals?**

Please tick	
Yes	
No	

Please explain your answer below:

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## Your feedback

**34. We would be very grateful if you could tell us how satisfied you were filling in this document and if you have any suggestions for how it could be improved.**

Please tick	
Very satisfied	
Satisfied	
Neither satisfied or dissatisfied	
Dissatisfied	
Very dissatisfied	
Don't know	

**Please tell us if you have any suggestions on how we could improve it**

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