

Bristol City Council  
**River Avon Flood Risk  
Management Strategy**  
SEA Consultation Report

Issue | 15 February 2021

This report takes into account the particular instructions and requirements of our client.







It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 260498

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# 1 Introduction

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## 1.1 Project context

Bristol City Council (BCC) supported by Arup, is working with the Environment Agency and stakeholders to create a vital long-term strategy to protect the city from increased flood events. The Strategy includes the provision of flood defence infrastructure to manage the risk from River Avon flooding to the centre of Bristol, with placemaking to seek opportunities for inclusive growth, quality of life, environment and resilience.

The Strategic Environmental Assessment (SEA), as produced by AECOM and then updated by Arup as part of the SEA Addendum, was commissioned to support the development of BCC's River Avon Flood Risk Management Strategy and presents the key findings of the environmental assessment of options. It was acknowledged in the SEA Environmental Report that:

*“A tidal flood risk management strategy for Bristol is vitally important for the city, not just because of the threat to lives and property but also because of the risk of long-term reputational damage on the city’s attractiveness and economic performance. Climate change predictions have the potential to constrain the scale and form of development in central Bristol today.*

*The Strategy will recommend an adaptive programme; identify when flood risk management interventions are needed and how they will be funded. The Strategy, once adopted by BCC’s Cabinet following a Key Decision, will provide evidence to support the partial refresh of Bristol’s Local Plan <sup>1</sup>.”*

A Project Board, made up of representatives of BCC and the Environment Agency, chose to commission a voluntary SEA to identify significant positive and negative effects, and ensure the environment was appropriately accounted for within the decision making process. An SEA was therefore undertaken by AECOM in line with procedures prescribed by the Environmental Assessment of Plans and Programmes Regulations 2004 (the SEA Regulations) which transpose into national law (EU Directive 2001/42/EC) ‘on the assessment of the effects of certain plans and programmes on the environment’ (the SEA Directive).

## 1.2 Consultation strategy

Consultation with key stakeholders and the general public is a key procedural requirement of the SEA Regulations in advance of adoption by BCC and endorsement by the Environment Agency.

Regulation 13 of The Environmental Assessment of Plans and Programmes Regulations<sup>2</sup> requires that the Draft Strategy is published for consultation

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<sup>1</sup> Bristol City Council (2011) Local Plan. Available online at: <https://www.bristol.gov.uk/planning-and-building-regulations/local-plan> Accessed April 2020

<sup>2</sup> The Environmental Assessment of Plans and Programmes Regulations 2004 <https://www.legislation.gov.uk/ukxi/2004/1633/regulation/13/made>

alongside the SEA Report. This document sets out the consultation strategy undertaken and provides responses to the key themes recorded through consultation.

*(1) Every draft plan or programme for which an environmental report has been prepared in accordance with regulation 12 and its accompanying environmental report (“the relevant documents”) shall be made available for the purposes of consultation in accordance with the following provisions of this regulation.*

*(2) As soon as reasonably practicable after the preparation of the relevant documents, the responsible authority shall—*

*(a) send a copy of those documents to each consultation body;*

*(b) take such steps as it considers appropriate to bring the preparation of the relevant documents to the attention of the persons who, in the authority’s opinion, are affected or likely to be affected by, or have an interest in the decisions involved in the assessment and adoption of the plan or programme concerned, required under the Environmental Assessment of Plans and Programmes Directive (“the public consultees”);*

*(c) inform the public consultees of the address (which may include a website) at which a copy of the relevant documents may be viewed, or from which a copy may be obtained; and*

*(d) invite the consultation bodies and the public consultees to express their opinion on the relevant documents, specifying the address to which, and the period within which, opinions must be sent.*

Effective and broad reaching stakeholder engagement is considered key to the success of this Strategy and as such, public consultation on its proposals were undertaken during a formal eight-week consultation conducted from 26<sup>th</sup> October to 20<sup>th</sup> December 2020. To ensure the consultation was accessible for all, the information was made available (on request) in other languages, Braille, audio tape, large print, easy English, British Sign Language video, CD ROM or plain text.

A three-week period of ‘early’ engagement with residents and businesses most at risk of flooding was undertaken from 5<sup>th</sup> to 25<sup>th</sup> October 2020, with those affected able to speak with BCC via phone or video call to make this accessible for all.

BCC wrote to around 1,200 homes and businesses near the River Avon to seek meaningful consultation and engage with the local community. The early engagement with those most at risk was undertaken to allow additional time to respond to the consultation and have any questions answered. The documents issued as part of the early engagement exercise included:

- A consultation booklet - setting out the proposed strategy and vision for River Avon flood defences;
- A consultation questionnaire; and
- A letter from Bristol City Council and the Environment Agency to residents offering an early opportunity to engage.

Stakeholder engagement with statutory bodies has helped shape early technical stages of Strategy development. These include BCC, Environment Agency, Natural England, Historic England, North Somerset, South Gloucestershire, Bath & North East Somerset and Wessex Water. These organisations have formed the stakeholder working group who meet regularly to provide assurance and support to the project team. Emerging work has been shared throughout for observation and information.

### 1.3 Purpose of this report

This report provides details on the stakeholder engagement activities and provides responses in respect of both statutory consultees and public participation. The SEA documents have been updated to reflect the consultation responses where necessary and will be considered further as the Strategy develops.

For further information on the consultation process and the responses to the consultation that relate to the Strategic Outline Case (SOC) documentation, please see the Bristol Avon Flood Strategy – Response to consultation analysis<sup>3</sup>.

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<sup>3</sup> Bristol City Council (2021) Bristol Avon Flood Strategy – Response to consultation analysis.

## 2 Statutory consultees

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### 2.1 Natural England

Consultation responses were received from Natural England on 16<sup>th</sup> December 2020 during the Strategy's consultation period. The response focussed largely on the Strategy itself and the updated SEA and Statement to Inform Appropriate Assessment (SIAA). Natural England acknowledged the need for the strategy and recognised that *“flood risk in Bristol needs to be appropriately addressed to protect people and property, and that a balance has to be met when determining the best options to achieve this, and considerations of timescales, costs, deliverability and a need for certainty are all relevant.”* It was recognised that although much of the Strategy involves a hard engineering solution in the form of flood walls, the preferred option includes the introduction of softer elements that would contribute to a range of placemaking and green infrastructure objectives.

Natural England have outlined that they are broadly satisfied with the SEA's conclusions and recommendations and support the need for further evidence identified that will be required to inform detailed consideration of the scheme and its design. A number of specific comments have been raised as part of the consultation and have been responded to in Table 1 below.

Table 1 Natural England consultation responses

| Respondent      | Summary of respondent  | Response   |
|-----------------|--|--|
| Natural England | <p>Natural England recognised the current evidence base around the effectiveness and feasibility of <b>upstream Natural Flood Management</b> (NFM) measures and the practicality to rely upon them at this stage, however recognised the long period of time the flood scheme is proposed to be delivered over. A recommendation has been made by Natural England to allow flexibility for upstream NFM measures in light of new evidence and/or opportunities to help reduce peak flows, and to also secure a wider range of ecosystem services than hard flood defences. It is noted that this approach could have the potential to significantly support the objectives of Government's 25 Year Environment Plan.</p> | <p>Measures to reduce peak river flows from upstream will not reduce tidal flood risk to central Bristol and the large size of the upstream river catchment makes this currently impractical for the Bristol Avon. Flood defences to contain flooding have been outlined in the Strategic Outline Case.</p> <p>However, we acknowledge the level of support for such measures and agree that benefits can be realised by introducing such techniques. This is a long-term strategy, and such measures to reduce peak river flows could potentially reduce some of the predicted impact of climate change. We will continue work with neighbouring authorities, the Environment Agency and other organisations such as the Avon Catchment Partnership to take a catchment wide approach, combined with any new evidence or opportunities as they arise to help reduce peak flows from upstream. Furthermore, consideration will also be given, where possible, to securing a wider range of ecosystem services, to support the objectives of Government's 25 Year Environment Plan<sup>4</sup>.</p> <p>The Strategy seeks opportunities to implement natural flood management measures and funding to deliver them.</p> |

<sup>4</sup> <https://www.gov.uk/government/publications/25-year-environment-plan> [Accessed online 19/01/21]

| Respondent             | Summary of respondent  | Response  |
|------------------------|--|---|
|                        |  | <p>At the time of writing (Jan 2021), we are leading on the submission of a partnership funding bid with South Gloucestershire Council through the Government’s Flooding and Coastal Resilience Innovation programme. The bid is focused on using green infrastructure and natural flood management schemes to reduce peak river flows in the River Frome catchment, a tributary of the Bristol Avon.</p>   |
| <p>Natural England</p> | <p>As part of Natural England’s consultation response, it is reported that the River Avon corridor is a uniquely important <b>green/blue infrastructure</b> feature which physically connects all West of England authorities. Natural England highlight that it should be planned as a core part of the green infrastructure network within and beyond Bristol and that this should include links with the River Frome corridor and the Severn Estuary and the England Coast Path.</p>  | <p>The connectivity of the River Avon will be considered in the context of the wider landscape and catchment, in recognition of its role as important green/blue infrastructure connecting different areas.</p>   |
| <p>Natural England</p> | <p>Natural England supports the <b>placemaking objectives outlined in the SEA</b> and the alignment with The Bristol One City Climate Strategy and highlights the importance and challenges of coordinating flood risk management solutions with new development.</p> <p>Natural England also recognise the work being undertaken by Bristol City Council, working with WECA, LNP and others in developing a business case for the Avon corridor <b>strategic green infrastructure</b> programme and that the river corridor is a prominent feature of the Council’s new Ecological Emergency Strategy. Joint working with these</p> | <p>Collaboration and consultation will be maintained with key stakeholders throughout design to ensure a co-ordinated approach is taken to refining and successfully implementing a scheme that secures flood protection and placemaking objectives in line with other strategies.</p> <p>The Strategy will be developed in consultation with Bristol City Council’s Ecological and Climate Emergency officers, to ensure the One City Strategies and Plans align with Strategy, and to maximise biodiversity net gain.</p> |

| Respondent      | Summary of respondent   | Response  |
|-----------------|---|---|
|                 | <p>partnerships will help to ensure a co-ordinated approach is taken to refining and successfully implementing a scheme that secures flood protection and placemaking objectives.</p>   |   |
| Natural England | <p><b><u>Avon Gorge Woodlands SAC</u></b></p> <p><i>“Natural England broadly supports the SEA findings, in particular the need for more information. We note that further surveys are proposed which is welcome. We would also point you to ecological information relating to the Avon Gorge Woodlands SAC that was gathered to inform the proposed MetroWest passenger rail service upgrade.”</i></p> <p><i>We would be pleased to advise further on the Avon Gorge Woodland SAC with respect to identifying, protecting and enhancing qualifying features of the site.</i></p> | <p>Further surveys will be undertaken within the Avon Gorge Woodland to provide a robust evidence base to assess potential impacts against, both for the SIAA and for any other impact assessment.</p> <p>Advice to consider the MetroWest passenger rail service upgrade is welcome. Consideration will be given to the ecological information within this Strategy to update the SIAA.</p> <p>As the Strategy progresses, further consultation with Natural England on potential impacts, with consideration of the mitigation hierarchy, would be welcome.</p> |
| Natural England | <p><b><u>Severn Estuary SPA</u></b></p> <p><i>In addition to ‘wintering’ birds, consideration of potential impacts on SPA species during the spring and autumn passage periods, occurring between April and June and between August and October, will also be necessary, given the SPA designation recognises the presence of over-wintering and migratory water bird populations.</i></p> <p>The Natural England consultation response makes reference to <i>The status of UK SPAs in the 2000s: the Third Network Review</i> which</p>  | <p>Assessment of impacts and avian survey programmes for qualifying bird species will be amended to consider both wintering and migratory periods, as outlined in Natural England’s consultation response and appropriate guidance.</p>   |

| Respondent      | Summary of respondent   | Response  |
|-----------------|---|---|
|                 | considers Non-breeding waterfowl assemblages across the network of Special Protection Areas (SPAs) in the UK. <sup>5</sup>  |   |
| Natural England | <p><b><u>Severn Estuary - Ramsar site</u></b></p> <p><i>In relation to qualifying bird species, the potential for an adverse effect on the integrity of the Severn Estuary Ramsar is identified from the proposed works around Shirehampton and Pill if these take place during winter. As advised for the SPA, passage species should also be considered.</i></p>  | As for the SPA, assessment of impacts and avian survey programmes for qualifying bird species will be amended to consider both wintering and migratory periods, as outlined in Natural England's consultation response.   |
| Natural England | <p>Natural England have supported the <b>range of mitigation measures</b> proposed at this stage to reduce impacts to the Avon Gorge Woodlands SAC and Severn Estuary SAC, albeit recognising further details will be needed.</p> <p>It is noted by Natural England that the SIAA has not identified mitigation measures to protect the Severn Estuary SPA and Ramsar site birds from potential disturbance, both over winter and during spring and autumn passage periods.</p> | <p>Further detail will be provided, where possible and appropriate to this design stage, to mitigate potential impacts on the Avon Gorge Woodlands SAC, Severn Estuary SPA and Ramsar site, in relation to birds from potential disturbance.</p> <p>Measures to mitigate disturbance to birds are detailed further within the updated SIAA.</p> <p>Measures will also be considered as required through Biodiversity Net Gain to secure benefits, where possible, to create and/or enhance functional habitat to support features of the European sites, as an enhancement.</p> |

<sup>5</sup> Joint Nature Conservation Committee, 2016. 'The status of UK SPAs in the 2000s: the Third Network Review' [http://jncc.defra.gov.uk/pdf/UKSPA3\\_Chapters1-8.pdf](http://jncc.defra.gov.uk/pdf/UKSPA3_Chapters1-8.pdf)

| Respondent             | Summary of respondent  | Response   |
|------------------------|--|--|
| <p>Natural England</p> | <p><b><u>North Somerset &amp; Mendip Bats SAC</u></b></p> <p>Natural England have recommended that potential effects on the North Somerset and Mendip Bats SAC are included in the HRA for the flood strategy. The SIAA should consider the designated site due to the <i>“findings of several bat surveys undertaken to inform the MetroWest passenger upgrade between Portishead and Bristol, which, among other things, found that the river corridor is an important commuting route for greater horseshoe bats associated with Brockley Hall, North Somerset and Mendip Bats SAC.”</i></p> <p>Commentary is also provided by Natural England on the potential for disturbance from artificial lighting on horseshoe bats and the consideration of a known lesser horseshoe maternity roost in Ashton Court that will require appropriate consideration as an Annex 2 species.</p> | <p>Both the SEA and SIAA and future assessment documentation will consider Brockley Hall SSSI and the North Somerset &amp; Mendip Bats SAC, in context to the Core Sustainance Zones, Bat Consultations Zones and other appropriate guidance and information, including Conservation Objectives.</p> <p>The advice to consult the MetroWest passenger upgrade project is welcome. Information on commuting / navigational routes from the tracking studies, in-combination with the roost locations and their status will be considered appropriately for this design stage within the SIAA and SEA.</p> <p>The use of lighting and any habitat loss will be considered further in the context of potential disturbance to bats, with additional mitigation applied, as appropriate.</p> |
| <p>Natural England</p> | <p><b><u>Coastal squeeze and habitat loss</u></b></p> <p><i>Natural England supports the conclusions and recommendations for reducing intertidal habitat loss and providing scope for landward migration, Biodiversity Net Gain and retention of intertidal habitats, as set out in section 3 of the Technical Note and echoed in the SIAA.</i></p>  | <p>Where possible, intertidal habitat loss will be avoided and minimised with habitat retention (in line with the mitigation hierarchy), with provision for scope for landward migration and Biodiversity Net Gain.</p>  |

| Respondent             | Summary of respondent  | Response  |
|------------------------|--|---|
|                        | <p><i>We would be pleased to discuss implications for the Severn Estuary European site and intertidal habitats more generally as the design progresses and more details are available.</i></p>   | <p>Further discussion will be held with Natural England in relation to implications on the Severn Estuary European site and intertidal habitats, as the designs progress.</p>   |
| <p>Natural England</p> | <p>Natural England noted the potential for a range of <b>protected species that could be adversely affected</b> by the Strategy agree with the Strategy’s consideration of the need for further ecological surveys and consultation with a suitably qualified ecologist is required in order to assess impacts and provide suitable mitigation and licencing, as required.</p> | <p>Further surveys and studies are to be undertaken to adequately consider potential impacts on protected species and provide mitigation and enhancement as appropriate.</p> <p>The Strategy welcomes the opportunity to discuss consideration of protected species further with Natural England and ensure the best outcome for biodiversity associated with this development.</p> |

## 2.2 Environment Agency

Consultation responses were received from the Environment Agency, in their role as a statutory consultee, on the 20<sup>th</sup> December 2020 during the Strategy's consultation period. The response focussed largely on the emerging strategy itself. The Environment Agency outlined that there were largely content in respect of the issues highlighted within the SEA documents and that the updated SEA documents reflected the collaboration with the Environment Agency in respects to the inclusion of pertinent environmental issues.

It is recognised in issues raised by the Environment Agency, similar to those raised by Natural England, that a significant proportion of the scheme involves hard engineering interventions in the form of flood walls, although the preferred option includes the introduction of softer elements that would contribute to a range of placemaking and green infrastructure objectives. The updated Strategy also recognises the need for inclusion of measures to prevent detriment (an increase in flood risk) to other areas.

Through the consultation response, the Environment Agency have outlined that they are content with the updated SEA conclusions and recommendations and that the flood defences and detriment mitigation measures are at an early stage of development, and further investigations and design development on a local level will be required to confirm and refine proposals. Agreement is shown in the following table with the need for further evidence to inform detailed consideration of the Strategy and its design.

Table 2 Environment Agency consultation responses

| Respondent         | Summary of respondent   | Response   |
|--------------------|---|--|
| Environment Agency | Commentary was provided by the Environment Agency with regards to the need to formally designate such defences under <b>Schedule 1 of the Flood and Water Management Act 2010</b> to ensure they remain in place unless permitted, and that information must be made available to ensure they provide an appropriate standard of protection and construction.   | This has been acknowledged by the project team and will be taken into account as the Strategy develops.  |
| Environment Agency | The need for <b>consultation with the relevant Statutory Nature Conservation Bodies (SNCBs) and Statutory Consultees</b> has been highlighted as part of the consultation response due to the proximity of the strategy to a number of international, national and locally designated sites.  | Consultation will be undertaken with the appropriate SNCBs and statutory consultees throughout the design process.   |
| Environment Agency | We note discounted techniques include “ <i>Source techniques to slow the flow upstream to reduce the peak flow (such as flood storage, working with nature or land management) were discounted on technical grounds due to the impractically large scale of required upstream works and the fact that this approach would not reduce tidal flooding from the estuary.</i> ” Notwithstanding this, we would strongly encourage the implementation of <b>natural flood management</b> techniques as part of this Strategy. Such an approach would help deliver a wide range of ecosystem services when compared to hard flood defences alone. This has the potential to | Measures to reduce peak river flows from upstream will not reduce tidal flood risk to central Bristol and the large size of the upstream river catchment makes this currently impractical for the Bristol Avon. Flood defences to contain flooding have been outlined in the Strategic Outline Case.<br><br>However, we acknowledge the level of support for such measures and agree that benefits can be realised by introducing such techniques. This is a long-term strategy, and such measures to reduce peak river flows could potentially reduce some of the predicted impact of climate |

| Respondent | Summary of respondent   | Response   |
|------------|---|--|
|            | <p>significantly support the objectives of the UK Government’s 25 Year Environment Plan and the NPPF in respect of biodiversity net gain.</p> | <p>change. We will continue to work with neighbouring authorities, the Environment Agency and other organisations such as the Avon Catchment Partnership to take a catchment wide approach, combined with any new evidence or opportunities as they arise to help reduce peak flows from upstream. Furthermore, consideration will also be given, where possible, to securing a wider range of ecosystem services, to support the objectives of Government’s 25 Year Environment Plan.</p> <p>The Strategy will seek opportunities to implement natural flood management measures and funding to deliver them. At the time of writing (Jan 2021), we are leading on the submission of partnership funding bid with South Gloucestershire Council through the Government’s Flooding and Coastal Resilience Innovation programme. The bid is focused on using green infrastructure and natural flood management schemes to reduce peak river flows in the River Frome catchment, a tributary of the Bristol Avon.</p> <p>The Strategy will be developed in consultation with Bristol City Council’s Ecological and Climate Emergency officers, to ensure the One City Strategies and Plans align with Strategy, and to maximise biodiversity net gain.</p> |

| Respondent         | Summary of respondent   | Response  |
|--------------------|---|---|
| Environment Agency | The River Avon corridor is an important <b>green/blue infrastructure</b> feature. It is a core part of the green infrastructure network within and beyond Bristol. We advise the emerging Strategy should link with ongoing work by the West of England Combined Authority (WECA) to develop a spatial and green infrastructure strategy for the West of England. | The connectivity of the River Avon will be considered in the context of the wider landscape and catchment, in recognition of its role as important green/blue infrastructure connecting different areas. We acknowledge the need to align the emerging Strategy with the ongoing work being undertaken by WECA. This will be a necessary inclusion for the next design stage. |
| Environment Agency | The preferred option and <b>placemaking objectives</b> must be aligned with The Bristol One City Climate Strategy. We strongly encourage an approach to reduce the impacts of climate change on the wider area.   | Collaboration and consultation will be maintained with key stakeholders throughout design to ensure a co-ordinated approach is taken to refining and successfully implementing a scheme that secures flood protection and placemaking objectives in line with other strategies and the emerging Local Plan.   |
| Environment Agency | <b>Spatial Planning</b> is key in taking an integrated approach, helping to unlock certainty of delivery of the required strategic infrastructure to facilitate growth together with wider environmental and economic benefits. We advise the Strategy must align with the emerging Local Plan and associated evidence base.                                      |   |

## 2.3 Bristol City Council – Nature Conservation Officer (Planning)

Consultation responses were received from the Nature Conservation Officer at Bristol City Council in their role as a statutory consultee, on the 26th October 2020 during the consultation period.

The response focussed largely on the ecological mitigation measures outlined in the SEA and SIAA documents, as well as BNG and enhancement. It was commented that the SIAA requires specific mitigation measures to be outlined in respect to piling, wintering birds, impacts on intertidal saltmarsh habitat, fish migration and fish passage and ecological monitoring, and the wording of such mitigation measures as draft planning conditions to help facilitate the potential adoption by the Local Planning Authority.

**In response, it is noted that further consideration will be given to detailed mitigation measures applicable within the SIAA as the Strategy develops. The advice received from BCC is welcome and these comments will be incorporated to allow for the provision of draft planning conditions, as appropriate.**

BCC advised that if/when the Environment Bill is passed, a future planning application will be required to demonstrate a mandatory minimum 10% Biodiversity Net Gain as measured using the Defra Biodiversity Metric 2.0 (as amended). The BNG assessment should be undertaken prior to the validation of a future planning application and not conditioned. It was outlined by BCC that engagement with the Council's pre-application process is encouraged to inform BNG proposals and the design of ecological mitigation proposals.

**In response, it is noted that at the earliest opportunity, once baseline surveys are completed, a Biodiversity Net Gain (BNG) assessment will be undertaken to understand the design implications. Following the mitigation hierarchy, the project will aim to avoid and reduce ecological impacts on site and to provide biodiversity gain within the site, and consideration will also be given to the need for offsite delivery of biodiversity units. Throughout this process we will welcome opportunities to collaborate and consult with stakeholders to ensure the effective delivery of (a minimum) 10% BNG, with any habitat enhancement and/or creation delivering maximum benefit where possible to species, habitats and designated sites. Consideration will also be given to use the latest version of any Defra Metric published.**

Opportunities for ecological enhancements were raised by BCC and that enhancements should be integrated within the design process at an early stage.

**In response, opportunities for enhancement will be considered at the appropriate stage of the Strategy. The considerations proposed by BCC are welcome and certainly would make meaningful contributions to the ecological diversity of the Strategy area.**

## 2.4 Wessex Water

Consultation responses were received from Wessex Water on the 18<sup>th</sup> December 2020 during the Strategy's consultation period. The response acknowledged the aim to deliver a long term plan to better protect homes and businesses from flooding and that the Strategy seeks to enhance through futureproofing the city, enabling greener and more active travel, and unlocking Bristol's potential.

Wessex Water have outlined their support for the proposal and are keen to explore opportunities to work with Bristol City Council and the Environment Agency to facilitate any required permissions that may be necessary as the statutory sewerage undertaker.

It is also recognised that the proposal contains elements which coincide with measures proposed in the Wessex Water Business Plan for the period 2020-2025. The need to develop strong partnership led projects are envisaged to deliver improvements to the drainage and water environment and that these align with the outset of the proposal.

The opportunity to further explore partnerships is welcomed by Wessex Water through the promotion of Sustainable Drainage Systems (SuDS) through either the proposed flood alleviation works or areas of redevelopment within the City.

## 2.5 Historic England

Consultation responses were received from Historic England following the Strategy's consultation. Historic England broadly welcomed the proposals and the principle of the Strategy in reducing the risk of flooding of the historic city. It was acknowledged that the Strategy will help safeguard the heritage assets from flood events, acknowledging that flooding is one of the most significant risks to the historic environment. Historic England noted that the Strategy:

*“..considers that measures to reduce such flooding are likely, in turn, to result in permanent adverse effects due to the lasting impact that the construction of the defences will have on the setting and fabric of heritage assets along the River Avon and the potential for significant effects due to impacts on archaeological remains. The challenge is clearly to reduce such effects whilst maintaining effective flood protection”.*

The commitment to integrate flood defence walls into the public realm was recognised and welcomed by Historic England, however this is likely to give rise to complications where these are designated heritage assets as reported in the SEA. It was also acknowledged that the Strategy has made efforts to reduce the flood risk in the area whilst also minimising the degree of potential harm to existing heritage assets and outlines the positive opportunities through the Strategy.

Through the consultation response, Historic England commented that they *“fully endorse the principle of the initiative and the ongoing commitment for further dialogue with all key partners to protect the city from flooding in a sensitive and bespoke manner”.*

A number of specific comments have been raised as part of the consultation and have been responded to in Table 3 below.

Table 3 Historic England consultation responses

| Respondent       | Summary of respondent  | Response  |
|------------------|--|---|
| Historic England | <p><i>“The report highlights potential negative effects of flood prevention measures along the length of the strategy area...</i></p> <p><i>...however, the assessment goes on to refer to the Placemaking Opportunities Report and how this, and further assessments may inform detailed and refined plans which may reduce the impact of any flood risk measures on these heritage assets.”</i></p>  | <p>Collaboration and consultation will be maintained with key stakeholders throughout design to ensure a co-ordinated approach is taken to refining and successfully implementing a scheme that secures flood protection and minimises the impact on heritage assets where possible.</p> <p>Further design work, including the use of materials and alternatives, will be considered as the Strategy develops in order to reduce impact on the setting of heritage assets where possible.</p> |
| Historic England | <p><i>While the visual impact of the proposed defences could be minimised by their integration into the public realm, their increased height may still have the potential to cause harm to the setting of nearby heritage assets.</i></p>  |   |
| Historic England | <p><i>The proposals are supported by an excellent heritage statement which clearly sets out the significance of the areas affected by the proposals and the heritage assets that may be affected. The heritage assessment is primarily focussed on above-ground impacts and you will need to consider the impact the proposals may have on archaeology, including paleoenvironmental material.</i></p> | <p>It is recognised that further work will be required as the Strategy develops to further understand the sensitivities of buried archaeology.</p>  |
| Historic England | <p><i>The proposals do not provide detail of plans for flood defences beyond the Cumberland Basin-Netham Lock Corridor. However, documentation describing the wider strategy beyond the New Cut/Floating Harbour indicates that additional defences will be needed at Sea Mills. A significant area of land at Sea Mills (where the River Trym joins the Avon) is</i></p>                              | <p>It is recognised that Scheduled Monument Consent will be required for any work in proximity to Sea Mills due to the presence of archaeological remains.</p>  |

| Respondent       | Summary of respondent  | Response   |
|------------------|--|--|
|                  | <i>scheduled, to preserve the archaeological remains of the Roman town and port (known as Abonae) once located here. Any works in this area will require scheduled monument consent (SMC).</i>   |  |
| Historic England | <i>We recommend that we work closely with your design team to ensure that the impact of the flood defence on the archaeology in this area [Sea Mills] is appropriately assessed and understood. You will need to ensure the works in this area follow the policies within the Department of Digital Cultural Media and Sports (DCMS) Scheduled Monuments Policy Statement (October 2013). The policies in this statement are clear that if harm is caused by the works then SMC will only be granted if there are public benefits to outweigh that harm. Any application for scheduled monument consent requires sufficient information to allow DCMS to make an informed decision on the granting of consent.</i> | Collaboration and consultation will be maintained with key stakeholders throughout design to ensure a co-ordinated approach is taken to refining and successfully implementing a scheme that secures flood protection.<br><br>Recommendations to work collaboratively with Historic England and the Enhanced Advisory Service is welcomed to better define the extent of heritage assets and to provide further clarity on the impacts as the Strategy develops. |
| Historic England | It was recommended that the Strategy uses the Enhanced Advisory Services to apply for a listing enhancement for designated assets, such as the Cumberland Basin, where the extent is not defined. This will enable greater clarity and allow for an accurate assessment of impact on the listed elements when more detailed designs emerge.  |  |
| Historic England | <i>We would encourage proposals for flood defence works around the Cumberland Basin to be used to bring forward proposals for the restoration of the Grade II* listed swing bridge, to bring it back into use and secure its removal from the Heritage at Risk register. We would also encourage any plans to better interpret the South Entrance Dock and improve its setting.</i>  | At the Outline Business Case (OBC) stage consideration will be given to this as part of the refinement of the defence designs and alignments, including integration of regeneration and placemaking opportunities.   |

| Respondent       | Summary of respondent   | Response  |
|------------------|---|---|
| Historic England | <i>The Cumberland Basin allows for exceptional views towards the Grade I listed Clifton Suspension Bridge and the Grade II* Registered Landscape of Ashton Court. The Cumberland Basin plays a key role in the immediacy of transition from townscape to landscape at Bristol's Western edge. The scale and massing of any new flood defence walls will need to be carefully considered here; proposals should seek to preserve the open character and allow views to continue to be appreciated.</i> | Consideration will be given to include both soft and hard-engineered approaches through developing designs alongside a placemaking strategy to meet green infrastructure objectives and to preserve the open character and enjoyment of the area. |
| Historic England | <i>We would encourage plans for flood defence works to improve the relationship between the buildings and the New Cut, where the present condition of the public realm is poor. Improvements in this area could be a catalyst for finding beneficial long-term uses for the bonded warehouses.</i>  |   |
| Historic England | <i>The Underfall Yard, including the historic sluicing mechanism, is a Scheduled Ancient Monument. As with Sea Mills, any work in this area will require Scheduled Monument Consent (SMC) and we recommend early engagement with our Inspector of Ancient Monuments to discuss the potential impact of any works.</i>   | Consideration of heritage assets, both designated and non-designated, will be considered as the Strategy develops including the need for any consents and engagement with Historic England.   |
| Historic England | Consideration should be given as to whether the New Cut retaining walls should be screened for statutory listing. Historic England have commented on their historical significance, albeit in poor condition and that these are likely to require substantial rebuilding as part of the Strategy. This would provide greater certainty at an early stage in the Strategy as to whether the retaining walls are likely to be listed.   |   |

| Respondent       | Summary of respondent   | Response  |
|------------------|---|---|
| Historic England | <i>We welcome the commitment to retain the tracks of the Bristol Harbour Railway alongside the New Cut. The railway makes a significant contribution to the character and appearance of the conservation area and is a physical reminder of the area's industrial past. We note one of the suggested options for the New Cut is to turn the railway into a tramway, whereby pedestrians and cyclists can share its formation. This could alter the railway's character and create a false historical narrative, as the New Cut Branch of the Harbour Railway was never was a dockside tramway. However, we applaud the ambition to integrate new public realm into the flood infrastructure and to create a "New Cut Greenway".</i> | Collaboration and consultation will be maintained with key stakeholders throughout design to ensure a co-ordinated approach is taken to refining and successfully implementing a scheme that secures flood protection whilst preserving the heritage of the area. |
| Historic England | <i>We encourage consideration of how the Greenway proposals might improve the pedestrian experience of the New Cut from the area around Bathurst Basin up towards Temple Meads. Here, particularly around Bedminster Bridge Roundabout, the pedestrian is directed onto roadside pavements and opportunities for appreciation and enjoyment of the river corridor is limited.</i>   | This is acknowledged and further design work will be carried out alongside a placemaking strategy to meet green infrastructure objectives and to improve the character and enjoyment of the area.   |
| Historic England | <i>Beyond Temple Meads, you will be aware that the Silverthorne Lane area (which includes the erstwhile Totterdown Lock and Basin) is under consideration for designation as a conservation area. This may have a bearing on your proposed designs. The reasons for the potential designation are its industrial character and appearance, and any flood defence works will need to respond positively to that character.</i>   | Consideration will be given to the importance of heritage assets as part of the Strategy and will consider measures to enhance through placemaking opportunities and public realm.  |

| Respondent       | Summary of respondent  | Response |
|------------------|--|----------|
| Historic England | <p><i>The area around St Philips is likely to see significant change in future years as plans for the Temple Quarter Enterprise Zone develop, and a mixture of uses replace the current light industry which predominates. There is an opportunity for the flood defence works to improve the relationship between the river and the surrounding townscape at this point in particular, using the watercourses (both the Avon and the Feeder Canal) to contribute to establishing a strong sense of place.</i></p> |          |
| Historic England | <p><i>The Feeder Canal does not form part of the current proposals, but is a historically significant piece of infrastructure that could be much better interpreted and appreciated.</i></p>   |          |

### 3 Public consultation

As part of the consultation process, the following consultation responses that relate to the SEA documents have been grouped into key themes and are outlined and responded to below.

Table 4: Public participation consultation responses

| ID Number/<br>Respondent | Summary of respondent  | Response  |
|--------------------------|--|---|
| 13                       | <i>Insufficient attention is paid in the report to the damage the proposed wall building makes to the environmental and heritage landscapes of the city and harbour. There needs to be a bigger vision than just build a wall</i>  | <p>Consideration will be given to include both soft and hard-engineered approaches through developing designs alongside a placemaking strategy to meet green infrastructure objectives.</p> <p>The Strategy will also be required to achieve a Biodiversity Net Gain of at least 10% if/when the Environment Bill is passed, measured using the Defra Biodiversity Metric 2.0. Ecological mitigation and enhancement will equally be developed through the design and assessment process.</p> |
| 288                      | <i>Section 4 confirms the many significant negative effects that will occur both during construction over a wide area and long term, including increased risk of flooding elsewhere. Landscape impacts are particularly significant. These concerns at the very least demonstrate why the more strategic option of a tidal barrier should be reviewed and brought forward as the preferred option after it is subjected to the same SEA process.</i> | <p>The next stage will seek consultation with the Bristol City Council's Ecological Emergency officer and heritage stakeholders, to ensure the One City Strategies and Heritage Guidance's align with Strategy.</p>   |
| 266                      | <i>Efforts should be made to increase biodiversity, rather than ensure only no net loss.</i>   | <p>The use of materials and design measures will be considered in further details as the Strategy develops to reduce</p>  |

| ID Number/<br>Respondent | Summary of respondent | Response   |
|--------------------------|-----------------------|--|
|                          |                       | <p>permanent impacts on the setting of heritage assets. The SEA addendum acknowledges the likely adverse effects on heritage assets through the implementation of the Strategy but also highlights the long-term protection for heritage assets from flood damage.</p> <p>A tidal barrage (permanently damming the river, such as the Cardiff Bay barrage) was scoped out early on whilst assembling the long list of strategic approaches because a barrage would create a non-tidal narrow body of water in the Gorge which would increase the risk of flooding from high flows coming down the River Avon. We will not progress further consideration of a tidal barrage for the reasons provided in the Strategic Outline Case.</p> <p>A tidal barrier (closing in advance of forecast flooding, such as the Thames Barrier in London) was included in the short list of strategic options but is not proposed at this stage. There are a number of reasons:</p> <ul style="list-style-type: none"> <li>• Because extensive flood defences would still need to be built in the city centre to contain river flows trapped at times the barrier was closed, despite testing barrier locations as far downstream as possible.</li> </ul> |

| ID Number/<br>Respondent | Summary of respondent   | Response   |
|--------------------------|---|--|
|                          |   | <ul style="list-style-type: none"> <li>• Because a barrier would cost significantly more (c£600m) to construct than the phased raised defences proposed by the strategy, more than double the cost (plus the additional cost of extensive flood defences upstream in the city centre).</li> <li>• Because a barrier would have significant operation and maintenance requirements.</li> </ul> <p>We will continue to progress the Strategic Outline Case as proposed at this stage for the reasons stated above, noting that the adaptive nature of defences does not preclude future decisions being taken on incorporating alternative solutions</p> |
| 45                       | <p><i>As far as I can see it has been too late in implementing changes to our flood defences, as we have already experienced floods in the past, like in Bedminster 1960s and again in the 80s a plan of action should have been in place then to increase our flood defences and minimise damage done to the surrounding areas, I was a child when the tobacco company in Bedminster was flooded, I cannot recall anything done about building our flood defences up just in case this should happen again, we can ill afford any further flooding in that area and unless our defences are built up this will continue to happen.</i></p> | <p>It is recognised that flooding has historically been an issue within the city of Bristol and that action is required to develop a flood strategy to further protect the city and neighbouring communities, and to enable a greener more active city.</p>  |

| ID Number/<br>Respondent | Summary of respondent   | Response  |
|--------------------------|---|---|
| 63                       | <i>Thank you for showing them</i>   | No action required.   |
| 70                       | <i>I am glad that this organisation is actively evaluating and taking action on the potential flood risks in and around Bristol. I would note the importance of dealing with climate change now, in order to minimise the potential damage these floods could cause, and their frequency. I feel we as a nation have greatly fallen flat in meeting climate goals, and if we continue act in this way, flood defences are simply dealing with a problem we could have prevented, or at the least reduced the impact of.</i> | <p>The Strategy recognises the need for long term flood management measures to protect against both fluvial and tidal flood risk, including consideration of climate change impacts through sea level rise.</p> <p>The Strategy also aligns to The Bristol One City Climate Strategy and highlights the importance and challenges of coordinating flood risk management solutions with new development.</p> |
| 79                       | <i>Yet to study.</i>  | No action required.   |
| 91                       | <i>A good overall assessment, pointing out the potential (temporary) disruption to both human and wildlife during construction of defences.</i>   | No action required.   |

| ID Number/<br>Respondent | Summary of respondent  | Response  |
|--------------------------|--|---|
| 186                      | <i>Migratory fish (sea trout and salmon, eels, lamprey) use the Bristol waterways as do mullet and bass. Recently (Oct 2020) harbour porpoises were seen and filmed under the Clifton suspension bridge. It's important that migration/feeding routes are not compromised and in fact enhanced if possible to aid recovery of these species. This should be reflected within the assessment.</i> | The potential impact on migratory fish and harbour porpoise will be considered as appropriate within the ecological assessment and Habitats Regulations Assessment. Where appropriate, mitigation and enhancement will be provided to minimise impacts and seek opportunities for biodiversity enhancements.  |
| 229                      | <i>I am not academically equipped to add anything or take away from what I have read on the Strategic Environmental Assessment</i>   | A summary of the Strategy and the SEA findings has been provided through the SEA Non-Technical Summary.   |
| 544                      | <i>Way too over complex.</i>   |   |
| 241                      | <i>Silting and therefore dredging is driven by flood spring tides over topping the Netham weir, the initial idea of the dam towards the mouth of the river Avon was to reduce the amount of silt being carried up stream, produce a body of fresh water that would be level controlled and form a recreational lagoon.</i>   | <p>A tidal barrage (permanently damming the river, such as the Cardiff Bay barrage) was scoped out early on whilst assembling the long list of strategic approaches because a barrage would create a non-tidal narrow body of water in the Gorge which would increase the risk of flooding from high flows coming down the River Avon. We will not progress further consideration of a tidal barrage for the reasons provided in the Strategic Outline Case.</p> <p>A tidal barrier (closing in advance of forecast flooding, such as the Thames Barrier in London) was included in the short list of</p> |

| ID Number/<br>Respondent | Summary of respondent   | Response   |
|--------------------------|---|--|
|                          |   | <p>strategic options but is not proposed at this stage. There are a number of reasons:</p> <ul style="list-style-type: none"> <li>• Because extensive flood defences would still need to be built in the city centre to contain river flows trapped at times the barrier was closed, despite testing barrier locations as far downstream as possible.</li> <li>• Because a barrier would cost significantly more (c£600m) to construct than the phased raised defences proposed by the strategy, more than double the cost (plus the additional cost of extensive flood defences upstream in the city centre).</li> <li>• Because a barrier would have significant operation and maintenance requirements.</li> </ul> <p>We will continue to progress the Strategic Outline Case as proposed at this stage for the reasons stated above, noting that the adaptive nature of defences does not preclude future decisions being taken on incorporating alternative solutions</p> |
| 290                      | <p><i>"The SEA references that embodied carbon is expected levels, however the Strategy should consider how it can introduce carbon capture either integrated into the works or as projects located elsewhere in the catchment to offset the project.</i></p> | <p>As part of the Strategy’s consenting process through Planning/EIA, further work to review and reduce embodied carbon and GHG emissions will be considered as part of the design, including carbon sequestration through mitigation planting and the need to achieve Biodiversity Net Gain.</p>  |

| ID Number/<br>Respondent | Summary of respondent  | Response  |
|--------------------------|--|---|
|                          |  | The next stage will seek consultation with the Bristol City Council's Ecological Emergency officer and Climate officers, to ensure the One City Strategies and Plans align with Strategy, and to maximise biodiversity net gain and carbon capture.   |
| 307                      | <p><i>"This is a very sensible and well-prepared report with recommendations which should be put into action as soon as possible.</i></p> <p><i>All reasonable and sensible reports quite often carry some negative aspects which the public in general is bound to pick up and give undue emphasis compared with the overall widespread benefits which will result.</i></p> <p><i>It is imperative that proper consultation and publicity be given to the project; this is very rarely done intelligently, I'm afraid to say. I hope it is not the case in this issue!"</i></p> | <p>Consultation with appropriate Statutory Nature Conservation Bodies and Statutory Consultees will be undertaken throughout the design development.</p> <p>A three-week period of early engagement with residents and businesses most at risk of flooding was undertaken from 5th to 25th October 2020, with those affected able to speak with us via phone or video call. As part of the consultation process, Bristol City Council have written to around 1,200 homes and businesses near the River Avon to seek meaningful consultation and engage with the local community. This has proven effective alongside engagement with statutory consultees and this engagement with local communities will be progressed as the Strategy develops.</p> |
| 308                      | <p><i>"The non-technical summary suggests that the landscape effects are to be mitigated through the implementation of a glass panel at the top of these defences which I find hard to believe. Given the vague nature of the defence measures at this stage, is it pertinent to state this now? Is this glass panel the preferred option going forward?"</i></p>  | <p>Glass panels have been successfully utilised in numerous flood defence projects in the UK and elsewhere. They are one of a number ways in which defence levels could be increased in 2065, including through integrating them into development; terracing, embankments and disguised walls. Detailed proposals will be developed at subsequent stages.</p>   |

| ID Number/<br>Respondent | Summary of respondent  | Response  |
|--------------------------|--|---|
|                          | <i>Significant positive effects to population and health is expected and welcomed."</i>  |   |
| 324                      | <i>I think that it was essential to submit to the SEA to provide both credibility and authority for the plan. The SEA is thorough and comprehensive. I have no detailed comments.</i>  | No action required.   |
| 442                      | <p><i>"I am very worried and disturbed by the glib dismissal of 'temporary damage and destruction to ecology and environment. When was this written? Any type of damage to river etc habitats is in my view a serious crime which should be dealt with in a law court with proper sanctions.</i></p> <p><i>In the light of the disgusting permanent destruction to an SSSI on the River Lugg in the last few weeks I call for a public consultation on these proposals.</i></p> <p><i>I know flooding needs a solution but these proposals aren't fit for purpose. This type of project calls for a new approach using nature and repairing the natural water meadow habitat not completely destroying what's left of it."</i></p> | <p>Consultation with appropriate Statutory Nature Conservation Bodies and Statutory Consultees will be undertaken throughout the design development and the next stage of the Strategy.</p> <p>As part of the Strategy consenting process through Planning/EIA, further work to assess the ecological and environmental implications. The Strategy will be required to achieve a Biodiversity Net Gain of at least 10% if/when the Environment Bill is passed, measured using the Defra Biodiversity Metric 2.0. Ecological mitigation and enhancement will equally be developed through the design and assessment.</p> |
| 508                      | <i>Do NOT build new housing or commercial/retail on flood plains</i>   | The Strategy seeks to protect the city of Bristol against flood risk and will seek to work alongside Bristol City Council and the emerging Local Plan.  |

| ID Number/<br>Respondent | Summary of respondent   | Response  |
|--------------------------|---|---|
| 514                      | <i>The link seems to take me towards a page I have already seen.</i>  | No action required.   |
| 548                      | <p><i>"There seems to be a greater concern over flowers, birds and fish than people.</i></p> <p><i>There is a fundamental scientific error with these reports. The actual tidal levels are politically determined and not by science. The annual increase in tide levels may be as much as 10 times greater than reality. This fact flows from the predicted tide levels from:</i></p> <p><i>Batstone. C et al "A UK best-practice approach for extreme sea-level analysis along complex topographic coastlines" 2013 Ocean Engineering #71</i></p> <p><i>8.67m to 9.43 in 1000 year</i></p> <p><i>Edmeades.A "Mean Sea Level Rise at Bristol Port" 2015 The Bristol Port Company. Increase of tide level of 1.23mm yr-1.</i></p> <p><i>The BAFS reports are lengthy and I cannot say that I have performed a detailed analysis as I also am working full time! However, any good science requires a list of References so others can easily understand. I cannot find a proper list of References.</i></p> | <p>The 'SEA Framework' comprises a series of objectives and key issues that are used as a benchmark against which the Strategy is assessed against. The Strategy and SEA process considers the need for flood risk measures, including the impact on infrastructure, communities, businesses and environmental aspects. The Strategy considers these aspects alongside the benefits of flood protection for communities throughout Bristol and a vision to futureproof the City. As the Strategy develops, consideration of all social, economic and environmental aspects will continue to be explored.</p> <p>The below allowances have been used in the modelling.</p> <p>National Planning Policy Framework (NPPF) allowances:</p> <ul style="list-style-type: none"> <li>• Fluvial – The Strategy has used the 'Higher Central' fluvial allowances as those given in the latest EA guidance for FRAs, which was last updated in December 2019 to incorporate UKCP18 findings. We understand that fluvial allowances have not been changed as a result of UKCP18.</li> <li>• Tidal – The Strategy has used a higher sea level rise than that given in the above guidance. EA confirmed that as the value</li> </ul> |

| ID Number/<br>Respondent | Summary of respondent  | Response  |
|--------------------------|--|---|
|                          | <p><i>My comments should be weighed as I have spent 7 years at sea, qualified with a Masters Degree in Ocean Engineering and Doctorate in Engineering. Furthermore I live beside the cut and have already successfully built flood defence for my property at The Marchioness Building, Commercial Road.</i></p> <p><i>The Marchioness Building is misnamed in these Reports as ""former Cardiff and Channel Steamship Co shed"". The Building should be properly named not by its occupants!"</i></p> | <p>for SLR used in the Strategy is more conservative, there is no need to adopt this change</p> <p>Flood and coastal erosion risk management (FCERM) allowances:</p> <ul style="list-style-type: none"> <li>• Fluvial – The Strategy has used the same allowances as those given in the 2016 EA guidance for FCERM Authorities. An update to the guidance was undertaken in July 2020 following the flood modelling within the Strategy, however are aligned to the ‘Central’ fluvial allowances in the EA guidance for FRAs (see above) and is therefore in line with UKCP18.</li> <li>• We have applied the ‘Change factor’ from the 2016 guidance up to 2100, which is the UKCP09 medium emission scenario 95 percentile. This is then extrapolating to 2125. EA have confirmed that there is no updated guidance (as of March 2020)</li> </ul> <p>Detailed hydraulic modelling was carried out as reported in Appendix I of the main SOC. References are provided throughout the documentation, as well as a list of key supporting documents. At future stages, modelling will be updated to be in line with the latest guidance.</p> <p>The naming of the Marchioness Building has been noted and has been updated within the SEA addendum.</p> |
| 549                      | <p><i>"I note that the "temporary negative effects" are predicted for areas including Cumberland Road that have had repeated</i></p>   | <p>The Strategy considers the temporary impacts seen during construction as well as the permanent impacts / benefits that are</p>   |

| ID Number/<br>Respondent | Summary of respondent   | Response   |
|--------------------------|---|--|
|                          | <p><i>disruption for Metrobus, Chocolate Path repairs, Harbourside construction and other projects. Whilst these impacts may be short-term relative to the predicted benefits, they can pose a significant disruption to individual lives. For example, students at the Universities may have the entirety of a 1 year Masters or majority of a 3 year BA/BSc/BEng affected by works; children may lose access to safe green space for play for most of a key stage; and wildlife may not return after a lost season.</i></p> <p><i>Development is needed, but it needs to be done with kindness to those who may be bearing costs for the benefits of others"</i></p>    | <p>likely through the long term flood risk measures. As the Strategy develops, consideration to the disruption on local communities, businesses and residents will be undertaken and where possible minimised through design, mitigation and construction measures.</p>  |
| <p>557</p>               | <p><i>"1. new and amended defences at Bower Ashton and detriment mitigation measures proposed at Shirehampton and Pill are likely to impact on designated sites including European designated sites. Without avoidance and / or mitigation measures, it is reasonable to conclude there could be adverse effects on the integrity of the European designated sites. (p.10)</i></p> <p><i>AND</i></p> <p><i>To allow the competent authority to conclude no adverse effect, further survey and mitigation measures are required to understand the impact of the proposed works on the Severn Estuary SPA, Ramsar and SAC, and the Avon Gorge Woodlands SAC. (p.13)</i></p> | <p>1. Consultation with appropriate Statutory Nature Conservation Bodies and Statutory Consultees will be undertaken throughout the design development.</p> <p>Through Biodiversity Net Gain (BNG) a 10% minimum net gain to biodiversity will be delivered. Consideration will be given, where appropriate, to the development of natural flood management measures, as well as habitat creation and enhancement proposals required through BNG.</p> <p>As the design progresses, appropriate surveys will be undertaken with the results made public during the Environmental Impact Assessment consultation period.</p> <p>2. We acknowledge the level of support for a wider range of solutions and agree that benefits can be realised by introducing</p> |

| ID Number/<br>Respondent | Summary of respondent   | Response  |
|--------------------------|---|---|
|                          | <p><i>Natural habitats provide one source of flood resilience; the plans as drafted here seem to be sacrificing natural habitats.</i></p> <p><i>When will the surveys take place and will their results be made public?</i></p> <p><i>2. Updated flood risk modelling has found that city centre defences may lead to an increased risk of flooding in other areas including Shirehampton, Pill, Sea Mills, River Avon near St Philip's Causeway, St Anne's, the Malago waterbody and the Brislington Brook. Detriment mitigation measures have therefore been included in the amended Strategy to resolve the issue.</i></p> <p><i>The need for mitigation measures increases my regret that the plans do not include a wider range of solutions -- bringing in (alongside flood defences): SUDS, behaviour change, cultural and historical awareness, and urban wetland.</i></p> <p><i>3. The defences will also protect land allocated in the Local Plan for future development. (p.11)</i></p> <p><i>While protection is needed, development is currently exacerbating the problem of flood-risk; the defences protect a source of the problem. The forms in which development occurs</i></p> | <p>such techniques. We will therefore work with neighbouring authorities, the Environment Agency and other organisations to seek opportunities to incorporate natural flood management, amongst other measures, and identify funding opportunities to deliver them.</p> <p>3. Collaboration and consultation will be maintained with key stakeholders throughout design to ensure a co-ordinated approach is taken to refining and successfully implementing a scheme that secures flood protection and placemaking objectives in line with other strategies and the emerging Local Plan.</p> |

| ID Number/<br>Respondent | Summary of respondent  | Response  |
|--------------------------|--|---|
|                          | <i>need therefore to be brought into the discussion of how to defence against flood risk."</i>   |   |
| 561                      | <i>The information provided is very good and enables the Council to put in place all the necessary works so all land and buildings can be protected.</i> | Support is acknowledged through these consultation responses. |
| 575                      | <i>"I am (content) with the strategic Environment assessment is being followed. Including EU Directives ."</i>   |   |

## 4 Next Steps

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Consultation on the strategy, and specifically the SEA, is the first stage in a long-term plan. The consultation raised awareness on the need for the Strategy and sought views on the leading strategic approach to inform BCC's Cabinet consideration as to whether to adopt the Strategy.

If adopted, an Outline Business Case (OBC) will be developed for the Strategy, currently anticipated to be undertaken in two work packages with the first of which to be completed in spring 2022. This will be informed by engagement followed by a subsequent public consultation, a decision by the BCC, and the commencement of detailed design and delivery. The process is outlined in more detail within the SOC documentation.

At OBC stage, additional refinement of the defence designs and alignments will be required, including integration of regeneration and placemaking opportunities as well as feedback from engagement and consultation. Environmental scoping and consenting will be developed to ascertain the scale of potential impacts to habitats and areas of loss, and to inform the requirements for compensatory habitat and biodiversity net gain.