



Chesham Vale Brook Flood Alleviation Scheme

Consultation response document

Report – ENVIMSE500144

V3 31/07/2017

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

Acting to reduce the impacts of a changing climate on people and wildlife is at the heart of everything we do.

We reduce the risks to people, properties and businesses from flooding and coastal erosion.

We protect and improve the quality of water, making sure there is enough for people, businesses, agriculture and the environment. Our work helps to ensure people can enjoy the water environment through angling and navigation.

We look after land quality, promote sustainable land management and help protect and enhance wildlife habitats. And we work closely with businesses to help them comply with environmental regulations.

We can't do this alone. We work with government, local councils, businesses, civil society groups and communities to make our environment a better place for people and wildlife.

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Executive summary

The Vale Brook passes through the centre of Chesham in Buckinghamshire through a 780m long series of buried tunnel sections (culverts) connecting to the River Chess. Construction of the culverts took place over a number of years, commencing in approximately 1850, using different methods and materials.

Due to the urban nature of Chesham, after a rainfall event, surface water drains quickly into the culvert. This significantly increases the flow within the Vale Brook and contributes to flood risk to the area.

The most recent significant flooding event in Chesham occurred in 2014, though flooding occurs regularly in the town, being particularly notable in the years of 2001, 2006 and 2008. Surveys in 2014/2015 confirmed that significant sections of the culvert remain in 'poor' condition, with sections at risk of collapse. Flood risk modelling estimates that a culvert blockage or failure could result in the flooding of up to 228 properties from surface water, groundwater and fluvial (river) water combined. This amounts to 165 commercial and 63 residential properties.

In 2014, the Environment Agency, Buckinghamshire County Council, Chiltern District Council, Chesham Town Council and riparian owners (those who own land adjoining and over the culvert) worked together to replace 40m of the culvert in Market Square that was at risk of immediate collapse. We and our partners have now started to look at how to manage the wider issue of flood risk in Chesham, including what to do about remaining sections of the culvert.

Although the Environment Agency do not own the culvert, due to the complexity of having numerous riparian owners, we are taking the lead on this project to ensure we can achieve wider flood risk and environmental benefits.

This document outlines how we ran a recent public consultation on options to reduce flood risk and summarises the responses. We have identified the key themes that emerged and provided our response to these, and will explain what will happen next.

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1. The project

The Chesham Vale Brook Flood Alleviation Scheme project began in 2015 on the back of a previous project in the town to repair the worst section of failing culvert in Market Square. We have developed various options for a potential scheme to reduce flood risk in Chesham, based on a detailed appraisal of environmental, technical and sociological opportunities and constraints. We also produced updated flood modelling to help us evaluate the effectiveness of these options.

With a variety of feasible options, we wanted to consult the local community, to understand what is best for Chesham; the comments you shared with us over the consultation period will help shape the project going forward.

Between 14 June and 12 July we held a public consultation on the options for the scheme. This was run online and at a drop-in event in Chesham Town Hall on 12 June.

2. The consultation

The purpose of a consultation is to engage with communities and obtain valuable feedback to help shape the project. After a consultation we gather together all of the responses which we have received and work out what about the project you do like, and what you don't like. We also take on board additional feedback or ideas which we may not have thought about.

Our internal project team, our design contractors CapitaAECOM, build contractors BAM Nuttall and representatives from our council partners were present at the event. Together we were able to provide the best breadth of knowledge to answer questions on the project.

To advertise the drop-in event, we posted letters to local households and businesses, informed local community groups and put up posters in local shops and businesses. Because the consultation was held during a hung-parliament, we were unable to advertise through the local press or through social media.

After the drop-in event, and once parliament was formed, we were able to issue press releases to the local press and issue social media posts to inform the community.

Following the event, the online consultation was open until 12 July. During this period responses were able to be collected through our online consultation portal, through the post, and in-person from the drop-in event. A phone number and email address were provided for extra information and guidance.

This document summarises the feedback from the responses we have received. It will not reveal any personal or identifiable information from the person(s) who have provided that feedback. As well as summarising feedback, we will also provide specific responses to these comments to show you how we intend to act on your advice.

To end, we will inform you of what will happen next on the project so that you know what the plans are in your town.

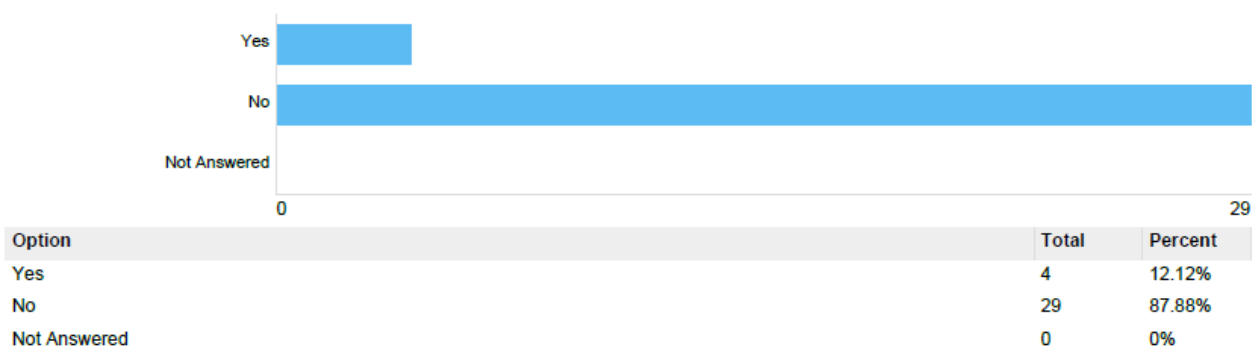
3. Our objectives

As well as getting feedback on the options for the scheme, we wanted to inform members of the public about their flood risk, especially if they were unaware that they are currently at risk of flooding.

Though almost 90% of respondents confirmed that they had not been flooded before, only 9% were unaware of the flood risk in Chesham. Although this is a small number, we are pleased that we have been able to raise awareness of flood risk amongst that 9%.

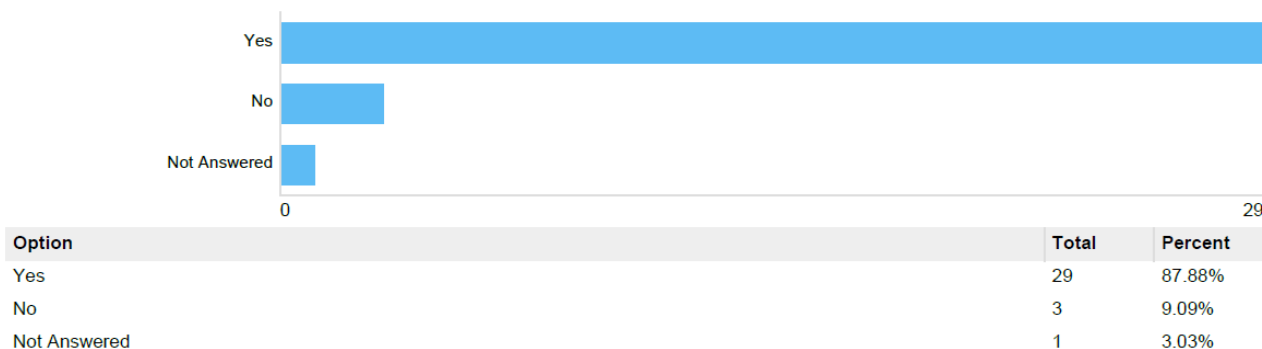
Question : Have you been flooded before?

Have you been flooded before?



Question : Were you previously aware of flood risk in Chesham before this consultation?

Were you previously aware of flood risk in Chesham before this consultation?

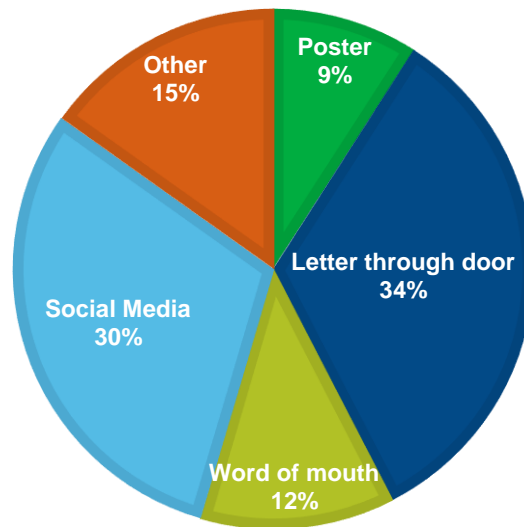


It is important for us to review how you came to hear about the consultation. This is so that we can improve our engagement in the future based on what is most effective for the local community. From the pie chart on the next page you can see that letters posted through the door and social media were the most effective way of reaching the most people.

We did not use social media to promote the consultation as we were under publishing restrictions because of the pre-election period. Therefore we expect that news of the consultation was spread on our behalf by members of the public through social media. This was clearly an effective way of promoting the event and we would try and use this channel in future.

HOW DID YOU FIND OUT ABOUT THE CONSULTATION?

■ Poster ■ Letter through door ■ Word of mouth ■ Social Media ■ Other

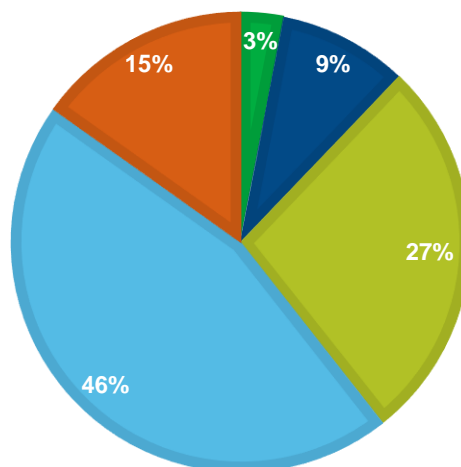


Finally, we wanted to review how useful you found the consultation. If most people said the consultation was not useful then we would need to consider changing how we consult in the future.

The majority (61%) of respondents scored the consultation as either a 4 or 5 on a scale of 1 - 5 (with 5 being very useful). However, 12% of respondents graded the consultation as either a 1 or 2 on the usefulness scale. These respondents unfortunately did not leave an explanation to why they felt it wasn't useful, so it is difficult for us to take any action on this.

HOW USEFUL DID YOU FIND THIS CONSULTATION ON A SCALE FROM 1 - 5?

■ 1 (Not Useful) ■ 2 ■ 3 ■ 4 ■ 5 (Very Useful)



One respondent said *"The consultation is useful but responding to it is very time consuming and could be made a lot easier."* We recognise that there were a lot of questions, which may have been

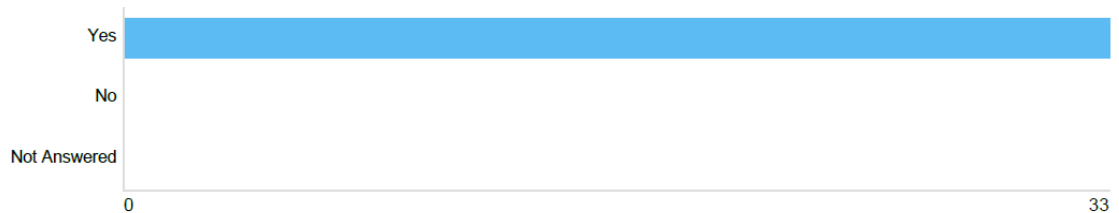
off-putting to some people. We try to ensure we are being open and inviting feedback on different areas of the scheme, however, we will take this feedback into account for future consultations and make them as short and concise as possible.

4. Key themes emerging from the consultation responses

We received 33 responses to the consultation. 100% of respondents support a scheme in principle.

Question : Do you support a scheme in principle to reduce flood risk in Chesham?

Do you support a scheme in principle?



You have sent a clear message that you would like to see a flood alleviation scheme in some form.

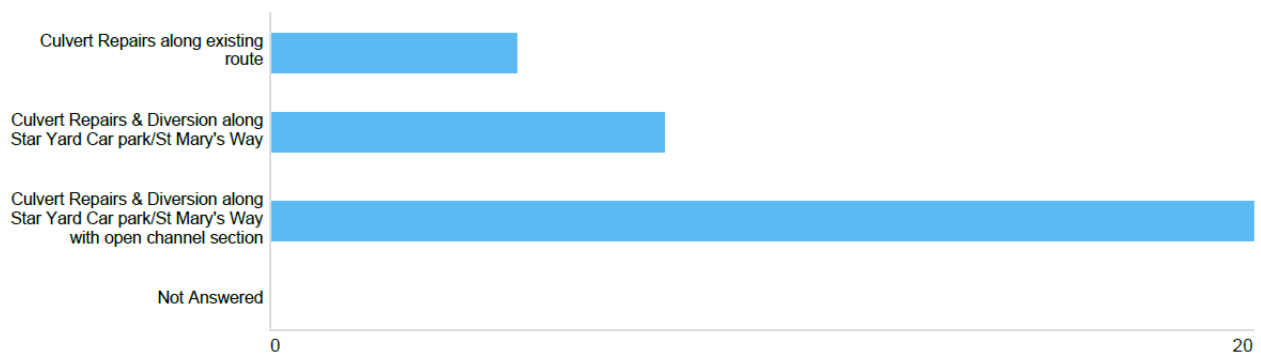
We have separated out detailed responses on the options for the 3 different sections of the scheme below.

Part 1 - town centre

Your preferred option for the town centre is to open up a section of the Vale Brook along the Star Yard car park/St. Mary's Way.

Question Part 1: Please select your preferred option for Part 1 of the scheme (town centre culvert works).

Part 1



Option	Total	Percent
Culvert Repairs along existing route	5	15.15%
Culvert Repairs & Diversion along Star Yard Car park/St Mary's Way	8	24.24%
Culvert Repairs & Diversion along Star Yard Car park/St Mary's Way with open channel section	20	60.61%
Not Answered	0	0%

However, from your comments it is clear that you also have some concerns regarding this option. These centre around the quality of the open channel, as some of you commented that *"the existing open culvert sections are not maintained and are an eyesore"* and that the open channel would be *"initially pretty but often left unattended"*.

We have addressed 2 of the main concerns below.

You said: "the open channel section of the Vale Brook running alongside St. Mary's Way will be a risk to public safety."

Each design has been carefully assessed on public safety grounds. As the project is within the early design phase, the exact details of each option are not yet confirmed.

If the open channel section along St. Mary's Way emerges as the preferred option, we will apply the Environment Agency's Public Safety Risk Assessment (PSRA) procedure during design to ensure that it meets the highest of public safety standards. The procedure evaluates any proposed channel design for different members of the public from able adult, through active child, to toddler. The procedure would include an assessment of the slope of the bank to evaluate how easily an active child or adult could escape the channel if they fell in, what kind of railings would be required alongside the open section to make them 'toddler'-proof, and how close the public would be allowed to get to the open section, which could be controlled by planting.

You said: "the open channel section of the Vale Brook running alongside St. Mary's Way will attract litter."

We will design the open channel section along St. Mary's Way carefully to minimise the risk of vandalism and reduce littering as best as we can. This could include railings along the banks of the channel to prevent close access to the channel, or other discouraging measures, such as planting.

These concerns will be taken forward into the next stage of the project to ensure that we provide the best option for the town.

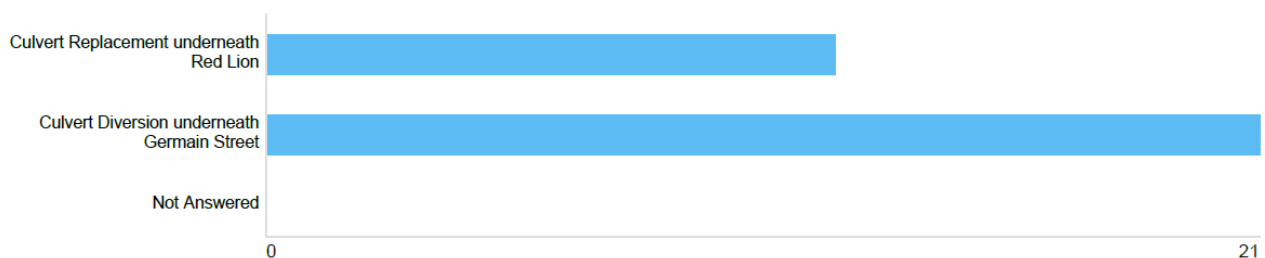
Despite the concerns over the quality of the open channel, most of you would still like to see this within the town, with many comments showing that you favour the open channel section because you would *"like to see open watercourse"*, and that *"it would improve the environment"*.

Part 2 - south of Market Square

Your preferred option for south of Market Square is to have the culvert diverted along Germain Street.

Question : Please select your preferred option for Part 2 of the scheme (south of Market Square)

South of Market Square



Option	Total	Percent
Culvert Replacement underneath Red Lion	12	36.36%
Culvert Diversion underneath Germain Street	21	63.64%
Not Answered	0	0%

We received fewer comments from you regarding the decision of what to do with the culvert south of Market Square. Some of you acknowledged that culvert replacement underneath the Red Lion Public House would be a *"less disruptive option"* to the road, however the majority of commenters preferred that the culvert be diverted under Germain Street. This is because you *"feel it would be better to have a completely new culvert"* and that it *"seems like a longer term solution."*

You also provided us with some additional feedback for Germain Street. This has been addressed below.

You asked: "can you implement a one-way system along Germain Street?"

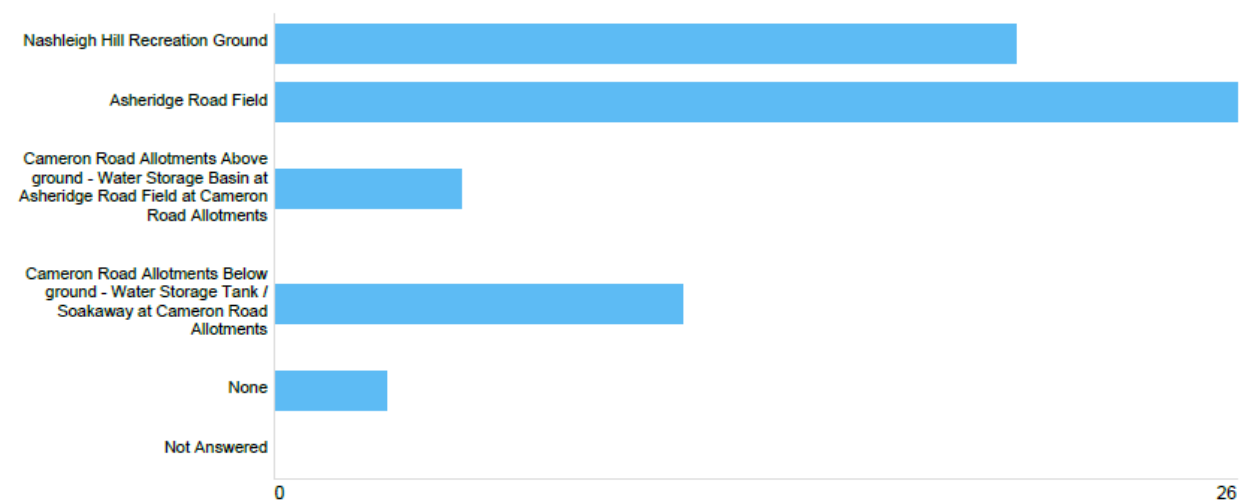
We were not aware of the public want for a one-way system along Germain Street prior to this consultation. Although our powers do not able us to implement such a system, we have passed this information on to Transport for Buckinghamshire to consider for future improvement projects.

Part 3 - surface water options

We received mixed feedback on these options. You most wanted to see a surface water attenuation unit at Asheridge Road field. You least wanted to see an above ground basin for storing surface water at Cameron Road allotments. A small number of you did not want to see any surface water attenuation units in Chesham at all.

Question : We can carry out any number or combination of these options, please select all of the sites in which you would be happy to see a surface water installation:

Surface water options



Option	Total	Percent
Nashleigh Hill Recreation Ground	20	60.61%
Asheridge Road Field	26	78.79%
Cameron Road Allotments Above ground - Water Storage Basin at Asheridge Road Field at Cameron Road Allotments	5	15.15%
Cameron Road Allotments Below ground - Water Storage Tank / Soakaway at Cameron Road Allotments	11	33.33%
None	3	9.09%
Not Answered	0	0%

We received the highest number of comments about the surface water options for the scheme. Many people viewed the surface water options as a necessity: *"will need big tanks for the water"*

around here. Massive soakaways as well. Nothing seems to work at the moment". We understand that the current surface water flooding issue can be very upsetting for residents.

However, the installation of surface water drainage systems were not favoured by all: *"the green spaces around Chesham are valuable and we must not lose them. The allotments on Cameron Road are used by many and by removing some, this would mean that other town members would not have the opportunity to grow their own food."*

More concerns were raised over the options to install a surface water attenuation unit at Cameron Road allotments. We have addressed these concerns below.

You said: "the option at Cameron Road allotments will be too disruptive to allotment holders."

Surface water remains a significant issue within Chesham, hence the need to identify areas of land where a surface water attenuation system could be installed. Due to the topography of the town there are unfortunately very few areas which are suitable for these tanks, which is why the Cameron Road allotments were initially included as an option location.

We have taken this feedback on board and have since been in touch with the allotment association to discuss the feasibility of this option further.

5. What happens next?

Now that the formal consultation period has come to an end, we have reviewed the responses and are using your comments to help decide what options would be most appropriate for reducing flood risk in Chesham.

Determining the preferred option

Our ongoing review of the options takes into account:

- your comments from the consultation
- the technical constraints of each option
- the cost of each option to build, and whether we are likely to receive sufficient funding for each option
- the future maintenance requirements of each option
- which options would reduce flood risk to the most houses
- which options our partners would like to see implemented in the town

Due to the large amount of feedback received specifically on the Cameron Road allotment options we visited the allotment site after the consultation to discuss the issue further with the allotment association representatives.

After further investigation and discussion with our geotechnical engineer, we have discovered a number of technical constraints and issues with this site.

- There is a potential asbestos risk at this location.
- The size of the available plot is only half the size needed for an attenuation tank.
- Tree roots from an adjacent plot would make construction difficult.
- The slope of the plot could make construction difficult.
- The plot is not situated correctly in the valley to capture sufficient runoff to make it worthwhile.

As a result, we have decided not to pursue the surface water option at the Cameron Road allotment site.

Once we have completed our review and determined the preferred options, we will inform you of the option which we will be taking forward. We expect that we will be in a position to share this information in autumn 2017.

Developing the scheme

Once we have a preferred option we will begin the more detailed design, which will involve doing further surveys, ground investigations and modelling. We will need to obtain planning permission for the scheme, and planning conditions which may impose restrictions or otherwise require us to change the design of some of the options in order to be approved. We expect that this will be able to apply for permission in winter 2017.

We will also need to secure funding for the works before we can go any further. Flood risk management projects are funded under Defra's Partnership Funding arrangements. This means that projects receive a proportion of funding from central government dependent on the benefits they bring in reducing flood risk. They are required to make up the remaining funding through contributions from those benefitting from the scheme, which may include local councils, organisations or individuals, who benefit directly from a reduced flood risk or indirectly from reduced flood impacts. We have begun to have these discussions with potential local beneficiaries and will continue to work to secure funding over the next few months.

If we are able to secure planning permission and funding, and achieve all of the necessary internal approvals, we expect to start construction in Chesham. In 2020/2021, however this will also be dependent upon which options are chosen, as some will be more complex to deliver than others, as well as being dependent on a number of constraints.

Keeping you up to date

We intend to keep you informed with updates on the project. If you have provided contact details to us through the consultation event then you will be on our mailing list and will receive regular updates. If you have not done so and wish to be kept updated, please email us HNL-PSO@environment-agency.gov.uk or call us on 0208 4748950 and we will get back to you.

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