

# Oxford Flood Alleviation Scheme

- Reducing flood risk
- Enabling a thriving economy
- Connecting people and the environment



## Consultation response report Spring 2016

# Executive summary

## Introduction

This report is a summary of the outcomes from our public consultation, held between 19 January and 1 March 2016, to obtain public views about route options for the Oxford Flood Alleviation Scheme.

We ran the consultation online for 6 weeks, within which time we also held 5 public events where we displayed information on the scheme, route options and other subjects such as potential environmental and recreational benefits, funding and maintenance. We ran the consultation online to make it more accessible to a wider and more diverse audience, and held the events in the areas affected by flooding or close to the possible route for the scheme. This included one event held in an active community downstream of the scheme where we knew there was significant interest. We also held meetings with landowners, tenants and interest groups along the possible routes.

876 people visited the drop-in events with 78% telling us the events were useful or very useful. We received over 300 written responses to the consultation from people who attended one of our events or who completed the online consultation.

Each submission has been published online and can be read in full at:

<https://consult.environment-agency.gov.uk/file/3846008> and  
<https://consult.environment-agency.gov.uk/file/3876413>

This document outlines how we ran the consultation and summarises the responses. We have also analysed the outcomes, identified the key themes that were expressed and provided our response to these.

## The scheme

Some of the notable outcomes from our analysis reveal:

- There is widespread support for the scheme as a solution to Oxford's flooding problem.
- There is some anxiety amongst those living on the River Thames downstream of Oxford that the scheme will pass on the flooding problem to their communities. There is a misunderstanding that water could be carried around Oxford more quickly and on to lower reaches of the river.
- There is interest in taking a wider catchment approach to flood management. Some respondents were concerned that the solutions focus too much on Oxford when other areas are also vulnerable to flooding.

- People told us they consider one of the benefits which can arise from the scheme is the opportunity to protect or enhance wildlife spaces and natural habitats.
- Ensuring the landscape is considered sensitively and natural habitats preserved features in many of the comments. There is a strong preference for avoiding or minimising any disturbance to specific species.
- The creation of new cycle ways and footpaths are both well supported benefits from the scheme. These include both north-south and east-west routes.
- People have concerns about channel maintenance. Some respondents believe that flooding is worsened by poor maintenance or because stretches of the River Thames channel are not routinely dredged. Some respondents raise concerns about the future maintenance of any new flood channels.

These comments are extracted from a wide range of views we received. Many of these address issues which we have responded to by identifying key themes. These themes are:

Themes		Themes	
1	Maintenance after construction	7	The 2-stage channel
2	Use of existing river channels	8	Future flood risk
3	Downstream flooding	9	Benefits to homes at risk
4	Complexity of the scheme's solution	10	Protection of wildlife habitat and landscape
5	Cost benefit	11	Disruption during construction
6	Catchment wide approach		

### Route options

An important outcome from our consultation was an understanding of which options were preferred or opposed from the range of possible options. The route was divided into 7 different areas to allow the different options in each area to be scrutinised.

The most favoured and least favoured options in each area are summarised here.

### Area 2 – Botley Road to Willow Walk

Most popular – 2B, 2A	Least popular – 2D
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Concerns about the wildlife meadow habitat and trees along the Hinksey Stream were the main reasons for strong support for options 2B and 2A.

### Area 3 – Willow Walk to Devils Backbone

Most popular – 3A	Least popular - 3B, 3C and 3D
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Option 3A received the greatest support and was considered to be the least intrusive option.

### Area 4 – Devils Backbone, South Hinksey and Redbridge

Most popular – 4B	Least popular – 4C
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The most strongly supported option was 4B, which many respondents told us made the best use of existing channels and the least impact on the landscape, in what is recognised as a very difficult area of the route. It was also viewed as providing the greatest protection to South Hinksey.

### Area 5+6 – Kennington and Sandford

Most popular – 5/6B	Least popular – 5/6A
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There was clear support for 5/6B in this area. Whilst 5/6A was the least preferred option, it also had a high level of support and was the second most popular option.

### Area 7 – Weirs Land and Iffley Meadow

Most popular – 7C	Least popular – 7A
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The impact of option 7A on residents living in narrow boats at moorings near Weirs Mill dominates concerns about this area. There is also comment about the impact on Iffley Meadow which is a Site of Special Scientific Interest (SSSI). Amongst respondents the preferred option was 7C with 69% of responses telling us they least preferred option 7A.

### Next steps

The responses to the consultation will feed into our analysis of the options, which also considers technical issues as well as environmental and social impacts. The most and least preferred options indicated above, and the reasons behind these, are one factor out of many which we consider to help us determine the preferred option. We will complete this analysis and announce the preferred option in Summer 2016.

Once this is known we will be doing further detailed modelling work to assess the effectiveness of the scheme.

We will also shortly start preparations for submitting our planning application and if it is granted, construction could begin in 2018.

There will be further opportunity for public comments when we hold our next consultation, currently planned for Spring 2017.

# Contents

Executive summary .....	2
Introduction .....	2
The scheme .....	2
Route options.....	3
Area 2 – Botley Road to Willow Walk .....	3
Area 3 – Willow Walk to Devils Backbone .....	4
Area 4 – Devils Backbone, South Hinksey and Redbridge.....	4
Area 5+6 – Kennington and Sandford .....	4
Area 7 – Weirs Land and Iffley Meadow.....	4
Next steps .....	4
Content.....	5
1. Introduction.....	7
2. Consultation objectives.....	8
3. The consultation process.....	9
The timeline for the consultation .....	9
Public consultations .....	9
Consultation events .....	9
Landowners and users .....	9
Consulting with our partners.....	9
Internal Environment Agency staff.....	9
Promoting the consultation .....	10
Online consultation .....	12
Questionnaire .....	13
4. Public events .....	14
Content .....	14
Staffing.....	15
Attendance.....	15
Who came to the drop-ins? .....	15
Visitor's drop-in experience .....	16
5. Consultation responses .....	16
6. Opinions and comments .....	19

General comments about the scheme .....	19
Maintenance after construction .....	20
Use of existing channels .....	20
Downstream impacts .....	21
Complexity of the solution .....	21
Cost benefit .....	21
A catchment-wide approach .....	22
Other 2-stage channels .....	22
Future flood risk.....	22
Benefits to homes at risk of flooding.....	23
Need to protect wildlife habitat and landscape .....	23
Disruption during construction .....	24
Comments about areas within the scheme .....	25
Area 2 Botley Road to Willow Walk (including North Hinksey and Osney) .....	25
Area 3 – Willow Walk to Devil’s Backbone .....	27
Area 4 Devil’s Backbone, South Hinksey and Redbridge .....	29
Area 5 and 6 Kennington and Sandford .....	30
Area 7 Weirs Mill and Iffley Meadow .....	31
Benefits of the scheme .....	33
.....	<b>Error! Bookmark not defined.</b>
7. Making use of the feedback.....	34
What happens next .....	34
Designing the channel .....	34
Further opportunities for public comments .....	34
APPENDIX .....	35
Appendix 1: Key map of the scheme areas (1-7) .....	35
.....	35
Appendix 2: .....	36
Responses which were not submitted using our questionnaire .....	36
Appendix 3: Questionnaire.....	39
Appendix 4: Register of Responses .....	44

# 1. Introduction

Oxford has 4,500 properties at a 1% or higher risk of flooding each year. This number could rise to nearly 6,000 by the year 2080 with the predicted effects of climate change. Major roads, the railway line, schools and businesses could also be affected by flooding.

The Oxford Flood Risk Management Strategy, published in 2009, produced a detailed study of the flood risk from rivers in Oxford. The strategy described how flood risk can be managed in Oxford over the next 100 years, in 3 phases. The first phase included asset repairs and maintenance, and was completed in 2012.

The second phase identified that the best way to manage flood risk in Oxford was to construct a flood relief channel through the western floodplain. The Environment Agency is therefore working in partnership with Oxfordshire County Council, Oxford City Council, Vale of White Horse District Council, Thames Regional Flood and Coastal Committee, Thames Water, University of Oxford, Oxford Local Enterprise Partnership, the Oxford Flood Alliance to develop a flood alleviation scheme. The proposed flood relief channel will reduce the risk to over 1,000 homes and businesses as well reducing the impact of flooding on major transport routes.

We shared our outline proposals at a series of public events in the summer of 2015. These were attended by almost 300 people who were asked to share their comments, ideas and concerns with our team.

The feedback from these events, along with further groundwork investigations and analysis, allowed consultants CH2M Halcrow to prepare options to alleviate flood risk using the capacity of the western flood plain.

Our consultation in January to March 2016 presented these options to the public and stakeholders. The opinions, ideas and concerns expressed during this consultation are helping to identify the preferred route option. This report includes a summary of the consultation and its outcomes.

## 2. Consultation objectives

Our primary objective for this consultation has been to engage with people living in Oxford and Oxfordshire, particularly those who experience flooding, live in or close to the western flood plain, and others living in areas along the River Thames.

We aimed to obtain the views of the public and other stakeholders on a number of options for the proposed flood relief channel around Oxford.

In addition we asked for further information on the potential environmental and recreational opportunities which the scheme could bring, and ideas on how we can manage other aspects of the scheme such as materials management, funding and construction.

We also took the opportunity to explain how we used public views from our drop-in events in summer 2015 to develop the most viable options, balancing them with the opinions of landowners and technical constraints, and to get feedback on our communication about the scheme to help us improve in future.

The consultation aimed to share the flood alleviation scheme route options and get opinions about these to assist in the development of a preferred route.

### 3. The consultation process

#### The timeline for the consultation

The consultation opened on 19 January and closed on 1 March 2016.

We began preparing for the public consultation in September 2015. The timing of the consultation was based on the deadline for our technical consultants completing the shortlist of viable route options.

#### Public consultations

We identified groups who may have interests in the scheme including local residents, downstream communities, businesses, recreational and commercial river users, charities, statutory organisations and members of the public.

#### Consultation events

We held 5 public drop-in events during the consultation. Each venue was chosen to make it easy for the people most directly affected by the scheme to attend. 4 of these events were held at locations close to communities in Oxford's western floodplain. A fifth event was held in Abingdon to provide a convenient place for residents in downstream communities to attend.

Each event was open from 2.30 until 7pm to enable a diverse range of people to visit. The events were held during a 2 week period, giving people a choice of dates.

#### Landowners and users

In early January we met with landowners, agents, occupiers and tenants whose properties lie in the flood alleviation scheme area. We held face-to-face meetings before the public consultation opened, to discuss the options that will impact them directly. In total we had 16 meetings with different landowners or their agents and Weirs Mill boat residents.

#### Consulting with our partners

We held face-to-face meetings with our partners before the public consultation opened. Once the consultation was launched they commented on the options and submitted their consultation responses on behalf of their organisations.

#### Internal Environment Agency staff

We held internal meetings with Environment Agency staff before and during the consultation period, to obtain their feedback and comments about the scheme and route options. Their comments have been taken into account, along with the other formal consultation responses to help decide upon the route option.

## Promoting the consultation

Our public events were promoted using leaflets, posters, email, media stories, websites and social media.

- We delivered leaflets to 7,500 homes in the floodplain from Botley Road in the north, down to Kennington in the south. These were delivered 7 days before the first event.

**Oxford Flood Alleviation Scheme**

- Reducing flood risk
- Enabling a thriving economy
- Connecting people and the environment

The Environment Agency and partners are working together to reduce flood risk in Oxford

**January 2016 public events and consultation**

**View the options we are considering for the route of a flood relief channel**

- We want to hear your views about the possible routes a relief channel might take around Oxford
- Talk to us about the recreational, environmental and economic benefits the scheme could bring
- Find out what we have done with information given to us at our first public events
- Complete the public consultation at one of the events or online

Date 2:30pm to 7:00pm	Venue
Tuesday 19 January	Oxford Town Hall OX1 1BX
Wednesday 20 January	Abbey House (Council Offices), Abingdon OX14 3JE
Friday 22 January	South Oxford Community Centre OX1 4RP
Wednesday 27 January	Kennington Village Centre OX1 5PG
Thursday 28 January	West Oxford Community Centre OX2 0BT

For more information contact: [oxfordscheme@environment-agency.co.uk](mailto:oxfordscheme@environment-agency.co.uk)  
The consultation runs from 19 January to 1 March 2016 and can be completed at one of the events or online at [www.gov.uk/government/publications/oxford-flood-risk-management-scheme](http://www.gov.uk/government/publications/oxford-flood-risk-management-scheme)

- We displayed posters at supermarkets, local convenience stores and at community buildings, facilities and drop-in venues.
- We sent e-newsletters to everyone signed up to our mailing list for the scheme 2 weeks ahead of the first event.
- Our partners, Oxford Flood Alliance, Oxford City and Oxfordshire County Councils, and the Environment Agency's regional Twitter account tweeted about the events.

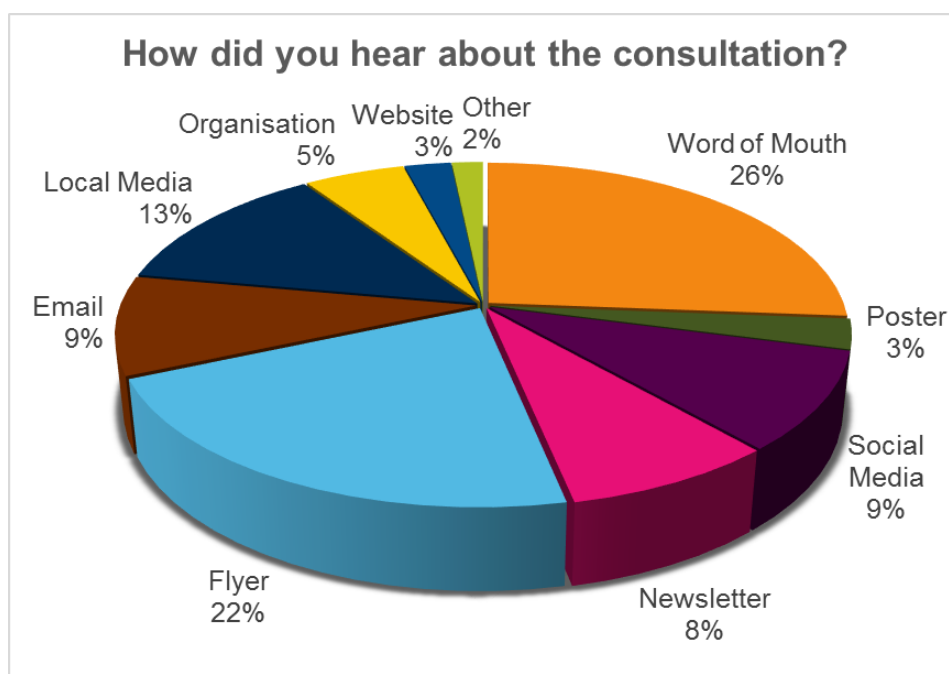


- We contacted local parish councils and community groups by email.
- We informed landowners and organisations about the consultation by email.

- We issued a press release ahead of the first event and invited Oxfordshire media organisations to the first public event at Oxford Town Hall on 19 January. The story was carried by local print, radio and TV media on the opening day of the consultation. Follow-up articles were also produced throughout the consultation.

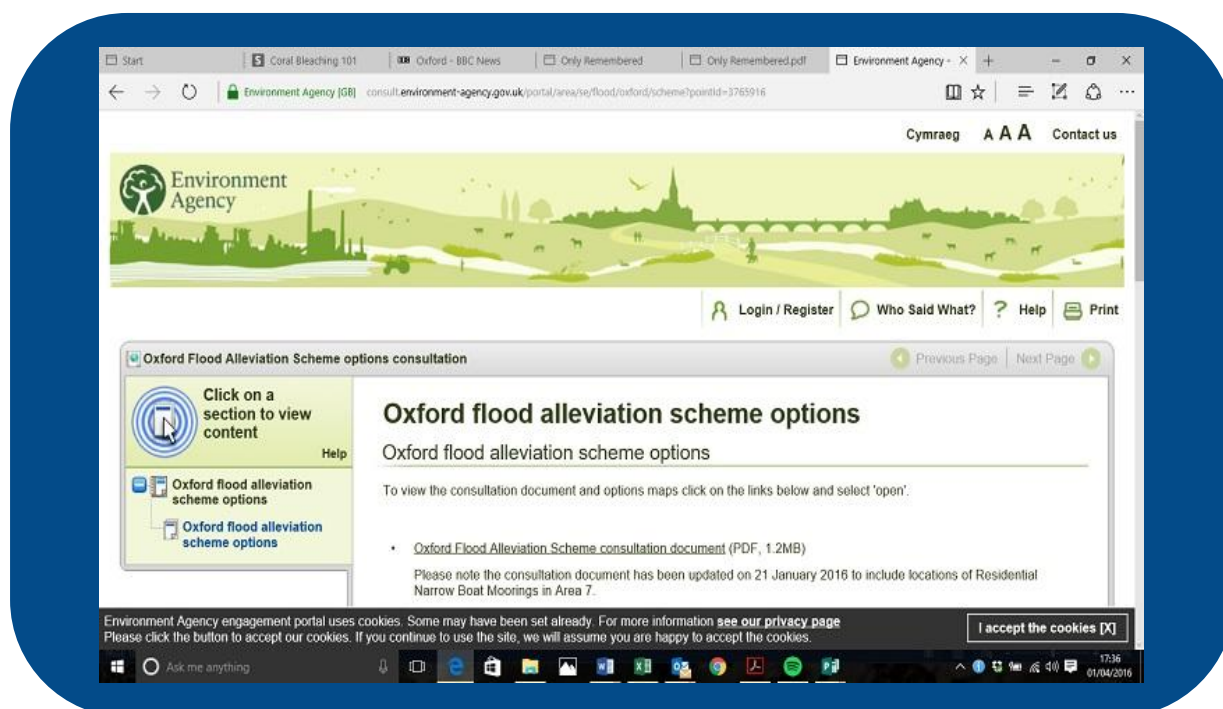


The majority of people attended drop-in events or responded after hearing about the consultation directly through our promotions.



The largest group attending came from homes we leafleted within the scheme area. A significant number of people told us they had been made aware of the consultation through word of mouth.

## Online consultation



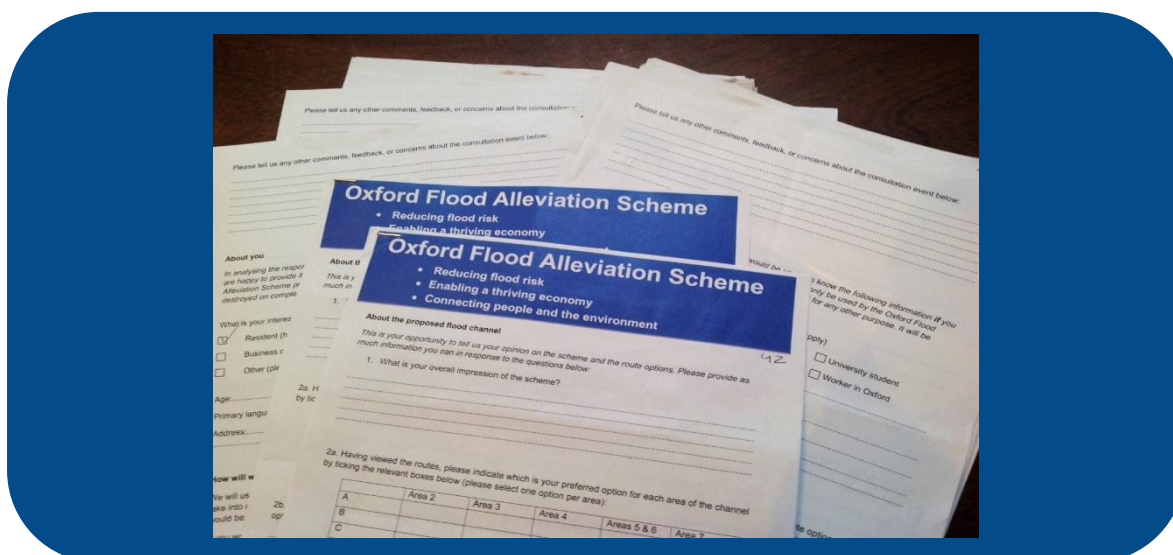
In addition to our public events, we also made the consultation information and response form available online at <https://consult.environment-agency.gov.uk/portal/>, between 19 January and 1 March. We did this to ensure a wider range of people could access the consultation process. This online access was promoted through QR quick links on posters and other literature distributed door to door as well as at our events. Our partners also promoted the online consultation in a range of other communications.

## Questionnaire

The questionnaire for the consultation was put together based on the objectives of the consultation. These were:

- to understand the public's preferred and least preferred options;
- to gain local knowledge and ideas to help with materials management, funding and construction;
- to understand public preference about potential additional benefits of the scheme.

A section titled 'About you' included questions designed to help us evaluate our communications and public engagement so far, and to help us develop and improve our future engagement. The questions were designed to help us understand the audiences we were reaching via our events and online consultation. We also wanted to gauge the effectiveness of our engagement using social media, traditional media, posters, flyers, and face-to-face.



A balance of open and closed questions were included, to produce both quantitative and qualitative feedback. The questionnaire was compared to previous consultations and tested on peers. Further assistance was received from the Environment Agency Consultation Lead before it was finalised.

A copy of the questionnaire is included in the appendix of this report.

## 4. Public events



Our drop-in public events were designed to give visitors a clear view of the route options and to speak with the team from the Environment Agency, our consultants and partners.

Each visitor was welcomed, briefly introduced to the exhibition and given a questionnaire sheet.

Visitors were invited to leave their email addresses if they wanted to receive e-newsletter updates on the scheme.

### Content

The primary focus of interest at the drop-in events was a series of panels showing the options developed by our consultants CH2M.

To allow scrutiny of these options we divided the scheme into Areas 1-7 and presented each of them on a separate display panel.

In addition, we had other displays which:

- illustrated how public feedback provided at a series of events in the summer of 2015 had been used;
- provided updated information about ground investigation work;
- explained about maintenance and managing materials during construction;
- summarised the emerging multiple benefits arising from the scheme.

### Staffing

At each event team members from the Environment Agency, partners and consultants were available to speak with visitors. Our team at each event included specialists who were available to respond to more detailed questions and concerns.

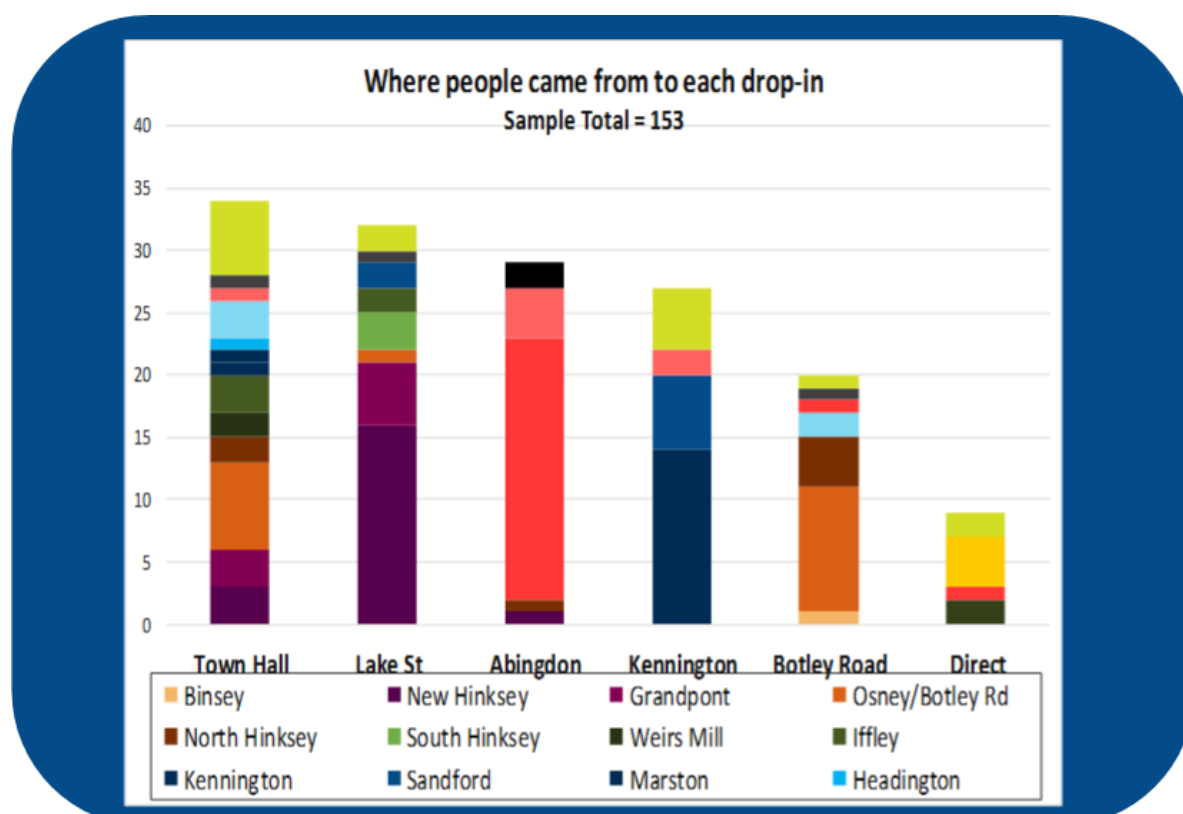
### Attendance

In total 876 people visited the drop-in events, numbers were evenly spread across all 5 venues.

Drop-In Venues	Attendance
Oxford Town Hall	184
Abingdon Abbey Building	181
South Oxford Community Centre	145
Kennington Village Hall	191
West Oxford Community Centre	175

### Who came to the drop-ins?

The largest number of people attending each venue were drawn from the nearby community, but a significant number of people at each event came from other parts of the city and county.

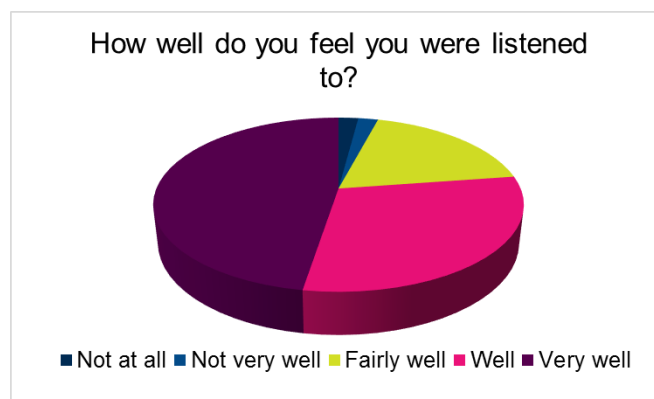
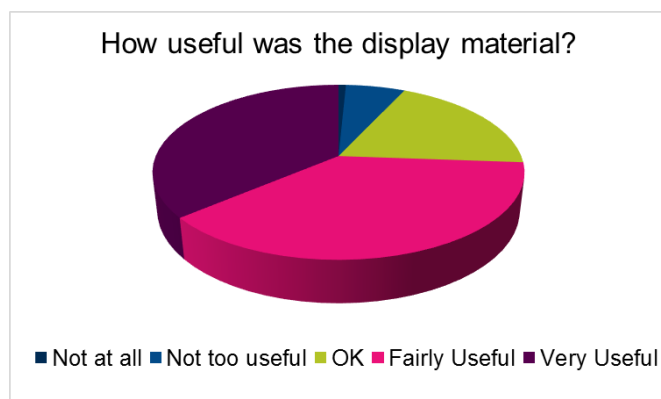
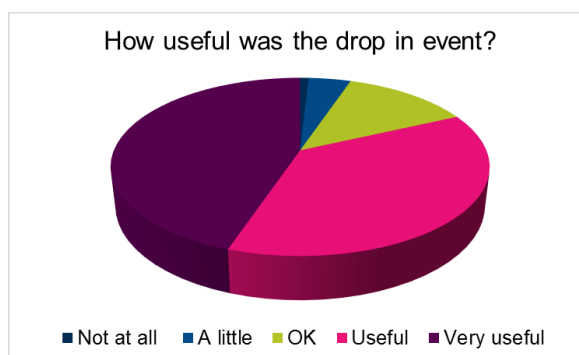


## Visitor's drop-in experience

"(I) am pleased that so much notice has been take of people's comments from the previous surveys and consultation."

"Very useful. It is always a worry for residents who may be subject to flooding."

Our drop-in events were very favourably received by visitors. Of the people who completed a section about the events in our questionnaire, 78% told us they found them either 'very' or 'fairly' useful. 61% of visitors at the drop-in events said their views were listened to 'very' or 'fairly' well. Others stated they would have like further information about the options, or information in different formats.

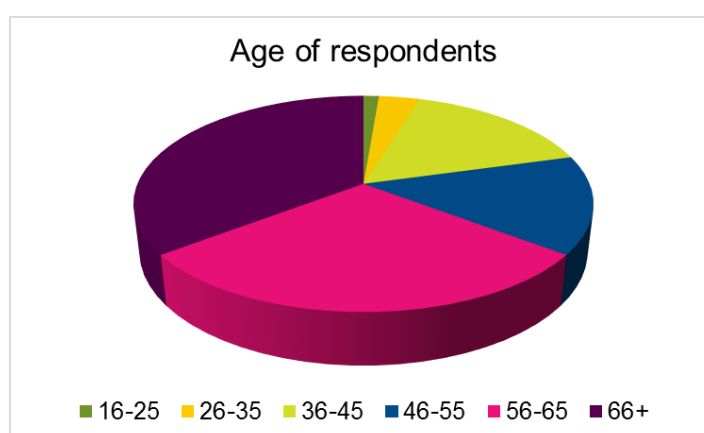


## 5. Consultation responses

We received 313 responses to the consultation. The majority of those people who responded said that they had attended one of our events.

Submissions	
Online	114
Drop-In events, Email or Post	199

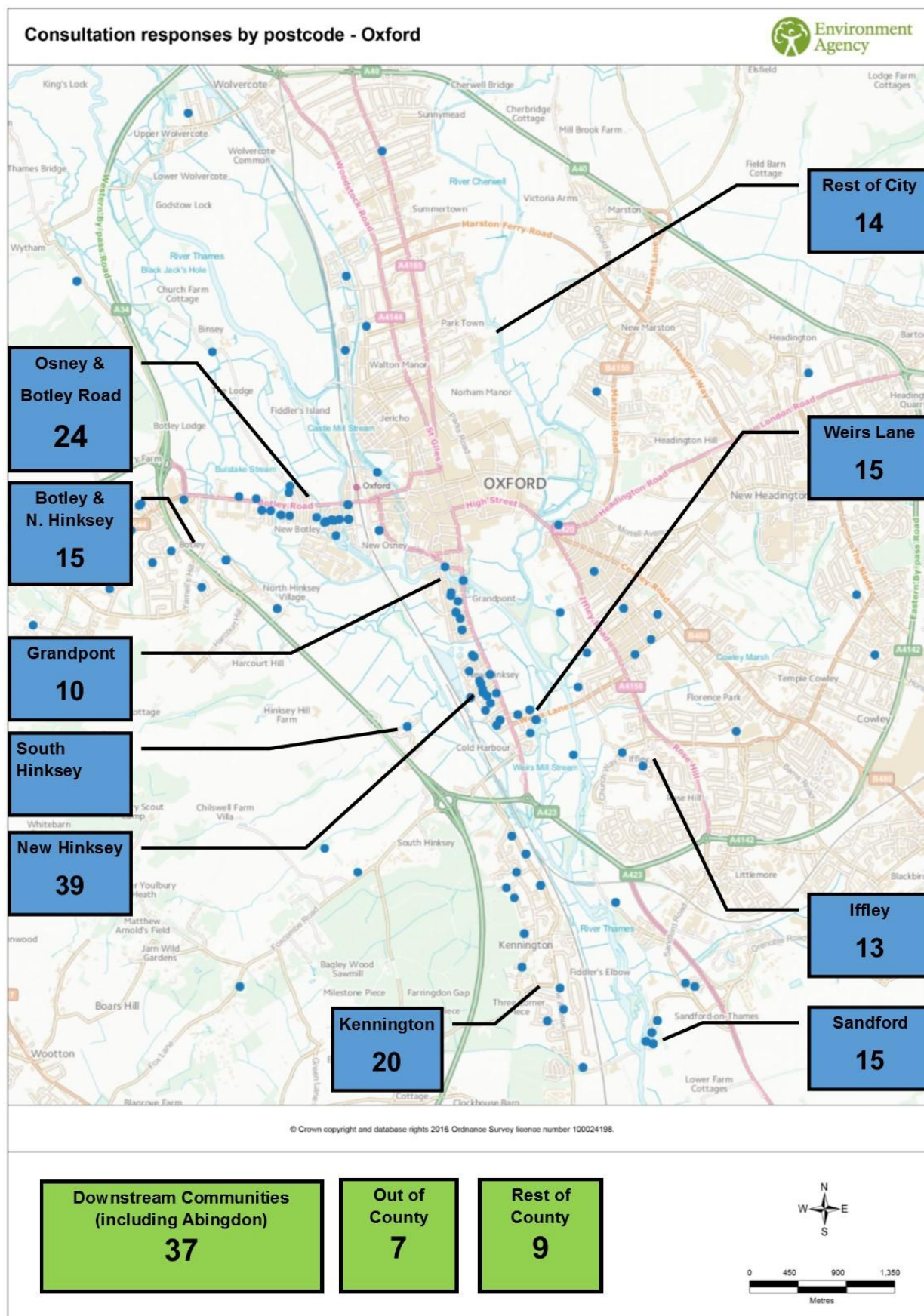
We found that 64% of respondents were aged over 55 and 34% aged between 25 and 55, and represented all ages groups. We intend to use this information to help plan our future engagement and to use other forms of communication to reach different age groups.



We were pleased to find that most respondents told us they found the information provided useful, 67% of respondents told us they found the consultation document 'very' or 'fairly' helpful.

### Where respondents live

By far the largest number of people attending our events came from areas which are directly impacted by flooding or who live within the scheme area. This included residents of upstream and downstream communities.



## 6. Opinions and comments

During the consultation we asked for views on the options for the flood alleviation scheme. We asked consultees to choose their 'most' and 'least' preferred options and share their reasons for these choices. The comments and observations made about each specific section of the scheme route are summarised by area.

We will be publishing the preferred option in early summer 2016 and at this point can provide more information supporting our decision.

There were also opportunities in the questionnaire for people to express general views and comments. We have summarised the range of views expressed in this section. The detailed questionnaire responses to can be downloaded at:

<https://consult.environment-agency.gov.uk/file/3846008>

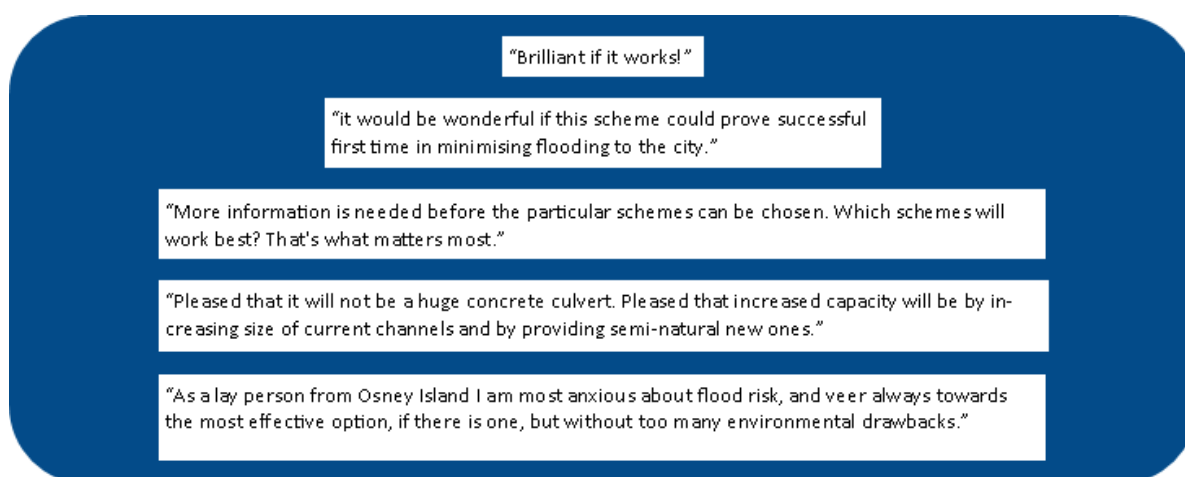
Some responses did not use the questionnaire format. Many of these were from organisations or individuals with specialist knowledge. These are briefly listed in appendix of this document. They can be read in full at:

<https://consult.environment-agency.gov.uk/file/3876413>

### General comments about the scheme

Many of the comments received were about general issues relating to the river, water management, and scheme-wide issues such as the cost and viability of the proposed solution to Oxford's flooding problem.

Overall, there is a high level of support for the scheme and an appreciation that the issues are being comprehensively addressed.



The most common concerns included; a belief that the same outcome might be achieved by clearing out streams and dredging the main river channels to reduce flooding risk; the need to ensure the rural nature of the landscape is not spoiled; the concern that communities downstream do not experience more flooding as a result.

A number of respondents felt that they will only be able to express a view once the preferred route for a channel is known and further modelling has been completed. Many of these respondents appreciated the opportunity to view the options, but felt that there are too many variable elements for them to decide or express an opinion.

"Good, but is it really necessary? Has consideration been given to improving the flow of water through existing channels by ensuring they are kept free flowing."

"I live in Abingdon and have long had misgivings about the scheme, fearing that it could have unwanted consequences here. These were partly allayed in discussion"

"I think it may be very useful to prevent houses flooding, but IT MUST BE MAINTAINED."

"(I) need to be convinced that the scheme would successfully manage the real causes of flooding to properties in my area which are a rather wicked combination of main river, groundwater and drainage (backing up) flooding"

"Echoes of the Jubilee Scheme for Windsor and Eton. This scheme, although expensive would seem to potentially relieve half the properties at flooding risk in Oxford. A major concern is where the excess water goes!

Other general comments about the scheme can be summarised into a number of themes. We have described the comments under the headings in this section and stated our response.

### Maintenance after construction

Consultees felt it was important that the channel is maintained properly after it has been constructed.

#### *Response:*

We understand the concern that the new channels are maintained. We carry out our maintenance work in line with government policy to provide the greatest benefits to people and property at risk of flooding within the available funding. We agree that the new channel needs to be maintained effectively. We are working with our partners to develop a maintenance strategy for the channel which we hope will be supported by partners and landowners, as well as the Environment Agency.

### Use of existing channels

There is support for using existing channels as much as possible. Many people understood the need for additional flood channels, but favoured the improved use of existing river channels and streams.

#### *Response:*

The options use a combination of widening existing channels and creating new channels to increase capacity of the flood plain. We have taken this feedback on board but in some areas this will be unavoidable, as widening existing channels could be more disruptive, less effective and in some cases, even increase flood risk.

## Downstream impacts

A number of consultees, particularly residents of Abingdon, Wallingford, and Sandford, expressed concern that the scheme could increase flood risk downstream. There is a perception that to manage water in Oxford the scheme will convey water faster downstream creating a higher flood risk lower down the river system. Some consultees living downstream viewed our explanation about how the scheme will work with scepticism.

### *Response:*

We work to reduce flood risk, not to transfer it from one community to another. We have developed modelling to test the preferred option to ensure that this is the case, and will need to prove that the scheme does not increase risk elsewhere as part of our planning application. We are aware some communities remain concerned. We are holding focus groups for residents in these areas and will be developing specific materials for these communities, to ensure our messages reassure people that the risk downstream will not increase as a result of the scheme.

## Complexity of the solution

There were concerns that the solution is complex and unproven. A few consultees told us the scheme seems to be very complex and question if the benefits justify this.

### *Response:*

The scheme is complex as it stretches over a wide area and each area needs a tailored approach to ensure the maximum reduction in flood risk. We have developed improved flood modelling of the area and are using this to model the preferred option to ensure it will reduce flood risk effectively. When we announce the preferred option in summer 2016 we will be able to provide more details of the effect of the scheme in reducing flood risk.

## Cost benefit

Some respondents asked for more details about the costs of the different options, whilst others felt that the cost is high for the benefits gained.

### *Response:*

At this stage, we do not have this level of detail. When we analyse the options, we rank them by predicted costs based on our knowledge of the types of works required for each one. When we have a preferred option, we then produce a detailed assessment of costs.

Flood schemes are funded under the Defra Partnership Funding scheme. Under this arrangement, a flood scheme will receive a proportion of the costs from Flood Defence Grant in Aid based on the benefits it will bring. The Oxford Flood Alleviation Scheme is due to receive £57.7 million in government funding over the lifetime of the project. The remainder of the funding must be found through contributions from those

who will benefit from the scheme. We already have contributions promised from: local councils; Thames Regional Flood and Coastal Committee; and Oxfordshire Local Enterprise Partnership. We have developed a funding strategy to secure the remainder of the costs.

As we develop the scheme we will look for efficiencies in order to reduce the costs as much as possible.

### A catchment-wide approach

A small number of consultees asked whether we had considered addressing the causes of flooding, rather than the consequences, for example, managing the whole catchment area and increasing tree planting to store water before it reaches the river.

#### *Response:*

We published the Oxford Flood Risk Management Strategy in 2009. This explored many options to reduce flood risk in Oxford, and made recommendations based on the most effective options. A flood relief channel was shown to be the best option for reducing flood risk. The other recommendations made were a series of repairs and maintenance activities we have already completed, and a flood storage area which could be constructed in the future to reduce the impacts of climate change on flood risk.

Some of the other options explored included land management and dredging. The strategy found that land management, such as tree planting upstream, could have some limited effect but could not reduce flood risk effectively enough. It also concluded that whilst dredging can have some localised benefits, and is carried out in some places, it is not always effective and the effects are not long-lasting.

### Other two-stage channels

Many respondents made positive comments about the use of two-stage channels in the scheme. Some people expressed concerns that these channels might not have a significant water flow when the river is not flooding. Other respondents told us they would like to see examples of where a two-stage channel has worked successfully.

#### *Response:*

Two-stage channels have been used in various different flood schemes across the UK and globally. They work by providing a deeper, narrower channel to ensure a constant flow, with a second, wider channel which water can spill into when water levels are high. This simulates the natural effect of a floodplain but in a more controlled manner, meaning the water will only spill onto the wider floodplain in larger flooding events.

### Future flood risk

Some consultees asked whether the scheme could cope with future high levels of flooding. They are mostly concerned that the scheme is just addressing current flood risks to Oxford.

#### *Response:*

The scheme is designed taking future climate change into account and therefore will continue to reduce flood risk into the future. It cannot eliminate flood risk entirely and some areas will still be at risk from larger floods. However the scheme will help reduce the effects of these events, as it increases the amount of water on the natural flood plain and therefore reduces the amount that would flow into built-up areas.

With climate change, flood risk is set to increase. The third recommendation made in the Oxford Flood Risk Management Strategy was to construct a flood storage area north of Oxford, which would support the channel to help reduce the effects of climate change.

### Benefits to homes at risk of flooding

Respondents requested information about the effect on flood risk on their properties.

#### *Response:*

We used the latest flood modelling in 2014 determine whether a scheme of this nature would help to reduce flood risk in the area. Known as an initial assessment, this showed that it would reduce flood risk to over 1000 properties, but did not provide detail about individual properties.

We have now developed more detailed modelling and will use this to model the preferred option. This will provide a more accurate picture of the effect of the scheme on flood risk and we will be able to provide information on properties affected when we announce the preferred option in early Summer 2016.

### Need to protect wildlife habitat and landscape

Many respondents feel that the best solutions will minimise impacts on wildlife and landscape. Preserving as much of the habitat and landscape features as possible is important to a large majority of respondents. There is also relief expressed by some that the plans do not involve significant amounts of 'hard' engineering for channels using concrete or urban style designs.

#### *Response:*

We are keen to preserve the landscape and heritage of the area and minimise the effects on the environment. We will preserve the natural channel as much as possible and not use hard engineering, except in features such as culverts under roads or the railway where it is absolutely necessary.

When we plan construction we will consider seasonal changes, such as nesting seasons for birds, to minimise the impact on wildlife and seek to ensure our construction and materials management activities have as little effect on the environment as possible. We are currently carrying out various surveys to enable us to do this.

Once we have a preferred option we can further discuss potential environmental enhancements with landowners and environmental groups.

### Disruption during construction

There is concern about the scale of disruption to people living and working in the areas near the scheme during construction. Whilst most comments relate to the flooding solutions of the scheme, there is a recognition that to achieve it there will be disruption from vehicle access and other construction activity.

#### *Response:*

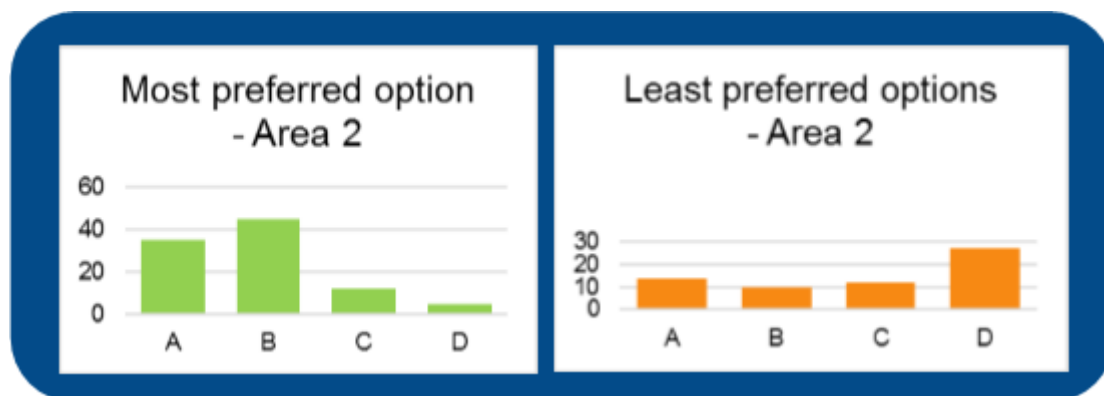
We understand that there is concern that disruption to local communities is kept to a minimum. Some disruption is of course unavoidable but we will seek to work as closely as possible with all local residents to ensure we minimise the effects. The feedback received during consultation has given us a good starting point and we will consider things such as times worked, construction traffic routes, and how material will be removed from site to ensure that our construction activities are both cost-effective and minimise disruption. We will present information at a later stage in the project after the preferred option has been announced.

## Comments about areas within the scheme

We asked for responses to the options presented in the consultation by areas – numbered 1-7. Area 1 lies at the north end of the scheme, with Areas 5&6 at the furthest point south. Area 7 (Weirs Mill and Iffley Meadow) is to the east of the main ‘corridor’ for the options presented (see Appendix 1).

### Area 2 Botley Road to Willow Walk (including North Hinksey and Osney)

The most favoured options were options 2B and 2A.



Option 2A retains Hinksey Stream as a primary channel with some remedial work to improve the flow rate. There would be a wider, shallower channel running alongside.

Option 2B also keeps Hinksey Stream as a primary channel with a secondary channel with shallow banks created in the meadow.



Option 2A

Option 2B



Option 2C

Option 2D

Many people expressed support for these options because they preserve trees along the bank of Hinksey Stream. These are valued as screening and as a wildlife habitat which respondents stated hosts kingfishers and water voles. Both options 2A and 2B were also supported for having the least impact on the wildlife meadow.

Other comments included:

- Greater recreational value in Option 2B for canoeing
- The success of the channel here relies on effective culverts through Willow Walk

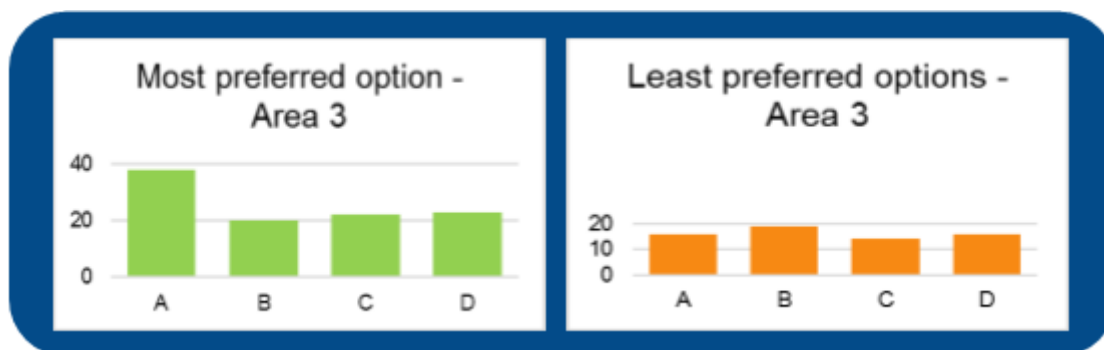
The main concerns in Area 2 are about the removal of trees on the Hinksey Stream, concerns about the meadow habitat (including species such as Snakeshead Fritillaries and the area becoming too boggy) and other changes to the wildlife habitat.

Other concerns include:

- Several comments about the amount of water 'storage' or capacity in the design options for this area.
- Worries about losing trees on Willow Walk.
- The location of a pylon on an island was not supported.
- Impacts on the North Hinksey Allotments (2D).
- The design of 2A being a barrier to walkers using the area.

### Area 3 – Willow Walk to Devil's Backbone

There was most support for Option 3A. This is a new channel with shallow banks to support existing watercourses running through the meadows.

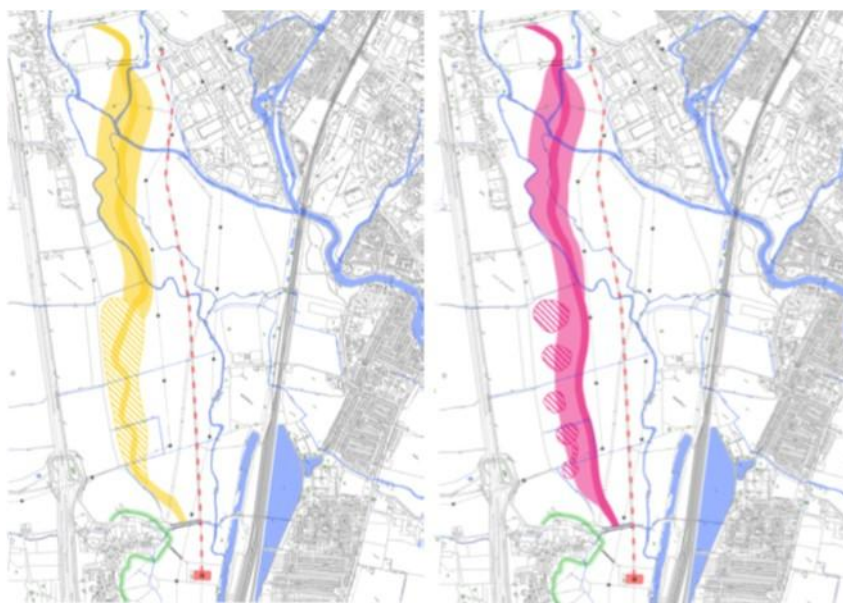


In general comments on this area showed little support for large or small lakes. Several comments specifically mentioned the impact of a largely recreational feature increasing pressure on roads and infrastructure in the area.



Option 3A

Option 3B



Option 3C

Option 3D

Respondents often referred to the character of this area in terms of its landscape, farming use or wildlife as important.

Comments included:

- Small lakes would provide the best marginal water areas for wildlife.
- Option 3A and 3B are the 'least intrusive' or would cause minimal disruption to farming.

Many respondents commented that they were not in favour of any large lake, which was indicated on one of the options not as part of the scheme but as something that could be developed separately if there was local interest.

Other concerns included:

- Negative impacts which the options may have on the medieval causeway (Devil's Backbone), Bulstake Stream and Pot Stream.
- The fairly straight, rather than meandering channel profile might increase flow speed through the area.
- Impact on the land owned by the Oxford Preservation Trust and its biodiversity.

### Area 4 Devil's Backbone, South Hinksey and Redbridge

Option 4B was the most strongly supported route. Respondents who supported this choice felt that it would make best use of existing river channels and would have the least impact visually.



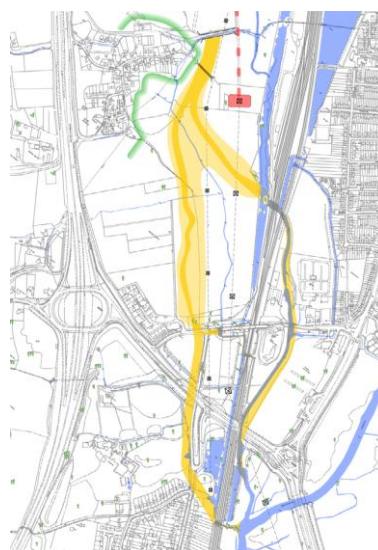
In this option the flow is split between new shallow banked channels. The eastern branch of the route makes use of enhancements to culverts under the railway and at Redbridge. A localised flood defence around South Hinksey is included.



Option 4A



Option 4B



Option 4C

Other positive comments about Option 4B included:

- It is the best option for flood defences around South Hinksey.
- Has the least impact on the Kendall Copse area

Issues raised about Area 4 included the impact on the Egrove Park area and the perceived disruption to Kennington residents during construction. The complexity of this area caused by physical constraints is also referred to by many respondents including:

- Water backing up at Mundays Bridge.
- The Devils Backbone being a barrier and causing flooding.
- Some respondents viewed Option 4C as over-engineered and probably costly.
- Concerns about whether the culverts under the road and railway are big enough to convey the volume of flood water it is required to manage.

### Area 5 and 6 Kennington and Sandford

There is greatest support for Options 5A and 6A and 5B and 6B in this area of the scheme. There were many comments supporting the creation of a new flood channel and its re-entry into the main river at the point furthest downstream from Sandford Lock. Respondents considered this to be the solution which will impact least on flooding around the lock itself.



5B/6B is a new channel running parallel to the River Thames to the west rejoining downstream of Sandford Lane. The new channel would have shallow edges and compliment the meadow setting.

5A/6A is a new secondary channel running alongside the River Thames. This channel would have a shallow bank retaining the current character with small beach areas.



Option 5A/6A

Option 5B/6B

Option 6C

There were comments in favour of the gently sloped riverbank in this area which respondents believe would be good for fish. The options were also supported because respondents felt they will remove a bottleneck at Rose Island. Some feel Option 6C will have least impact on the lock and the existing main river channel.

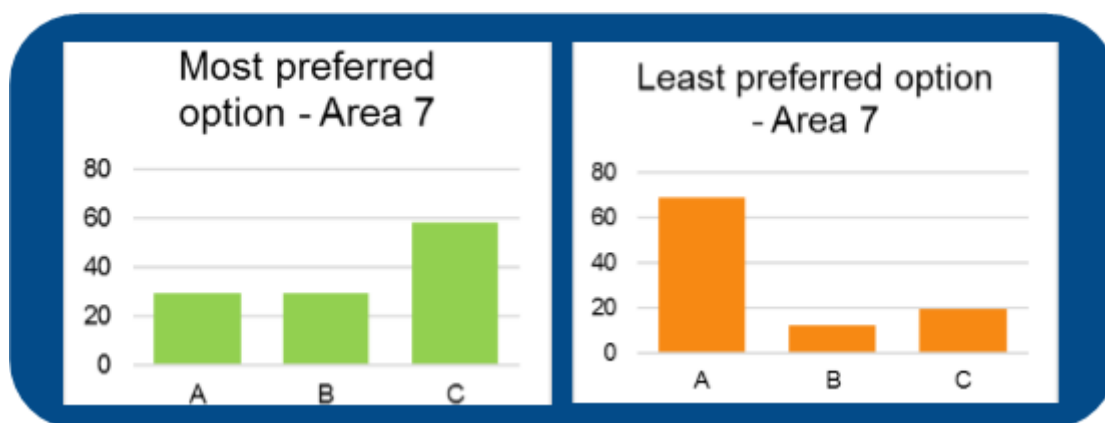
Concerns and issues raised about this area include:

- Pressure on the east bank of the river at the point where water is returned into the main river, especially for the Sandford Mill estate. This could be a 'pinch-point' and might cause further local flooding.
- Impact of the options on the planned hydro power project on this stretch of the main river.
- Impacts of Option 5A/6A on the Thames Path and requirement for bridges needed for pedestrian access for several of the options.
- Worries about potential harm to species on land owned by the Oxford Preservation Trust and potential damage to the 'Brunel Causeway' from Options 5B/6B and 6C.

#### Area 7 Weirs Mill and Iffley Meadow

Of those responding specifically about Area 7, there is a strong preference for Option 7C. This is a new channel across Iffley Meadows following the route of an existing drain. It would have a greater visual appearance than the existing drain.

Comments included the view that both 7B and 7C allow space for water to disperse.



Supporting comments about option 7C include:

- It has the least impact on moorings for residential narrow boats.
- It makes sense to allow more water to flow over the meadow at times of flood.
- Respondents believe it would have the least impact on the eco system.
- Respondents believe it would be the most sustainable option.
- It makes use of an existing channel route.
- Respondents believe it is probably the cheapest option.



*Option 7A*

*Option 7B*

*Option 7C*

Many respondents expressed concerns about Option 7A which will remove existing moorings and has a significant detrimental impact on their homes and community.

Comments include:

- The concern that option A could have the most social and environmental impact.
- Loss of a historic orchard.

- The concern that option A could cause a loss of wildlife habitat, including otters, water vole and some nesting sites for geese – as well as links to the adjacent Site of Special Scientific Interest.

### Benefits of the scheme

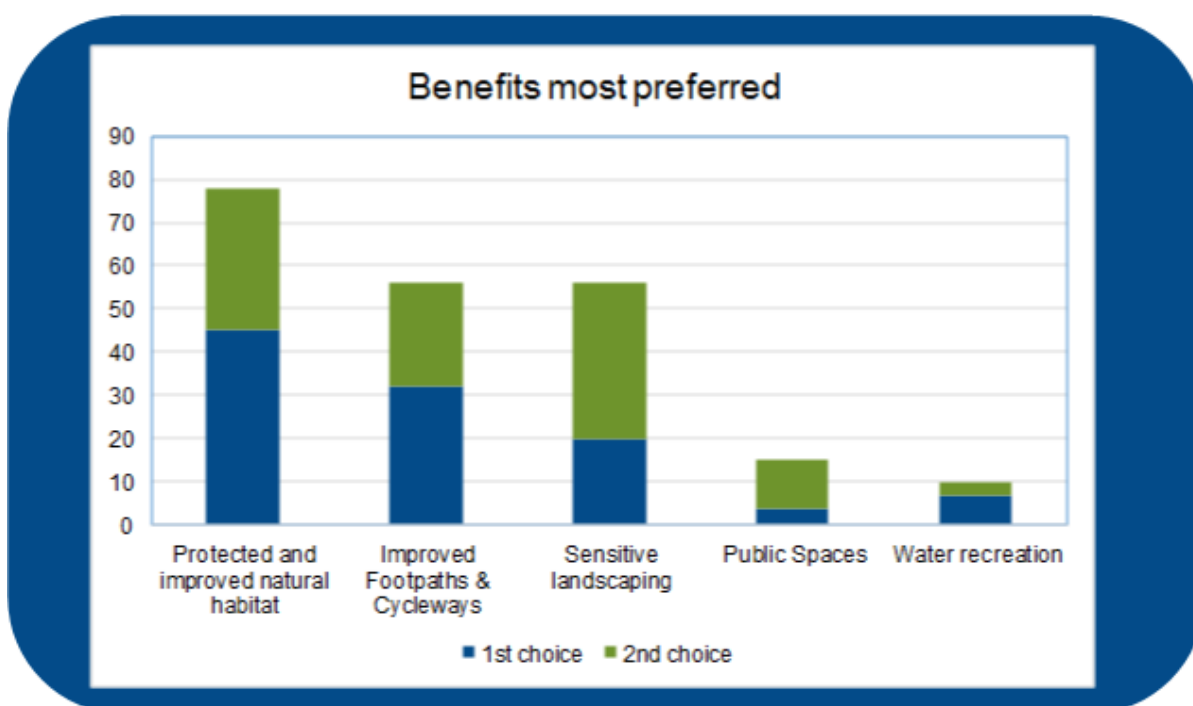
One of our scheme objectives is to connect people and the environment. We are therefore exploring additional benefits that may be possible as part of the scheme, such as creating new habitats and recreational opportunities. We asked our event visitors and online consultees to place in order their preferences for the type of improvements which may be possible.

Of the general categories of improvements, enhancements and opportunities which can be created by the flood alleviation scheme, the most strongly supported were improvements to natural habitats, and improvements to cycle and footpaths.

The sensitive treatment of the landscape was also widely supported.

There was very little support for water recreation facilities and other public amenities.

We will look to incorporate as many of the strongly supported opportunities into the scheme as possible.



## 7. Making use of the feedback

Following the consultation, we are carrying out further work to determine the preferred route for the channel.

As part of this process, we are reviewing all comments made and will ensure they feed into the options appraisal process. We have also published all the responses we received on our website.

We use the feedback to assess how popular the various options are with the general public. This is fed into the evaluation of the options along with a range of other information gathered from different sources.

Each section of the evaluation is carried out by a specialist in this area, i.e. environmental comments are reviewed by the lead environmental scientist, landscape comments are reviewed by the landscape architect.

The response to the consultation is one factor out of many considered as part of our analysis of the options. Our assessment considers a range of factors including: environment and landscape opportunities and constraints, value for money, sustainability, operation and maintenance, health and safety, funding opportunities and practical considerations during construction.

### What happens next

Once we have completed our analysis of the options, we will take the preferred option to our Sponsoring Group, which includes representatives from all our partner organisations. If they approve it, we will progress that option. We expect to be able to announce the preferred option in Summer 2016.

#### Designing the channel

The design has 2 phases: outline and detailed. At outline stage, the fundamental engineering behind the scheme must be agreed. At detailed design, we add detail about the scheme and how it will be created.

#### Further opportunities for public comments

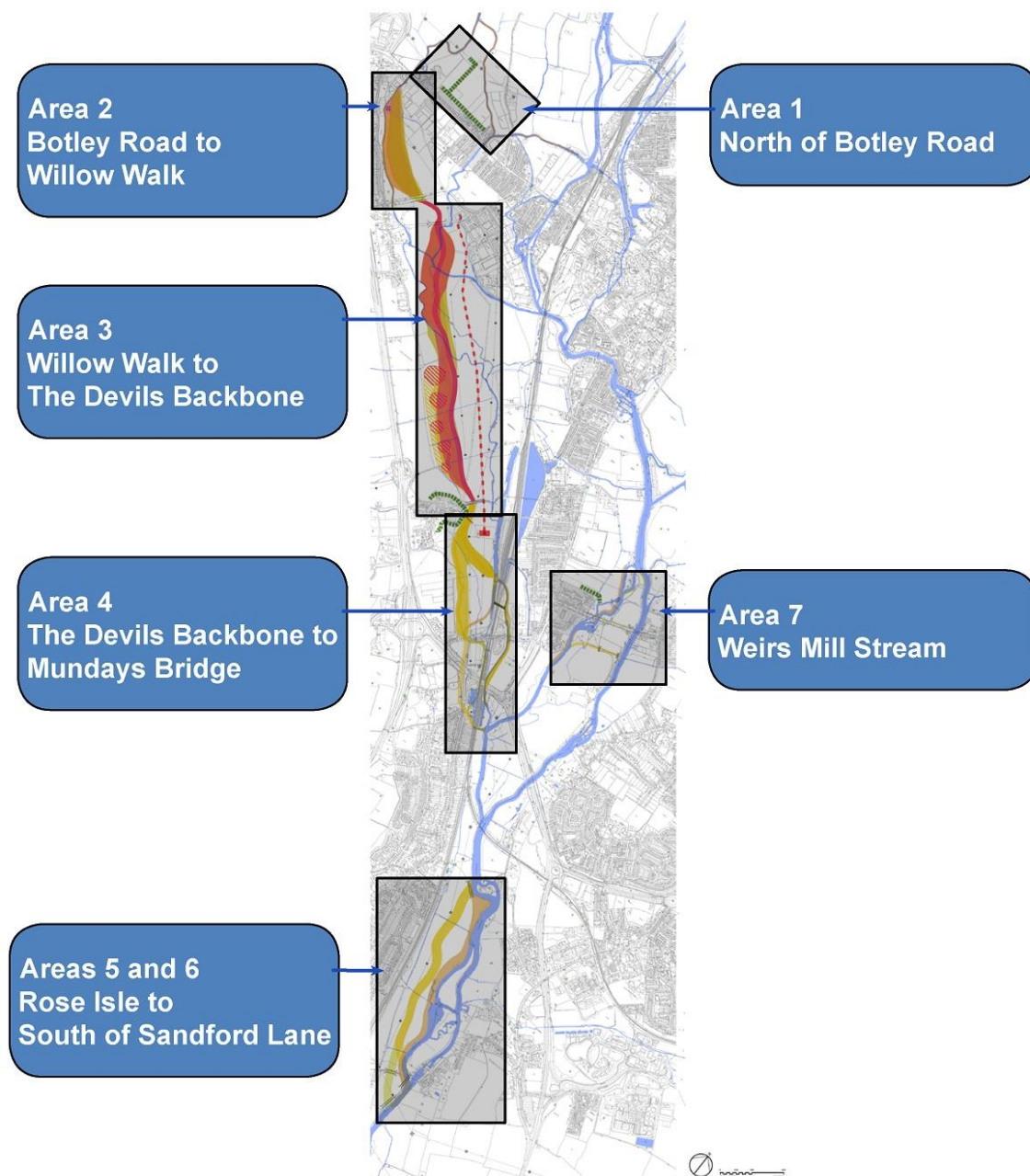
During the detailed design stage we will hold our next public consultation, which will be your opportunity to influence how the final channel and surrounding area will look. We expect to be at this stage by Spring 2017.

At this stage we will also be preparing for a planning permission application. If permission is granted, construction could begin in 2018.

# APPENDIX

## Appendix 1: Key map of the scheme areas (1-7)

This map shows how we divided the length of the flood alleviation scheme into areas.



## Appendix 2:

### Responses which were not submitted using our questionnaire

This is a list of submissions sent to us in non-questionnaire format. It is difficult to include comprehensive summaries of these often detailed responses, so we have included only a brief note here about each submission.

The full submissions are available to read in full at <https://consult.environment-agency.gov.uk/file/3876413>

**#1** The organisation suggests taking a wider catchment approach, raises issues about the impact on downstream communities and comment on the impact of new channels and on a need for a low flow strategy.

**#2** The organisation comments specifically on the protection and enhancement of the ecology of the area. It is suggested that the design of the scheme should seek a net gain in biodiversity. The organisation suggests that when options are selected they avoid negative impacts before considering any approach involving mitigation.

The organisation makes specific recommendations in each area of the scheme. The submission makes specific reference to Iffley Meadow Site of Special Scientific Interest, which they manage, and the Osney Mead Local Wildlife Site.

**#3** The organisation comments about a range of issues including specific areas of the scheme.

Wide ranging general comments include a suggestion to use surplus spoil from the excavations to create noise barriers along the A34, and the need for continued maintenance after the completion of the scheme.

Observations and some local knowledge about areas of the scheme are made. It does not support Option A in Area 7 because of the impact on the boat residents.

A report from October 2011 about water conveyance through the western flood plain is included in the OFA submission.

**#4** Comments relate to the need to protect any species rich grasslands identified or with the potential for restoration.

The partnership provide comments about each area of the scheme with specific comments about grasslands in Area 2 (Botley Road to Willow Walk) and Area 7 (Iffley Meadow).

**#5** Expresses an interest in protecting their assets from erosion and flooding. There is a requirement to secure access to some areas for power network maintenance.

**#6** Comments on the environmental impacts and urge the scheme to adopt a 'no net loss' and preferably a 'net gain' in biodiversity.

It urges the avoidance of harm to sites of conservation interest and identification of ways to mitigate losses where they cannot be achieved. In areas where no mitigation can be achieved it asks for compensation steps to be identified and justified.

Reference is also made to the need for access to green spaces, access routes such as the Thames Path and consideration of the existing and future landscape.

**#7** The minutes of a meeting held with the Environment Agency have been submitted which include issues concerning allotment holders across the flood area.

**#8** An extensive submission includes comments from a number of departments on the biodiversity, air quality, land quality, flood mitigation, trees and landscape, archaeology, parks and open spaces, planning, regeneration and major projects.

**#9** Comments have been submitted about the impact on badgers, their habitat and the western flood plain.

**#10** Comments about sections of the scheme lying within the council's boundaries are summarised by each of the 7 areas presented during the consultation. It highlights concerns about downstream communities and areas prone to flooding.

**#11** This submission on behalf of its 23 members makes comments and details objections to options which directly impact the residential narrow boats in the Weirs Mill area (Area 7) and makes observations about features of the area relating to each of the options.

**#12** This brief submission reports a shortage of moorings in the Oxford area and urges the partners to avoid the removal or displacement of residential moorings.

**#13** The response does not relate specifically to the Oxford scheme, but includes an assessment of how the restoration of the Wiltshire and Berkshire Canal may assist in the alleviation of flooding in the Abingdon area.

**#14** Specific observations about each area of the scheme is included in this submission along with recommendations about the approach to be taken in addressing habitat and biodiversity issues.

**#15** Makes no specific comments about the options presented, but raises a number of issues about the scheme as a whole.

**#16** This detailed response raises concerns about the approach being taken to the flooding problem in Oxford, favouring a 'whole catchment' approach.

**#17** Reports broad support for the scheme amongst its membership in the county and asks that efforts are made to minimise the impact on farming and farm land. It details suggestions about a wide range of issues relating to the scheme.

**#18** Reports concerns about proposals in Area 2 which is believes will be damaging to wildlife habitat at Osney Mead flood meadow.

**#19** An ecologist makes a number of comments about the impact of the scheme on natural habitats.

**#20** The organisation make a number of observations about each area of the scheme.

**#21** The organisation owns land at several locations along the options routes presented in this consultation. It has made a number of detailed comments and observations, raising issues relating to the flood alleviation scheme.

**#22** Comments on a range of wildlife and ecological issues and presents some alternatives to the scheme options presented.

**#23** Broadly supports the objectives of the flood alleviation scheme. It makes comments about several aspects including the wider context of the catchment as a whole.

**#24** The submission details objections to the scheme based upon concerns about gravel extraction, ecological damage, impact on an important vista of the city history and archaeology and pollution. The response makes observations about several specific locations within the scheme.

**#25** Opposes Option A in Area 7 of the scheme which will have an impact on boat moorings at Rope Ham and the weirs.

**#26** Raises concerns about Option A in Area 7 of the scheme.

**#27** Includes a different option for this area which it refers to as Option E.

## Appendix 3: Questionnaire

## Oxford Flood Alleviation Scheme

- Reducing flood risk
- Enabling a thriving economy
- Connecting people and the environment

### About the proposed flood channel

*This is your opportunity to tell us your opinion on the scheme and the route options. Please provide as much information you can in response to the questions below:*

1. What is your overall impression of the scheme?

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2a. Having viewed the routes, please indicate which is your preferred option for each area of the channel by ticking the relevant boxes below (please select one option per area):

	Area 2	Area 3	Area 4	Areas 5 & 6	Area 7
A					
B					
C					
D					

2b. Please provide comments below to support your preferred route options (please indicate which option your comment refers to):

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3a. Please indicate your least preferred option by ticking the relevant boxes below (one per area):

	Area 2	Area 3	Area 4	Areas 5 & 6	Area 7
A					
B					
C					
D					

3b. Please provide comments below to explain why these are your least preferred options (please indicate which option your comment refers to):

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4. During previous public events we gathered feedback on environmental and recreational improvements which could be incorporated into the scheme. We have taken these on board in developing the options and will consider them when selecting the preferred option. To help us do this, please rank the features below in order of priority for you (1 being most important, 5 being least important):

Improved and new cycle and foot paths .....

More or improved water-based recreation opportunities .....

Protected and improved natural habitat .....

Sensitive landscaping .....

Improved and new public spaces i.e. picnic or play areas .....

## Your ideas

As well as developing the options for the channel, we are also looking at various issues related to the scheme and its construction. We would appreciate any ideas you have for how we can manage these.

5. There is currently a £27m funding gap for the scheme. How can we find the remaining £27m funding required?

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6. If we get full approval and funding, construction is expected to take 3 years. How can we minimise disruption during this period?

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7. In excavating the channel we will create large volumes of excess materials. What can we do to dispose of the excavated materials from the site in a sustainable way?

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8. Please tell us any other comments or ideas you have about the scheme below:

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## About the consultation



*This is your opportunity to tell us your thoughts about the consultation and the public events.*

How did you find out about the consultation?

- ☐ newsletter      ☐ social media      ☐ flyer through your door      ☐ word of mouth  
☐ poster      ☐ other (please state): .....

If you attended one of our public events, please tell us which one:

- ☐ Oxford Town Hall      ☐ South Oxford Community Centre  
☐ Abbey House, Abingdon      ☐ West Oxford Community Centre  
☐ Kennington Village Centre

On a scale of 1-5, how useful did you find the public drop-in?

1 (not useful)      2      3      4      5 (very useful)      n/a

On a scale of 1-5, how useful did you find the display material?

1 (not useful)      2      3      4      5 (very useful)      n/a

On a scale of 1-5, how well do you feel your views were listened to?

1 (not at all)      2      3      4      5 (definitely)      n/a

Please tell us any other comments, feedback, or concerns about the consultation event below:

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**About you**



*In analysing the response to the consultation, it would be useful to know the following information if you are happy to provide it. Any personal information you provide will only be used by the Oxford Flood Alleviation Scheme project team to review the consultation and not for any other purpose. It will be destroyed on completion of the scheme.*

What is your interest in Oxford and the scheme? (please tick all that apply)

- ☐ Resident (homeowner)      ☐ Resident (tenant/other)      ☐ University student
- ☐ Business owner      ☐ Landowner      ☐ Worker in Oxford
- ☐ Other (please state):

.....

Age:.....

Ethnicity:.....

Primary language:..... Any disabilities:.....

Address:.....  
.....Postcode:  
.....

### How will we use your response?

We will use your responses to the consultation questions to help us assess the route options. We will take into account public opinion alongside the outputs of our assessment, which considers which options would be technically and economically feasible.

If you would like to be added to our mailing list for regular newsletter updates on the scheme and a summary of the consultation responses, please provide your name and email address below.

Name: ..... Email:  
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Thank you for taking the time to read our proposals and comment on the route options. Please hand in this form at one of our drop-in events, return via email to [oxfordscheme@environment-agency.gov.uk](mailto:oxfordscheme@environment-agency.gov.uk) or by post to Oxford Scheme, Kings Meadow House, Kings Meadow Road, Reading, RG1 8DQ before **1st March 2016**. If you require this information in any other format please contact us at the address above.

Alternatively respond online at: <https://consult.environment-agency.gov.uk/portal>



#### Appendix 4: Register of Responses

We have published all responses to our consultation online.

You can download them at:

Submissions by post, email or online:

<https://consult.environment-agency.gov.uk/file/3846008>

Other submissions received in a non-standard format:

<https://consult.environment-agency.gov.uk/file/3876413>