

# LOCAL FLOOD RISK MANAGEMENT STRATEGY AND ACTION PLAN

## APPENDIX C: OUR FLOOD ACTIONS IN DETAIL



04/24

## Contents

<b>Introduction</b>	<b>5</b>
<b>A01</b>	<b>7</b>
<b>A02</b>	<b>7</b>
<b>A03</b>	<b>8</b>
<b>A04</b>	<b>9</b>
<b>A05</b>	<b>10</b>
<b>A06</b>	<b>10</b>
<b>A07</b>	<b>11</b>
<b>A08</b>	<b>12</b>
<b>A09</b>	<b>13</b>
<b>A10</b>	<b>14</b>
<b>A11</b>	<b>15</b>
<b>A12</b>	<b>15</b>
<b>A13</b>	<b>16</b>
<b>A14</b>	<b>17</b>
<b>A15</b>	<b>18</b>
<b>A16</b>	<b>19</b>
<b>A17</b>	<b>20</b>
<b>A18</b>	<b>21</b>
<b>A19</b>	<b>22</b>
<b>A20</b>	<b>22</b>
<b>A21</b>	<b>23</b>
<b>A22</b>	<b>24</b>
<b>A23</b>	<b>25</b>
<b>A24</b>	<b>26</b>
<b>A25</b>	<b>27</b>
<b>A26</b>	<b>27</b>
<b>A27</b>	<b>28</b>
<b>A28</b>	<b>29</b>
<b>A29</b>	<b>30</b>
<b>A30</b>	<b>31</b>
<b>A31</b>	<b>32</b>
<b>A32</b>	<b>33</b>
<b>A33</b>	<b>34</b>

<b>A34</b>	<b>35</b>
<b>A35</b>	<b>36</b>
<b>A36</b>	<b>37</b>
<b>A37</b>	<b>38</b>
<b>A38</b>	<b>39</b>
<b>A39</b>	<b>40</b>
<b>A40</b>	<b>41</b>
<b>A41</b>	<b>42</b>
<b>A42</b>	<b>43</b>
<b>A43</b>	<b>44</b>
<b>A44</b>	<b>44</b>
<b>A45</b>	<b>45</b>
<b>A46</b>	<b>46</b>
<b>A47</b>	<b>47</b>
<b>A48</b>	<b>48</b>
<b>A49</b>	<b>48</b>
<b>A50</b>	<b>49</b>
<b>A51</b>	<b>50</b>
<b>A52</b>	<b>51</b>
<b>A53</b>	<b>52</b>
<b>A54</b>	<b>53</b>
<b>A55</b>	<b>54</b>
<b>A56</b>	<b>54</b>
<b>A57</b>	<b>55</b>
<b>A58</b>	<b>56</b>
<b>A59</b>	<b>57</b>
<b>A60</b>	<b>57</b>
<b>A61</b>	<b>58</b>
<b>A62</b>	<b>59</b>
<b>A63</b>	<b>60</b>
<b>A64</b>	<b>61</b>
<b>A65</b>	<b>62</b>
<b>A66</b>	<b>63</b>
<b>A67</b>	<b>63</b>
<b>A68</b>	<b>64</b>
<b>A69</b>	<b>65</b>

<b>A70</b>	<b>66</b>
<b>A71</b>	<b>67</b>
<b>A72</b>	<b>67</b>
<b>A73</b>	<b>68</b>
<b>A74</b>	<b>69</b>
<b>A75</b>	<b>70</b>
<b>A76</b>	<b>70</b>

# Introduction

In our unwavering commitment to safeguarding our communities from the potential adversities of flooding, we have outlined a series of decisive actions in this section, forming a vital component of our Local Flood Risk Management Strategy and Action Plans. These actions, meticulously structured from A01 to A76, encompass a broad spectrum of initiatives aimed at fostering a resilient, environmentally sustainable, and community-centric approach to flood risk management.

Our actions are organized into several key thematic areas:

1. **Strategic Planning and Implementation (A01 to A08):** This segment underscores our dedication to maintaining and updating our local strategies and plans, undertaking detailed studies to understand the causes and consequences of flooding, and implementing preferred solutions identified through rigorous investigations.
2. **Community Engagement and Awareness (A09 to A18):** Here, we emphasize the importance of community consultation and awareness, offering guidance on flood risk support and resources, and enhancing our telemetry network to provide timely warnings to at-risk communities.
3. **Asset Maintenance and Risk Management (A19 to A28):** This section delineates our approach to asset maintenance and risk management, focusing on regular reviews of maintenance manuals, implementing risk assessments for critical assets, and adopting a proactive approach to inspection and maintenance.
4. **Biodiversity and Environmental Conservation (A29 to A41):** This segment highlights our commitment to environmental conservation through the implementation of natural flood management schemes, promoting biodiversity enhancements, and fostering a commitment to sustainable practices.
5. **Socio-Economic Support and Resilience (A43 to A48):** In this section, we outline our strategies to support communities with a higher socio-economic vulnerability, offering targeted information campaigns and ensuring mental health support during recovery phases.
6. **Natural Flood Management and Biodiversity Awareness (A49 to A59):** This segment focuses on the continuous implementation of natural flood management schemes, promoting public awareness of biodiversity, and encouraging the adoption of sustainable practices in flood management.
7. **Climate Adaptation and Environmental Benefits (A60 to A63):** Here, we detail our initiatives to promote adaptive management practices, encourage the use of environmentally friendly construction materials, and regularly update climate change projections.
8. **Planning and Development Guidance (A64 to A65):** This section outlines our collaborative approach with planning departments to guide future developments and ensure adherence to technical advice notes.

9. **Asset Management and Data Maintenance (A66 to A76):** In the concluding segment, we emphasize our commitment to maintaining a comprehensive asset register, updating flood risk maps, and ensuring timely reporting and investigation of flooding incidents.

As we forge ahead, we remain steadfast in our commitment to creating a safer, more resilient community, ready to face the challenges of the future with confidence and preparedness. We invite you to explore each action in detail, as we collectively embark on this journey towards a flood-resilient future.

<b>Action #</b>	
<b>A01</b>	
<b>Action</b>	Maintain and update the Local flood Risk Management Strategy every 6 years in line with National Strategy update cycles.
<b>Description</b>	This Strategy will be reviewed and updated every 6 years in accordance with the legislation and requirements of the National Strategy.
<b>Benefit(s)</b>	By maintaining and updating the Local Flood Risk Management Strategy every 6 years, we ensure that our approach to flood risk management is always based on the latest scientific understanding and best practices. This not only enhances our ability to reduce flood risks but also builds confidence among our community and stakeholders in our flood risk management efforts.
<b>Target timescale</b>	Medium Term (every 6 years)
<b>Critical dependencies (for delivery)</b>	A02
<b>Cost</b>	£30,000
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Funding
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	All
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	CCBC commit to ensuring that the Local Flood Risk Management Strategy is updated every <b>6</b> years, and progress will be measured based on the timely completion of each six-year update cycle.

<b>Action #</b>	
<b>A02</b>	
<b>Action</b>	Maintain and update the Local Flood Risk Plan associated with the Local Flood Risk Management Strategy every <b>3</b> years.
<b>Description</b>	The Local Flood Risk Action Plans and Flood Actions part of this Strategy will be reviewed and updated every 3 years in order to provide an interim progress report and review.
<b>Benefit(s)</b>	Regularly updating the Local Flood Risk Plan ensures that our operational plans are always aligned with our strategic goals and the most current understanding of flood risks. This enhances the effectiveness of our flood risk management efforts and ensures that we are always prepared to respond to flood events.
<b>Target timescale</b>	Short-Term (every 3 years)

<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	£30,000
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Funding
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	All
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	The Local Flood Risk Management Plan associated with the Local Flood Risk Management Strategy will be updated every <b>3</b> years. Adherence to this schedule will be a primary metric for progress.

<b>Action #</b>	
<b>A03</b>	
<b>Action</b>	Undertake detailed studies to identify the causes and consequences of flooding in high-risk areas including increase due to Climate Change, in line with the Local Flood Risk Management Strategy 6-year period.
<b>Description</b>	Where high risk flooding locations have been identified through our local flood risk assessment, we will look to carry out detailed studies to understand the causes and mechanisms of flooding. See Appendices A1 to A4 for more information.
<b>Benefit(s)</b>	Generally, the detailed studies will inform the delivery of local flood risk management, alleviation or mitigation schemes. Specific benefits will vary depending on the study location and context and will be set out in the individual area flood action plans (Appendices A1 to A5).
<b>Target timescale</b>	Varies, Recurring (every 6 years)
<b>Critical dependencies (for delivery)</b>	A68 A69 A70 A71
<b>Cost</b>	Varies; typically, £30,000 - £60,000 per scheme
<b>Funding option(s)</b>	CCBC Capital Budget Welsh Government FCERM Capital Grants
<b>Delivery partner(s) / option(s)</b>	Other Risk Management Authorities (RMAs) where multiple flood sources are prevalent Neighbouring Local Authorities where cross boundary catchments are impacted
<b>Type(s) of flood management</b>	Prevention, Protection

<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	Detailed studies will be undertaken to identify causes and consequences of flooding in high-risk areas. The completion of these studies and the actions arising from the findings will be facilitated as a means of monitoring progress.

<b>Action #</b>	<b>A04</b>
<b>Action</b>	Undertake relevant analysis to investigate options for reducing flood risk in these areas confirmed by detailed studies.
<b>Description</b>	Where high risk flooding locations have been identified through our local flood risk assessment, we will look to carry out detailed feasibility analyses and options appraisal to develop business cases for implementation of flood alleviation schemes. See Appendices A1 to A4 for more information.
<b>Benefit(s)</b>	Investigating options for reducing flood risk in high-risk areas ensures that our flood risk reduction efforts are based on a thorough understanding of the available options and their potential impacts. This not only enhances the effectiveness of our efforts but also ensures that we are making the best use of our resources. Specific benefits will vary on a scheme by scheme basis and will be demonstrated through the appropriate business case or funding application.
<b>Target timescale</b>	Varies; typically, Medium-Term
<b>Critical dependencies (for delivery)</b>	A03
<b>Cost</b>	Varies; Typically, £30,000 - £60,000 per scheme
<b>Funding option(s)</b>	CCBC Capital Budget Welsh Government FCERM Capital Grants
<b>Delivery partner(s) / option(s)</b>	Other Risk Management Authorities (RMAs) where multiple flood sources are prevalent Neighbouring Local Authorities where cross boundary catchments are impacted
<b>Type(s) of flood management</b>	Prevention, Protection
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	CCBC will conduct analyses to discover options for reducing flood risk in high-risk areas. The number of such analyses, the identified options, and the implementation rate of these options will serve as indicators of progress.

<b>A05</b>	
Action #	
<b>Action</b>	Implement the preferred option identified through relevant investigation.
<b>Description</b>	Where high risk flooding locations have been identified through our local flood risk assessment, we will look to implement flood alleviation schemes. See Appendices A1 to A4 for more information.
<b>Benefit(s)</b>	Implementing the preferred option identified through relevant investigation ensures that our flood risk reduction efforts are not only based on a thorough understanding of the available options but also on a careful evaluation of their potential impacts. This not only enhances the effectiveness of our efforts but also builds confidence among our community and stakeholders in our decision-making process. Specific benefits will vary on a scheme by scheme basis and will be demonstrated through the appropriate business case or funding application.
<b>Target timescale</b>	Varies, predominantly over a Medium to Long Term Period
<b>Critical dependencies (for delivery)</b>	A04 A03
<b>Cost</b>	Varies; typically, £30,000 to £3,000,000 per scheme
<b>Funding option(s)</b>	CCBC Capital Budget Welsh Government FCERM Capital Grants
<b>Delivery partner(s) / option(s)</b>	Other Risk Management Authorities (RMAs) where multiple flood sources are prevalent Neighbouring Local Authorities where cross boundary catchments are impacted
<b>Type(s) of flood management</b>	Prevention, Protection
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	Progress will also be measured by the number of identified preferred options that we successfully implement, as well as the impact of these options on reducing flood risk.

<b>A06</b>	
Action #	
<b>Action</b>	Continue and conclude Welsh Government funded schemes continuing from previous strategy period.
<b>Description</b>	Within the previous strategy period, a number of Welsh Government funded flood alleviation schemes have been commenced, largely in response to particular flooding incidents

	including Storm Dennis. We will progress with and conclude these schemes. Further details on the individual schemes are included in Appendix A5.
<b>Benefit(s)</b>	<p><b>Continuity of Strategy:</b> Ensures a seamless transition between strategy periods, maintaining momentum in flood risk management efforts.</p> <p><b>Resource Optimization:</b> Utilizes the funding allocated by the Welsh Government to its fullest extent, ensuring that the community receives the maximum possible benefit from these resources.</p> <p><b>Enhanced Safety:</b> By continuing and concluding government-funded schemes, we are working towards reducing the risk and impact of flooding in vulnerable areas, thereby safeguarding communities.</p> <p>Specific benefits will vary on a scheme by scheme basis and will be demonstrated through the appropriate business case or funding application.</p>
<b>Target timescale</b>	Varies
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Varies
<b>Funding option(s)</b>	Welsh Government FCERM Capital Grants
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention, Protection
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	Documentation of the support given to the community following a severe flood event, coupled with community feedback, will be used to gauge the effectiveness of our response.

<b>Action #</b>	<b>A07</b>
<b>Action</b>	Assist and provide support to the community following a severe flood event.
<b>Description</b>	We understand that flooding can have severe impacts on individuals and communities not just during the event, but for some time following on from an event. We will aim to have a continued presence within the community to provide support following on from flood incidents and the immediate response where possible and practical.

<b>Benefit(s)</b>	Providing support to the community following a severe flood event not only helps our community recover more quickly but also builds trust and strengthens our relationship with the community. This enhances our ability to work together with the community in managing flood risks.
<b>Target timescale</b>	Short Term (post-flood event) Service Requests have the following targeted timescales: <b>Emergency Service Request – 2 (hours)</b> <b>Councillor Service Request – 10 Working days</b> <b>Standard Service Request – 20 Working days</b>
<b>Critical dependencies (for delivery)</b>	A71 A70 A69
<b>Cost</b>	Event and incident specific; typically, £500 - £1,000 per attendance
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Emergency Funding / Flood Recovery Grants
<b>Delivery partner(s) / option(s)</b>	Other Risk Management Authorities (RMAs) where multiple sources are prevalent.
<b>Type(s) of flood management</b>	Recovery
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	Documentation of the support given to the community following a severe flood event, coupled with community feedback, will be used to gauge the effectiveness of our response.

<b>Action #</b>	<b>A08</b>
<b>Action</b>	To produce a culvert policy.
<b>Description</b>	We do not currently have a formal Council policy in relation to culverts. However, we recognise that national policy and guidelines as well as legislative requirements place certain expectations on us, on riparian landowners and on developers in relation to the creation, use, maintenance and removal of culverts. We will seek to produce a clear policy and guidance that will set out our expectations in relation to culverts and help developers and riparian owners to have a clear understanding of their rights and responsibilities.
<b>Benefit(s)</b>	Producing a culvert policy provides clear guidelines for the management of culverts, which are crucial for controlling water flow and reducing flood risks. This not only enhances our ability to manage culverts effectively but also provides clarity and certainty for our community and stakeholders.

<b>Target timescale</b>	Short to Medium Term, in line with the Action Plan review period (3-years)
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	£10,000
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention and Review
<b>Link to Other Council Plans</b>	None
<b>How we measure progress</b>	CCBC will measure the success of this action by the timely completion and subsequent implementation of the culvert policy.

<b>Action #</b>	<b>A09</b>
<b>Action</b>	Consult with local communities and Councillors on possible Small Scale Grant schemes, Natural Flood Risk Management Schemes and schemes that affect/benefit communities.
<b>Description</b>	The best information relating to local flood risks can often be provided by those living and working in the risk areas. We will look to meet with local Communities in relation to proposed schemes as early as possible within the development of the scheme to ensure that we understand the local issues, risks and concerns. We will look to address these within the appraisal of options to provide solutions that best meet the needs and wants of the community wherever possible and practical to do so.
<b>Benefit(s)</b>	Consulting with local communities and Councillors on possible Small Scale Grant schemes, Natural Flood Risk Management Schemes, and schemes that affect/benefit communities ensures that local voices are heard and considered in our flood risk management efforts. This not only enhances the relevance and effectiveness of our efforts but also builds trust and strengthens our relationship with the community.
<b>Target timescale</b>	Varies (scheme specific)
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Varies; typically, £200 - £500 per meeting
<b>Funding option(s)</b>	CCBC Capital Budget Welsh Government FCERM Capital Grants

<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Preparedness
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	The number of community consultations held, feedback received, and schemes influenced will be recorded to monitor progress.

<b>A10</b>	
Action #	
<b>Action</b>	Ensure that information provided in regards to flood preparedness along with flood prevention and mitigation measures on Caerphilly County Borough Council's webpage is up to date.
<b>Description</b>	Information and resources relating to flood risk, flood preparedness, flood prevention and mitigation measures, flood resilience and flood recovery changes and is updated over time. We will regularly review the information that we are providing on our website and through other channels to ensure that it is up to date with best practice, current guidance and legislative requirements.
<b>Benefit(s)</b>	Ensuring that information provided in regards to flood preparedness along with flood prevention and mitigation measures on Caerphilly County Borough Council's webpage is up to date ensures that local communities have access to the most current and relevant information to help them prepare for and mitigate the risks of flooding. This not only enhances their ability to protect themselves and their properties but also empowers them to take an active role in flood risk management.
<b>Target timescale</b>	Short Term
<b>Critical dependencies (for delivery)</b>	A58 A59
<b>Cost</b>	£5,000 over Strategy Period
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	CCBC Digital Services
<b>Type(s) of flood management</b>	Preparedness
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	CCBC will ensure regular updates to its webpage and track the frequency of visits as a measure of progress.

<b>A11</b>	
Action #	
<b>Action</b>	Advise communities on CCBC's position and policy/guidance in relation to provision of flood risk support & resources (e.g., sandbags, temporary flood barriers, etc.)
<b>Description</b>	There is no statutory requirement on any local authority or Risk Management Authority (RMA) to provide or guarantee a particular standard of protection. Despite this, we do look to provide support where appropriate and possible. We will ensure that this policy position and associated guidance is communicated effectively.
<b>Benefit(s)</b>	Advising communities on CCBC's position and policy/guidance in relation to the provision of flood risk support & resources (e.g., sandbags, temporary flood barriers, etc.) provides clarity and certainty for our community and stakeholders. This not only enhances their understanding of our flood risk management efforts but also empowers them to take appropriate actions to protect themselves and their properties.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	£500 over Strategy period
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Preparedness
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	The frequency of advisories issued, and the community's response will be monitored to track progress.

<b>A12</b>	
Action #	
<b>Action</b>	Produce community level flood risk support & resources guidance.
<b>Description</b>	There is no statutory right to any particular standard of flood protection and in some cases, it is appropriate that homeowners, occupiers and businesses take steps to protect themselves from flooding. Where we have community flood forums, high risk areas where intervention does not appear possible or practically achievable or areas where Community Adaptation and Resilience Plans (CARPs) exist or are in development, we will look to provide community level flood risk guidance and resources to allow

	individuals and communities to take appropriate measures to protect themselves.
<b>Benefit(s)</b>	Producing community-level flood risk support & resources guidance ensures that our guidance is tailored to the specific needs and circumstances of our local communities. This not only enhances the relevance and effectiveness of our guidance but also empowers local communities to take appropriate actions to manage flood risks.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	A13 A14 A15
<b>Cost</b>	£5,000 - £10,000 per location
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	Other Risk Management Authorities (RMAs) Emergency Planning
<b>Type(s) of flood management</b>	Preparedness
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	Progress will be measured by the number of community-level guidance documents produced and their reach within the community.

<b>Action #</b>	<b>A13</b>
<b>Action</b>	Contribute to the preparation and maintenance (or critical review) of Community Adaptation and Resilience Plans (CARPs)
<b>Description</b>	Under the proposals within the draft version of TAN15 anticipated to be introduced within this Strategy period, there is an expectation that redevelopment or regeneration of existing areas that are liable to flood risk will only be permissible where there is a CARP in place. The CARP is anticipated to identify flood risks and causes, mitigation measures that can be implemented through the delivery of redevelopment or regeneration and resilience or adaptation measures that the community may need to adopt. The CARP will also address response and recovery plans. We will contribute to the preparation and maintenance of CARPs or critically review those produced by others.
<b>Benefit(s)</b>	Contributing to the preparation and maintenance (or critical review) of Community Adaptation and Resilience Plans (CARPs) ensures that our flood risk management efforts are integrated with broader community adaptation and resilience planning. This not only enhances the overall resilience of our community but also ensures

	that our efforts are aligned with the community's broader goals and priorities.
<b>Target timescale</b>	Medium Term
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Typically, £1,500 - £3,000 per site
<b>Funding option(s)</b>	Application fees CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	Local Planning Authority Other Risk Management Authorities (RMAs) in relation to flooding from other sources Emergency Planning Emergency Services
<b>Type(s) of flood management</b>	Preparedness
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals Local Development Plan Emergency Planning
<b>How we measure progress</b>	Documenting our contributions to Community Adaptation and Resilience Plans (CARPs) and the feedback on these contributions will serve as progress metrics.

<b>Action #</b>	<b>A14</b>
<b>Action</b>	Meet with Community Flood Forums at appropriate intervals depending on local needs and flood risks to listen to and understand local issues and concerns.
<b>Description</b>	The best information relating to local flood risks can often be provided by those living and working in the risk areas. We will look to meet within Community Flood Forums to learn and understand their concerns and local issues and will then seek to implement measures to alleviate the issues or concerns wherever possible and practical to do so.
<b>Target timescale</b>	Recurring (based on local needs)
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Typically, £200 - £500 per event
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	None

<b>Type(s) of flood management</b>	Preparedness
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	CCBC will monitor the frequency of meetings with Community Flood Forums and the actions arising from these meetings as indicators of progress.

<b>A15</b>	
<b>Action #</b>	
<b>Action</b>	Take appropriate action on issues and concerns raised by Community Flood Forums where possible.
<b>Description</b>	The best information relating to local flood risks can often be provided by those living and working in the risk areas. We will look to meet within Community Flood Forums to learn and understand their concerns and local issues and will then seek to implement measures to alleviate the issues or concerns wherever possible and practical to do so.
<b>Benefit(s)</b>	Taking appropriate action on issues and concerns raised by Community Flood Forums where possible ensures that we are responsive to the needs and concerns of our local communities. This not only enhances the relevance and effectiveness of our efforts but also builds trust and strengthens our relationship with the community.
<b>Target timescale</b>	Short Term (following forum meetings)
<b>Critical dependencies (for delivery)</b>	A14
<b>Cost</b>	Varies; Typically, £500 - £20,000 depending on type and scale of intervention needed
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Preparedness
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	CCBC will record the number of issues raised at Community Flood Forums and the actions taken to resolve these issues, as part of our progress measurement.

Action #	<b>A16</b>
<b>Action</b>	Expand our coverage of telemetry from the current 3 sites to a minimum of 24 (10%) of the Severe Weather Culverts (SWCs) on our register within the period of this Local Flood Risk Management Strategy.
<b>Description</b>	<p>Across the Borough, we have 238 Severe Weather Culverts that we manage and maintain in accordance with our Severe Weather Culvert Manual.</p> <p>Only 3 of these sites have had automated systems for monitoring and early warning. For the remaining 235 sites, we carry out site inspections which requires Officers or maintenance teams to travel to sites that are sometimes in remote or difficult to access locations. In accordance with our risk assessment, we will look to expand the network of remote monitoring and early warning systems to at least 10% of the Severe Weather Culverts.</p>
<b>Benefit(s)</b>	<p>Expanding our coverage of telemetry from the current 3 sites to a minimum of 24 (10%) of the Severe Weather Culverts (SWCs) on our register within the period of this Local Flood Risk Management Strategy enhances our ability to monitor and respond to flood risks in real-time. This not only enhances our ability to prevent and mitigate flood risks but also provides reassurance to our community and stakeholders.</p> <p>Reduced risks to staff carrying out site inspections.</p> <p>Opportunity cost in directing maintenance teams to only those sites where maintenance is known to be needed</p>
<b>Target timescale</b>	Within Strategy Period (6-years)
<b>Critical dependencies (for delivery)</b>	A21
<b>Cost</b>	<p>£240,000 initial investment</p> <p>£12,000 annual maintenance</p>
<b>Funding option(s)</b>	<p>CCBC Revenue Budget</p> <p>Welsh Government FCERM Revenue Grant</p> <p>Welsh Government FCERM Small Scale Grant Funding</p>
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Preparedness and Prevention
<b>Link to Other Council Plans</b>	None
<b>How we measure progress</b>	CCBC will monitor the number of sites with telemetry installation, with the goal of expanding from the current 3 sites to a minimum of 24, representing 10% of Severe Weather Culverts (SWCs) on our register, within the period of this Local Flood Risk Management Strategy.

<b>A17</b>	
<b>Action #</b>	
<b>Action</b>	Work with our Communications and Emergency Planning teams to provide direct access to warnings from our telemetry network to those people and properties identified as being at risk from the respective SWCs where appropriate.
<b>Description</b>	<p>NRW operate the Floodline national flood warning and alert system. This warns people of likely flooding related to main rivers and the sea. Together with Met Office weather warnings, there are also some warnings or alerts made in relation to the likelihood of surface water flooding impacts.</p> <p>Due to the nature of small watercourses that often react very quickly to flood events it is difficult to provide general warnings. We will look to make our early warning system information available to those people and communities likely to be directly impacted through updates directly to the individuals, on our social media and other communication channels.</p>
<b>Benefit(s)</b>	Working with our Communications and Emergency Planning teams to provide direct access to warnings from our telemetry network to those people and properties identified as being at risk from the respective SWCs where appropriate ensures that at-risk individuals and communities receive timely warnings of potential flooding. This not only enhances their ability to protect themselves and their properties but also empowers them to take an active role in flood risk management.
<b>Target timescale</b>	Within Strategy Period (6 years)
<b>Critical dependencies (for delivery)</b>	A16
<b>Cost</b>	£10,000 set-up cost per site £1,000 - £2,000 annual maintenance cost per site
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant Welsh Government FCERM Small-Scale Grant
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Preparedness
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	CCBC will measure success based on the number of individuals and properties that gain direct access to warnings from our telemetry network due to our collaboration with the Communications and Emergency Planning teams. The timeline for

	this rollout will be tracked and documented as part of our progress monitoring.
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<b>A18</b>	
Action #	
<b>Action</b>	Provide information to NRW (Natural Resources Wales) to allow them to enhance flood warnings and alerts with specific local information.
<b>Description</b>	<p>NRW operate the Floodline national flood warning and alert system. This warns people of likely flooding related to main rivers and the sea. Together with Met Office weather warnings, there are also some warnings or alerts made in relation to the likelihood of surface water flooding impacts.</p> <p>Due to the nature of small watercourses that often react very quickly to flood events it is difficult to provide general warnings. We will look to make our early warning system information available to NRW such that they can include local information relating to specific watercourses in their general updates where possible and appropriate.</p>
<b>Benefit(s)</b>	Providing information to NRW (Natural Resources Wales) to allow them to enhance flood warnings and alerts with specific local information supports the provision of more accurate and locally relevant flood warnings and alerts. This not only enhances the effectiveness of flood warnings and alerts but also builds trust and strengthens our relationship with NRW.
<b>Target timescale</b>	Within Strategy Period (6 years)
<b>Critical dependencies (for delivery)</b>	NRW warning and alert system compatibility A16
<b>Cost</b>	£10,000 set-up per site £1,000 - £2,000 annual maintenance per site
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant Welsh Government FCERM Small-Scale Grant
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Preparedness
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan
<b>How we measure progress</b>	CCBC will keep a record of the information provided to NRW to enhance flood warnings and alerts. The frequency of these updates will align with the 6-monthly NAD update cycles and will also be provided during severe events. The receipt of these updates by

	NRW and any feedback or actions taken by NRW based on this information will be part of our progress tracking.
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<b>A19</b>	
Action #	
<b>Action</b>	Review and, where required, update the Severe Weather Culvert Maintenance Manual every 3 years in line with the review and update of Local Flood Risk Management Plans.
<b>Description</b>	Across the Borough, we have 238 Severe Weather Culverts that we manage and maintain in accordance with our Severe Weather Culvert Manual. We will review and update the manual alongside our local flood risk action plans every 3 years to ensure that we are up to date with changing conditions and circumstances.
<b>Benefit(s)</b>	Regularly reviewing and updating the Severe Weather Culvert Maintenance Manual ensures that our maintenance practices for severe weather culverts are always based on the latest scientific understanding and best practices. This not only enhances the efficiency and effectiveness of our maintenance efforts but also reduces the risk of culvert failures that can lead to flooding and disruption to critical infrastructure.
<b>Target timescale</b>	In line with the Action Plan review period (3 years)
<b>Critical dependencies (for delivery)</b>	A22 A23
<b>Cost</b>	£10,000
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention, Protection and Review
<b>Link to Other Council Plans</b>	Highways Asset Maintenance Plan
<b>How we measure progress</b>	Monitor the timely review and necessary updates to the Severe Weather Culvert Maintenance Manual every three years in line with the Local Flood Risk Management Strategy Plan review.

<b>A20</b>	
Action #	
<b>Action</b>	Review and update where required the Ditching Cleansing Manual every 3 years in line with the review and update of Local Flood Risk Management Plans.

<b>Description</b>	Across the Borough, we have approximately 18km of highway and land drainage ditches that we manage and maintain in accordance with our Ditching Cleansing Manual. We will review and update the manual alongside our local flood risk action plans every 3 years to ensure that we are up to date with changing conditions and circumstances.
<b>Benefit(s)</b>	Regularly reviewing and updating the Ditching Cleansing Manual ensures that our ditching cleansing practices are always based on the latest scientific understanding and best practices. This not only enhances the efficiency and effectiveness of our ditching cleansing efforts but also reduces the risk of ditch blockages that can lead to flooding and disruption to critical infrastructure.
<b>Target timescale</b>	In line with the Action Plan review period (3 years)
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	£10,000
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention, Protection and Review
<b>Link to Other Council Plans</b>	Highways Asset Maintenance Plan
<b>How we measure progress</b>	Monitor the timely review and necessary updates to the Ditching Cleansing Manual every three years in line with the Local Flood Risk Management Strategy Plan review.

<b>Action #</b>	<b>A21</b>
<b>Action</b>	Implement a risk assessment for all critical flood risk assets to identify “High Priority” assets.
<b>Description</b>	Across the Borough, we have around 35,000 gullies, 18km of highway ditches, 248 culvert inlets and 165 culverts that we also manage and maintain. In addition to these, the implementation of Schedule 3 of the Flood and Water Management Act, places a duty on us as the Lead Local Flood Authority (LLFA) to adopt and be responsible for maintenance of drainage assets that meet the criteria for adoption. We are also progressing with schemes to deliver flood alleviation in certain areas across the Borough. We will ensure that these assets are assessed on a consistent basis through the implementation of procedures and defined criteria.

<b>Benefit(s)</b>	Implementing a risk assessment for all critical flood risk assets to identify “High Priority” assets allows us to prioritise our resources and efforts towards the assets that are most critical to flood risk management. This not only enhances the efficiency and effectiveness of our maintenance efforts but also reduces the risk of asset failures that can lead to flooding and disruption to critical infrastructure.
<b>Target timescale</b>	Short Term
<b>Critical dependencies (for delivery)</b>	A22
<b>Cost</b>	£10,000
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention and Review
<b>Link to Other Council Plans</b>	None
<b>How we measure progress</b>	The completion and results of risk assessments for all critical flood risk assets will be recorded. This will include the number of high-priority assets identified.

<b>Action #</b>	<b>A22</b>
<b>Action</b>	Inspect critical flood risk assets in accordance with the Environment Agency / Natural Resources Wales Flood Defence Asset Condition Inspections (T98 Inspections).
<b>Description</b>	We will ensure that inspections are carried out on critical flood risk assets in accordance with the Environment Agency’s Flood Asset Visual Inspection (T98) protocol by inspectors who have the appropriate accreditation. We will record the findings of these asset inspections and ensure that any maintenance works or recommendations from the inspections are carried out.
<b>Benefit(s)</b>	Inspecting critical flood risk assets in accordance with the Environment Agency / Natural Resources Wales Flood Defence Asset Condition Inspections (T98 Inspections) ensures that our inspections of critical flood risk assets are thorough and meet national standards. This not only enhances the reliability of our critical flood risk assets but also reduces the risk of asset failures that can lead to flooding and disruption to critical infrastructure.
<b>Target timescale</b>	Ongoing / Recurring

<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Typically, £10,000 per annum
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention, Recovery and Review
<b>Link to Other Council Plans</b>	None
<b>How we measure progress</b>	Compliance with Environment Agency / Natural Resources Wales Flood Defence Asset Condition Inspections (T98 Inspections) will be monitored. Metrics will include the number of completed inspections and works carried out on identified critical assets.

<b>Action #</b>	<b>A23</b>
<b>Action</b>	Carry out necessary works to critical flood risk assets as identified through T98 Inspections.
<b>Description</b>	We will ensure that inspections are carried out on critical flood risk assets in accordance with the Environment Agency's Flood Asset Visual Inspection (T98) protocol by inspectors who have the appropriate accreditation. We will record the findings of these asset inspections and ensure that any maintenance works or recommendations from the inspections are carried out.
<b>Benefit(s)</b>	Carrying out necessary works to critical flood risk assets as identified through T98 Inspections ensures that any issues identified during inspections are promptly addressed to maintain the integrity of our critical flood risk assets. This not only enhances the reliability of our critical flood risk assets but also reduces the risk of asset failures that can lead to flooding and disruption to critical infrastructure.
<b>Target timescale</b>	Ongoing / Recurring
<b>Critical dependencies (for delivery)</b>	A22
<b>Cost</b>	Varies; Typically, £5,000 - £20,000 per identified defect
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant Welsh Government FCERM Small-Scale Works Grant
<b>Delivery partner(s) / option(s)</b>	None

<b>Type(s) of flood management</b>	Protection and Recovery
<b>Link to Other Council Plans</b>	None
<b>How we measure progress</b>	Metrics will include the number of works carried out on identified critical assets.

<b>Action #</b>	<b>A24</b>
<b>Action</b>	Make use of the Highways and Land Drainage programmed works list to ensure that works are prioritised and undertaken accordingly.
<b>Description</b>	Across the Borough, we have 1,200km of roads, 2,000 km of footway and 68 km of cycle paths that we maintain. Alongside this, we have around 35,000 gullies, 18km of highway ditches, 248 culvert inlets and 165 culverts that we also manage and maintain. It is not always possible to carry out works on every defect immediately and we need to ensure that we are managing budgets and risk responsibly. We will continue to use our prioritisation matrix to target spend towards highest risk areas first.
<b>Benefit(s)</b>	Making use of the Highways and Land Drainage programmed works list to ensure that works are prioritised and undertaken accordingly ensures that our maintenance and repair works are well-coordinated and prioritised based on need and risk. This not only enhances the efficiency and effectiveness of our maintenance efforts but also reduces the risk of asset failures that can lead to flooding and disruption to critical infrastructure.
<b>Target timescale</b>	Ongoing / Recurring
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Varies depending on scheme; Typically, £2,000 - £50,000 per scheme
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government Resilient Roads Fund
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention, Protection and Recovery
<b>Link to Other Council Plans</b>	Highways Asset Maintenance Plan
<b>How we measure progress</b>	The effective use of the Highways and Land Drainage programmed works list will be monitored by tracking prioritisation and completion of tasks.

<b>A25</b>	
Action #	
<b>Action</b>	Encourage and enforce maintenance of privately owned assets when required.
<b>Description</b>	Under the CCBC Land Drainage Byelaws, riparian landowners are required to carry out maintenance of structures such as sluices, weirs or flood gates and general maintenance of the watercourse beds and banks. We will work with riparian landowners to encourage appropriate maintenance and protection of watercourses, including removal of items likely to constitute flood risk and maintenance of banks and bankside vegetation. Where necessary, we will take appropriate enforcement actions.
<b>Benefit(s)</b>	Encouraging and enforcing maintenance of privately owned assets when required recognizes the role of private asset owners in maintaining the overall effectiveness of our flood risk management system. This not only enhances the overall resilience of our flood risk management system but also reduces the risk of private asset failures that can lead to flooding and disruption to critical infrastructure.
<b>Target timescale</b>	Ongoing / Recurring
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Typically, £1,000 - £10,000 per site
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention
<b>Link to Other Council Plans</b>	None
<b>How we measure progress</b>	Progress will be measured by the number of instances where maintenance of privately-owned assets was encouraged or enforced.

<b>A26</b>	
Action #	
<b>Action</b>	Take action to minimise inappropriate constrictions in watercourses.
<b>Description</b>	Under the CCBC Land Drainage Byelaws, any works in, on, under, over or within 8m of a watercourse are subject to regulation and control. Sometimes, there are changes to a watercourse either through natural processes such as meanders and overgrowth, through human interactions such as development or through the

	<p>impacts of storm events such as waterborne debris being trapped at particular locations.</p> <p>We will work with riparian landowners to encourage appropriate maintenance and protection of watercourses, including removal of items likely to constitute flood risk and maintenance of banks and bankside vegetation. Where necessary, we will take appropriate enforcement actions.</p>
<b>Benefit(s)</b>	<p>Taking action to minimise inappropriate constrictions in watercourses helps to maintain the capacity of our watercourses and prevent blockages that can lead to flooding. This not only enhances the overall resilience of our flood risk management system but also reduces the risk of watercourse constrictions that can lead to flooding and disruption to critical infrastructure.</p>
<b>Target timescale</b>	Ongoing / Recurring
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Typically, £1,000 - £10,000 per site
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention
<b>Link to Other Council Plans</b>	None
<b>How we measure progress</b>	The number of actions taken to minimise inappropriate constrictions in watercourses will serve as a performance metric.

<b>Action #</b>	<b>A27</b>
<b>Action</b>	Review and update gully cleansing schedules on a risk-based approach.
<b>Description</b>	<p>In our previous Strategy and Plan we outlined a commitment to clean every gully within the County Borough twice per year. There are approximately 35,000 – 40,000 gullies within the Borough. We continue to operate 3 maintenance teams and specialist jettors to carry out this maintenance. However, it is apparent that some gullies block more regularly than others and that there are certain high risk areas that are more dependent on the operation of the gullies than other low risk areas.</p> <p>We will review how we operate the maintenance teams through the implementation of more advanced tracking and monitoring systems and processes. In some instances, we will move to cleaning gullies on a more regular basis which could be quarterly or even monthly.</p>

	In other areas, we may reduce maintenance frequency to annually or less frequently depending on risk.
<b>Benefit(s)</b>	Reviewing and updating gully cleansing schedules on a risk-based approach ensures that our gully cleansing efforts are targeted towards areas with the highest risk of flooding. This not only enhances the efficiency and effectiveness of our gully cleansing efforts but also reduces the risk of gully blockages that can lead to flooding and disruption to critical infrastructure.
<b>Target timescale</b>	Short Term
<b>Critical dependencies (for delivery)</b>	Implementation of Gully Monitoring Systems
<b>Cost</b>	£10,000 - £20,000 for implementation of system and review of risk factors £1,000 - £2,000 per annum maintenance fee and continual review
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention
<b>Link to Other Council Plans</b>	Highways Asset Maintenance Plan
<b>How we measure progress</b>	Progress will be measured every 3 years in line with the Local Flood Risk Management Strategy Plan review by the timely review and updates of gully cleansing schedules, using a risk-based approach.

<b>Action #</b>	<b>A28</b>
<b>Action</b>	Maintain a pro-active approach to inspection and maintenance of high-risk assets at times of anticipated adverse weather.
<b>Description</b>	Whenever we receive a weather warning or flood warning, we instigate either a set of inspections of critical assets carried out by Lead Local Flood Authority (LLFA) Officers or a Rapid Inspect and Cleanse protocol carried out by our in-house contractors. Through these inspections and maintenance, we can ensure that our systems are operational prior to storms or extreme weather events in order to limit impacts from the event. We will continue to carry out the inspections and maintenance in this way.
<b>Benefit(s)</b>	Maintaining a proactive approach to inspection and maintenance of high-risk assets at times of anticipated adverse weather ensures that our flood risk management system is prepared to handle adverse weather conditions. This not only enhances the overall resilience of our flood risk management system but also reduces

	the risk of asset failures that can lead to flooding and disruption to critical infrastructure.
<b>Target timescale</b>	Ongoing / Recurring
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Typically, £15,000 per event
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention
<b>Link to Other Council Plans</b>	Highways Asset Maintenance Plan
<b>How we measure progress</b>	The proactive approach towards inspection and maintenance of high-risk assets during anticipated adverse weather will be recorded and evaluated.

<b>Action #</b>	<b>A29</b>
<b>Action</b>	Deliver or ensure delivery of biodiversity enhancements in any schemes where bank stabilisation or re-modelling of watercourse banks are carried out.
<b>Description</b>	Addition of bird nest tubes or boxes, use of native seed mixes with peat free compost and provision of otter holts are relatively simple enhancements that can provide useful and sustainable habitat enhancements. When these are carried out as part of an overall scheme, such as bank stabilisation or re-profiling, they have a very minor impact on the scheme costs. However, when delivered independently they can be cost-prohibitive to provide. We will therefore look to incorporate these measures within any schemes that we progress ourselves. We will also encourage developers and landowners to make similar provisions within 3 <sup>rd</sup> party schemes when we are reviewing and commenting on applications and pre-applications.
<b>Benefit(s)</b>	<b>Nature's Flourish:</b> This action helps our local nature to thrive, creating a vibrant and healthy environment for everyone to enjoy. <b>Beautifying Our Community:</b> Enhanced greenery and natural landscapes not only protect us from floods but also beautify our surroundings, making it a pleasant place to live. <b>Learning from Nature:</b> Through this, we can learn more about the plants and animals in our area, fostering a community that cherishes its natural heritage.

	<p><b>Habitat Restoration:</b> Contributes to regional and national efforts to restore natural habitats and protect native species.</p> <p><b>Research and Education:</b> Provides opportunities for research and education in the field of environmental science and habitat restoration</p>
<b>Target timescale</b>	Short to Medium Term
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	£500 - £1,000 per scheme when implemented alongside other works
<b>Funding option(s)</b>	CCBC Capital Budget Welsh Government FCERM Capital Grants Developer / Landowner and Beneficiary Contributions
<b>Delivery partner(s) / option(s)</b>	Landowners / Developers
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Biodiversity Action Plan
<b>How we measure progress</b>	We will undertake site visits and assess the areas where we have implemented biodiversity enhancements to ensure that the local ecosystems are thriving. We will keep a record of these assessments to track our progress over time.

<b>Action #</b>	<b>A30</b>
<b>Action</b>	Identify and map obstructions on watercourses.
<b>Descriptions</b>	<p>Obstructions on watercourses such as weirs can provide both flood risk benefits and risks depending on the nature of the obstruction. However, they do present barriers to the movement of fish and other aquatic animals and often require maintenance and management to ensure that they remain clear of debris.</p> <p>We will look to identify obstructions on watercourses and, where possible, work with the riparian owners and Natural Resources Wales (NRW) to remove or mitigate obstructions.</p>
<b>Benefit(s)</b>	<p><b>Preventing Floods Before They Happen:</b> By identifying blockages in our water paths, we can prevent potential floods, keeping our homes and streets safe.</p> <p><b>Smooth Flowing Waters:</b> This action helps to maintain a smooth flow of water, preventing soil erosion and safeguarding our environment.</p>

	<p><b>Knowledge is Power:</b> Creating a detailed map of watercourse obstructions empowers our community with information, helping us to understand and manage our local water systems better.</p> <p><b>Data Sharing:</b> Facilitates data sharing with other regions and organisations, contributing to broader water management strategies.</p> <p><b>Policy Development:</b> Supports the development of policies and guidelines to manage watercourses effectively.</p>
<b>Target timescale</b>	Short to Medium Term
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	<p>Typically, £500 - £1,000 for identification</p> <p>Typically, £15,000 - £30,000 for catchment analysis and feasibility studies for removal</p> <p>Typically, £20,000 - £100,000 for implementation</p>
<b>Funding option(s)</b>	<p>CCBC Revenue and Capital Budgets</p> <p>Welsh Government FCERM Revenue and Capital Grants</p> <p>NRW River Restoration Fund</p> <p>Landowner and Beneficiary contributions</p>
<b>Delivery partner(s) / option(s)</b>	<p>NRW</p> <p>Landowners</p> <p>3<sup>rd</sup> Party and Charitable Organisations</p>
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Biodiversity Action Plan
<b>How we measure progress</b>	We will record incidents of obstructions found in watercourses either through addressing relevant service request or site investigation, noting their type and location. This will help us keep an eye on potential impacts on water flow and the surrounding environment.

<b>Action #</b>	<b>A31</b>
<b>Action</b>	Continue with a commitment to “no gully” drainage solutions.
<b>Description</b>	Highway gullies are often used to convey run-off from the road surfaces to below ground pipes. They are prone to blockage and require regular maintenance to ensure that they operate freely and effectively. Gullies have a tendency to trap contaminated sediment, oils and petrol for a period of time, however, they are also highly susceptible to this contaminated soup being washed out during heavy storm events and delivered to the receiving environment as a toxic shock load.

	<p>We will work with the Highways Development Control team to develop best practice guidance and standard details for draining the highway using “no gully” solutions such as flush or negative kerbs, rain gardens, swales and filter drains.</p> <p>Within our review Sustainable Drainage applications and pre-applications, we will recommend alternative approaches to gullies where possible and practical.</p>
<b>Benefit(s)</b>	<p><b>Environmentally Friendly:</b> Promotes the use of environmentally friendly drainage solutions, helping to protect our local ecosystems.</p> <p><b>Reduced Maintenance:</b> These solutions often require less maintenance, saving time and resources in the long run.</p> <p><b>Community Aesthetics:</b> Helps to maintain the natural beauty of our community by avoiding hard engineered solutions that might not be considered aesthetically pleasing.</p> <p><b>Innovation in Infrastructure:</b> Encourages innovation in infrastructure development, potentially influencing broader industry standards and practices.</p> <p><b>Water Conservation:</b> Contributes to broader water conservation efforts by promoting more natural and sustainable drainage solutions.</p>
<b>Target timescale</b>	Ongoing / Recurring
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Typically, £500 - £1,500 per application for review £10,000 for development of standard details and guidance
<b>Funding option(s)</b>	Application Fee CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	CCBC Highway Development Control
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Biodiversity Action Plan Highways Asset Management Plan
<b>How we measure progress</b>	We are committed to implementing "no gully" drainage solutions wherever possible and will track the areas where these solutions have been put in place.

<b>Action #</b>	<b>A32</b>
<b>Action</b>	Retrofit small animal escape ladders to existing highway gullies.
<b>Description</b>	Roadside gullies trap many thousands of amphibians every year during migration periods where they tend to follow the kerb line, fall into the gully and are unable to escape. Provision of mesh materials

	to the sides of gullies can provide a stable footing and allow the amphibians to climb out of the gullies. We will start a programme of retrofit to existing gullies.
<b>Benefit(s)</b>	<p><b>Protecting Wildlife:</b> This action helps to protect our smaller local wildlife, preventing them from becoming trapped and promoting a richer local ecosystem.</p> <p><b>Community Engagement:</b> Encourages community engagement and awareness regarding the protection of local fauna.</p> <p><b>Ethical Considerations:</b> Demonstrates a commitment to ethical environmental stewardship, fostering a community that cares for all its inhabitants.</p>
<b>Target timescale</b>	Short to Long Term
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Typically, £50 - £100 per gully; excluding any traffic management costs
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	CCBC Ecology
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Biodiversity Action Plan Highways Asset Management Plan
<b>How we measure progress</b>	We will keep a record of the number of highway gullies that have been equipped with small animal escape ladders and will monitor their effectiveness in safeguarding small animals.

<b>Action #</b>	<b>A33</b>
<b>Action</b>	Identify and develop opportunities to de-culvert or daylight watercourses.
<b>Description</b>	Historically watercourses have often been piped or culverted below ground. This has typically been done to enable development above the watercourse but results in “lost” rivers and streams. The use of culverts hides the natural waterbody and means that it is often difficult to see where maintenance issues are developing without specialist equipment and qualifications such as CCTV or confined space entry or diving teams. Underground waterways are also often restricted in terms of their available capacity for water flow and provide very limited opportunities for wildlife to migrate across a catchment. We will actively look for opportunities to re-open watercourses to be on the surface where possible.

<b>Benefit(s)</b>	<p><b>Restored Natural Habitats:</b> Helps in restoring natural habitats, encouraging a diverse ecosystem in the community.</p> <p><b>Enhanced Landscape Beauty:</b> Uncovering watercourses can enhance the beauty of the landscape, creating serene environments for residents to enjoy.</p> <p><b>Improved Water Quality:</b> Daylighting watercourses can lead to improved water quality and natural water filtration, promoting a healthier environment.</p> <p><b>River Restoration:</b> Contributes to broader river restoration efforts, promoting healthier water systems on a regional scale.</p> <p><b>Collaborative Opportunities:</b> Creates opportunities for collaboration with other organisations and regions on river restoration projects.</p>
<b>Target timescale</b>	Short to Medium Term
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Typically, £30,000 to £60,000 for surveys, catchment analysis and feasibility study per scheme
<b>Funding option(s)</b>	CCBC Capital Budget Welsh Government FCERM Capital Grants UK Government Grants NRW River Restoration Fund Developer and Beneficiary Contributions
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Biodiversity Action Plan Highways Asset Management Plan
<b>How we measure progress</b>	We are working on identifying opportunities to restore or daylight watercourses, and we will track the number of projects we initiate and complete.

<b>Action #</b>	<b>A34</b>
<b>Action</b>	Identify and correct misconnections to watercourses.
<b>Description</b>	Sewage and wastewater are generally the 2 <sup>nd</sup> highest contributor to poor water quality in rivers and streams behind agricultural pollution from rural areas. Many people do not realise that drainage systems may be separated and often assume that all drainage systems go to a sewage or wastewater treatment plant. In fact, many drainage systems discharge directly to surface water bodies with little or no

	treatment. Householders and businesses will sometimes inadvertently connect washing machines, dishwashers or sinks to surface water systems, or use surface water systems to dispose of water from car washing or similar activities. Where we become aware of any misconnections, we will seek to trace these back to the source and take steps to correct through discussions with the householder or business, informing other agencies such as Natural Resources Wales (NRW) and taking enforcement action if appropriate.
<b>Benefit(s)</b>	<p><b>Prevention of Pollution:</b> Correcting misconnections helps in preventing water pollution, safeguarding the health of both the community and the environment.</p> <p><b>Resource Conservation:</b> Helps in conserving water resources by preventing unnecessary wastage and contamination.</p> <p><b>Community Awareness:</b> Raises community awareness about the importance of proper connections and the role they play in maintaining a healthy water system.</p>
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Typically, £500 - £5,000 per investigation
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	Natural Resources Wales (NRW) CCBC Environmental Health
<b>Type(s) of flood management</b>	Prevention and Recovery
<b>Link to Other Council Plans</b>	Biodiversity Action Plan Highways Asset Management Plan
<b>How we measure progress</b>	We are actively identifying and correcting misconnections to watercourses. We will record the number of corrected misconnections through relevant work instructions.

<b>Action #</b>	<b>A35</b>
<b>Action</b>	Retrofit water quality measures to highway drainage systems.
<b>Description</b>	Contaminated run-off from urban surfaces, including highways, is typically the 3 <sup>rd</sup> most prevalent reason for a water body being polluted and not achieving “Good” status under the Water Framework Directive (WFD) behind agricultural pollution and sewage / wastewater. We recognise that we have a role to play in the protection and enhancement of water quality in our rivers and streams and that we cannot expect other sectors to deliver improvements if we are not also prepared to work on our own

	systems. Whilst Sustainable Drainage requirements are addressing new developments, retrofit projects remain limited. We will actively look at opportunities through retrofit and redevelopment schemes to deliver water quality improvements.
<b>Benefit(s)</b>	<p><b>Enhanced Water Quality:</b> Implementing these measures will enhance the quality of water in our local streams and rivers, promoting a healthier ecosystem.</p> <p><b>Reduced Flooding Risks:</b> Helps in reducing the risks of flooding by managing stormwater more effectively.</p> <p><b>Sustainable Development:</b> Demonstrates a commitment to sustainable development, fostering a community that values environmental protection.</p> <p><b>Pollution Reduction:</b> Contributes to broader efforts to reduce pollution from road runoff, promoting cleaner water systems.</p> <p><b>Innovation and Research:</b> Encourages innovation and research in water quality management, potentially influencing broader industry practices.</p>
<b>Target timescale</b>	Short to Medium Term
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Varies; £1,000 to £200,000 per scheme
<b>Funding option(s)</b>	CCBC Capital Budget Welsh Government Resilient Road Fund Developer and Beneficiary Contributions
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Biodiversity Action Plan Highways Asset Management Plan
<b>How we measure progress</b>	This action will ensure that we consider retrofitting water quality measures to highway drainage systems to ensure provision of the benefits associated with such construction. We will track our progress by noting the number of systems retrofitted and will monitor improvements in water quality in the affected areas.

<b>Action #</b>	<b>A36</b>
<b>Action</b>	Work with CCBC Ecology team to develop a checklist for SuDS Wildlife Enhancements appropriate to single dwellings and small developments to assist applicants to achieve Net Biodiversity Gain on 100% of applications.

<b>Description</b>	The net-benefits for biodiversity approach by the Welsh Government does not use a metric but puts the emphasis on proactive consideration of biodiversity and wider ecosystem benefits within a placemaking context early in the development stage. Standard 5 (Biodiversity) of the Welsh Government National Standards for Sustainable Drainage Systems states that developments should “maximise biodiversity benefits”. Both approaches are open to interpretation. In order to provide more clarity and simplicity of approach, we will work with our Ecologists to develop best practice guidance and standard details.
<b>Benefit(s)</b>	<p><b>Biodiversity Enhancement:</b> Encourages developments that enhance local biodiversity, creating richer habitats for wildlife.</p> <p><b>Educational Opportunities:</b> Offers educational opportunities for homeowners to learn about sustainable practices.</p> <p><b>Community Engagement:</b> Fosters community engagement by encouraging residents to take an active role in enhancing local wildlife habitats.</p> <p><b>Knowledge Sharing:</b> Facilitates knowledge sharing with other regions and organizations, promoting the adoption of best practices in sustainable development.</p>
<b>Target timescale</b>	Short to Medium Term
<b>Critical dependencies (for delivery)</b>	Internal resources
<b>Cost</b>	£10,000
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	CCBC Ecology
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Biodiversity Action Plan
<b>How we measure progress</b>	We will collaborate with our Ecology team to develop a checklist for SuDS Wildlife Enhancements. We will track the number of applicants utilising the checklist to achieve Net Biodiversity Gain.

<b>Action #</b>	<b>A37</b>
<b>Action</b>	Develop best practice guidance / standard details for inclusion of in-line reed beds for basins / ponds for developments of 5 or more plots with a view to assisting applicants to achieve Net Biodiversity Gain on 100% of applications.
<b>Description</b>	The net-benefits for biodiversity approach by the Welsh Government does not use a metric but puts the emphasis on

	proactive consideration of biodiversity and wider ecosystem benefits within a placemaking context early in the development stage. Standard 5 (Biodiversity) of the Welsh Government National Standards for Sustainable Drainage Systems states that developments should “maximise biodiversity benefits”. Both approaches are open to interpretation. In order to provide more clarity and simplicity of approach, we will work with our Ecologists to develop best practice guidance and standard details.
<b>Benefit(s)</b>	<p><b>Natural Filtration:</b> Reed beds act as natural filters, helping to improve water quality and promote a healthier ecosystem.</p> <p><b>Aesthetic Enhancement:</b> Creates aesthetically pleasing environments, enhancing the beauty of local developments.</p> <p><b>Promotion of Biodiversity:</b> Encourages biodiversity by creating habitats for various species of wildlife.</p> <p><b>Wetland Conservation:</b> Contributes to broader wetland conservation efforts by promoting the use of natural water filtration systems.</p> <p><b>Educational Opportunities:</b> Creates educational opportunities for communities to learn about wetland ecosystems and their benefits.</p>
<b>Target timescale</b>	Short to Medium Term
<b>Critical dependencies (for delivery)</b>	Internal resources
<b>Cost</b>	£10,000
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	CCBC Ecology
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Biodiversity Action Plan
<b>How we measure progress</b>	We will develop guidance and standard details to assist applicants in achieving Net Biodiversity Gain in developments of 5 or more plots. We will monitor the uptake and effectiveness of this guidance in promoting biodiversity.

<b>Action #</b>	<b>A38</b>
<b>Action</b>	Ensure and enforce development set-back / buffer zones adjacent to watercourses.
<b>Description</b>	Under the CCBC Land Drainage Byelaws all development within 8m of any watercourse is subject to control and works within this zone require consent. The provision of a development buffer zone is also set out within the draft version of TAN15 anticipated to be

	introduced shortly. We will ensure that all developments are set back from watercourses by at least 3m and to the full extent of the Land Drainage Byelaw margin where appropriate. Buffer zones shall be fenced, with 100mm – 150mm lift for small animal passages; and / or seeded or planted and maintained appropriately.
<b>Benefit(s)</b>	<b>Erosion Control:</b> Helps in controlling erosion by maintaining natural vegetation along watercourses, which stabilises the soil. <b>Natural Habitats:</b> Preserves natural habitats for wildlife, fostering a rich biodiversity in the community. <b>Water Quality Protection:</b> Protects the quality of water bodies by preventing direct runoff from developments into watercourses.
<b>Target timescale</b>	Ongoing / recurring
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Typically, £500 - £1,500 per application for review of development sites
<b>Funding option(s)</b>	Application Fees CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Biodiversity Action Plan
<b>How we measure progress</b>	We are enforcing development set-back/buffer zones adjacent to watercourses as per our Byelaws and will track the number of developments adhering to these zones.

<b>Action #</b>	<b>A39</b>
<b>Action</b>	Promote a commitment to a peat-free Caerphilly.
<b>Description</b>	Under the Environment (Wales) Act all public bodies must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales and in doing so promote the resilience of ecosystems so far as possible in the exercise of those functions. No peat-based composts will be used on any sites under our operational control and management. We will encourage owners, operators and maintainers of 3 <sup>rd</sup> party sites to commit to peat-free operations.
<b>Benefit(s)</b>	<b>Climate Change Mitigation:</b> Supports the fight against climate change by reducing the degradation of peatlands, which are significant carbon sinks.

	<p><b>Biodiversity Conservation:</b> Helps in conserving the unique biodiversity of peatland ecosystems.</p> <p><b>Sustainable Gardening:</b> Encourages residents to adopt sustainable gardening practices, fostering a greener community.</p>
<b>Target timescale</b>	Ongoing / Recurring
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Typically, £500 - £1,500 per application for review of 3 <sup>rd</sup> party sites
<b>Funding option(s)</b>	Application Fees CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	CCBC Countryside CCBC Parks
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Biodiversity Action Plan
<b>How we measure progress</b>	Progress will be measured by recording the uptake of peat-free alternatives used within construction schemes across the Borough.

<b>Action #</b>	<b>A40</b>
<b>Action</b>	Control the growth and spread of Invasive Non-Native Species (INNS).
<b>Description</b>	Under the Environment (Wales) Act all public bodies must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales and in doing so promote the resilience of ecosystems so far as possible in the exercise of those functions. INNS, such as Japanese Knotweed and Himalayan Balsam can be particularly prevalent around water courses and subject to spread through inappropriate activities. Where we identify INNS on a site, we will work with other service areas and specialist contractors to implement appropriate management practices and treatment plans
<b>Benefit(s)</b>	<p><b>Ecosystem Protection:</b> Protects local ecosystems by controlling species that can outcompete native flora and fauna.</p> <p><b>Preservation of Native Species:</b> Helps in preserving native species, maintaining the natural balance of local ecosystems.</p> <p><b>Community Education:</b> Provides opportunities for community education on the importance of controlling INNS and preserving native species.</p>
<b>Target timescale</b>	Ongoing / Recurring
<b>Critical dependencies (for delivery)</b>	None

<b>Cost</b>	Typically, £2,500 per location
<b>Funding option(s)</b>	CCBC Revenue Budget Developer and Beneficiary Contributions
<b>Delivery partner(s) / option(s)</b>	CCBC Countryside
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Biodiversity Action Plan
<b>How we measure progress</b>	We are working to control the growth and spread of Invasive Non-Native Species especially near critical assets across the borough and will monitor the number and extent of controlled or eradicated species which will set the basis for measuring progress.

<b>Action #</b>	<b>A41</b>
<b>Action</b>	Ensure wildlife friendly maintenance on both adoptable and non-adoptable developments.
<b>Description</b>	Under the Environment (Wales) Act all public bodies must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales and in doing so promote the resilience of ecosystems so far as possible in the exercise of those functions. We will fulfil this obligation by ensuring, so far as possible, that all maintenance activities are carried out in a manner that is sensitive to the local environment. For example, this might include scheduling maintenance for certain times of year (e.g., outside of bird nesting season) or carrying out maintenance in stages (e.g., only de-silting up to 1/3 of ponds and basins at any one time).
<b>Benefit(s)</b>	<b>Wildlife Conservation:</b> Encourages the conservation of wildlife by promoting habitats that are friendly to various species. <b>Community Engagement:</b> Engages the community in wildlife conservation efforts, fostering a sense of stewardship for the local environment. <b>Enhanced Quality of Life:</b> Enhances the quality of life for residents by fostering developments that are in harmony with nature, offering tranquil and aesthetically pleasing surroundings. <b>Biodiversity Corridors:</b> Helps in establishing biodiversity corridors, facilitating the movement and survival of wildlife species. <b>Green Building Practices:</b> Promotes green building practices, which can be adopted by others as a model for sustainable development.
<b>Target timescale</b>	Ongoing / Recurring

<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Typically, £500 - £2,000 per maintenance operation
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant Developer or Beneficiary Contributions
<b>Delivery partner(s) / option(s)</b>	CCBC Parks CCBC Countryside 3 <sup>rd</sup> Sector or Charitable Organisations
<b>Type(s) of flood management</b>	Prevention, Protection and Review
<b>Link to Other Council Plans</b>	Biodiversity Action Plan
<b>How we measure progress</b>	We are ensuring wildlife-friendly maintenance on both adoptable and non-adoptable developments and will monitor the number of developments implementing these practices which will set the basis for measuring progress.

<b>Action #</b>	<b>A42</b>
<b>Action</b>	Update the Local Flood Risk Plan in accordance with updates to the SFRI every 3 years.
<b>Description</b>	We have committed to embedding social vulnerability within this Strategy and have outlined how we will be using the Social Flood Risk Index (SFRI) when making investment decisions. When we formally review and update our flood action plans, we will also review our flood risk assessment and include any updates to the SFRI within this appraisal.
<b>Benefit(s)</b>	Updating the Local Flood Risk Plan in accordance with updates to the Social Flood Risk Index (SFRI) every 3 years ensures that our flood risk management efforts are always aligned with the most current understanding of social flood risks. This not only enhances the relevance and effectiveness of our efforts but also ensures that we are targeting our resources and efforts towards the areas and communities most at risk.
<b>Target timescale</b>	Medium Term
<b>Critical dependencies (for delivery)</b>	Social Flood Risk Index (SFRI) updates
<b>Cost</b>	£5,000
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	None

<b>Type(s) of flood management</b>	Preparedness and Review
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	Monitor the timely update of the Local Flood Risk Plan every three years in accordance with SFRI updates.

Action # **A43**

<b>Action</b>	Review and evaluate identified flood risk areas in the context of the Social Flood Risk Index (SFRI) every 3 years.
<b>Description</b>	We have committed to embedding social vulnerability within this Strategy and have outlined how we will be using the Social Flood Risk Index (SFRI) when making investment decisions. When we formally review and update our flood action plans, we will also review our flood risk assessment and include any updates to the SFRI within this appraisal.
<b>Benefit(s)</b>	Reviewing and evaluating identified flood risk areas in the context of the SFRI every 3 years ensures that our understanding of flood risks is always based on the most current social flood risk data. This not only enhances the accuracy and relevance of our flood risk assessments but also ensures that we are focusing our efforts on the areas and communities most at risk.
<b>Target timescale</b>	Medium Term
<b>Critical dependencies (for delivery)</b>	Social Flood Risk Index (SFRI) updates A42
<b>Cost</b>	£5,000
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Preparedness and Review
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	CCBC will track the consistent review and evaluation of identified flood risk areas in the context of the SFRI every three years in line with the review of the Local Flood Risk Management Plan.

Action # **A44**

<b>Action</b>	Target information and awareness campaigns at areas of local socio-economic vulnerability through local resilience forums & community groups.
<b>Description</b>	We have committed to embedding social vulnerability within this Strategy and have outlined how we will be using the Social Flood Risk Index (SFRI) when making investment decisions. This will include information and awareness campaigns.
<b>Benefit(s)</b>	Targeting information and awareness campaigns at areas of local socio-economic vulnerability through local resilience forums & community groups ensures that our information and awareness efforts reach the communities most at risk. This not only enhances the effectiveness of our information and awareness campaigns but also empowers vulnerable communities to take an active role in managing their flood risks.
<b>Target timescale</b>	Short to Medium Term
<b>Critical dependencies (for delivery)</b>	A54 A46
<b>Cost</b>	Typically, £1,000 - £5,000 per event
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	Natural Resources Wales (NRW) Gwent Local Resilience Forum
<b>Type(s) of flood management</b>	Preparedness and Recovery
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	CCBC will measure the number and reach of information and awareness campaigns targeted at socio-economically vulnerable areas through Community Flood Forums and responses received from the community.

<b>Action #</b>	<b>A45</b>
<b>Action</b>	Target flood warning services towards areas of socio-economic vulnerability.
<b>Description</b>	We have committed to embedding social vulnerability within this Strategy and have outlined how we will be using the Social Flood Risk Index (SFRI) when making investment decisions. This will include when making decisions in relation to where we will install and maintain local flood warning systems.
<b>Benefit(s)</b>	Targeting flood warning services towards areas of socio-economic vulnerability ensures that our flood warnings reach the communities most at risk. This not only enhances the effectiveness of our flood

	warnings but also empowers vulnerable communities to take timely actions to protect themselves and their properties.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Typically, £10,000 per site for implementation; £500 per year per site for maintenance
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant Welsh Government FCERM Small Scale Grant
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Preparedness and Recovery
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	CCBC will record the implementation of flood warning services in areas of socio-economic vulnerability.

<b>Action #</b>	<b>A46</b>
<b>Action</b>	Work with other departments to utilise community engagement, participation and partnership working opportunities.
<b>Description</b>	Nobody understands local flood risk better than those individuals and communities living with the risk. We will look to use existing community participation events and partnership working to form improved links across our communities and gain as much insight and information as possible. We will also look at opportunities to use partnership working to better deliver on our other actions, measures and objectives collaboratively.
<b>Benefit(s)</b>	Working with other departments to utilise community engagement, participation and partnership working opportunities ensures that our flood risk management efforts are integrated with broader community engagement and participation efforts. This not only enhances the overall resilience of our community but also strengthens our relationship with the community.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	Resource availability within other departments
<b>Cost</b>	Typically, £500 - £1,000 per event
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant

<b>Delivery partner(s) / option(s)</b>	Other CCBC departments 3 <sup>rd</sup> Sector and Charitable Organisations
<b>Type(s) of flood management</b>	Preparedness and Recovery
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	CCBC will record the number of collaborations with other departments to utilise community engagement, participation, and partnership working opportunities.

<b>Action #</b>	
<b>Action</b>	Provide training for emergency responders in trauma-informed approaches and psychological first aid.
<b>Description</b>	We act as a first responder to flooding incidents and also operate within strategic control teams. Our staff are already trained in water safety and rescue techniques and provided with appropriate opportunities to have training and accreditation in general first aid. We will expand these opportunities to include training and qualification in trauma-informed Mental Health First Aid.
<b>Benefit(s)</b>	Providing training for emergency responders in trauma-informed approaches and psychological first aid ensures that our emergency responders are equipped to provide effective and compassionate support to individuals affected by flooding. This not only enhances the effectiveness of our emergency response efforts but also supports the mental health and well-being of our community.
<b>Target timescale</b>	Short to Medium Term
<b>Critical dependencies (for delivery)</b>	Availability of suitable training courses
<b>Cost</b>	£5,000 - £10,000
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	Accredited training bodies Aneurin Bevan University Health Board
<b>Type(s) of flood management</b>	Preparedness and Recovery
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	The delivery and completion rates of trauma-informed approaches and psychological first aid training for emergency responders will be monitored.

<b>A48</b>	
Action #	
<b>Action</b>	Ensure that recovery coordinating groups involve mental health trusts and representatives from organisations with expertise in mental health at the start of a recovery phase following a flooding event.
<b>Description</b>	The mental health impacts on individuals and households following on from a flooding incident can be significant and can persist for many years following an event, with those impacted often stating that they suffer from increased stress and anxiety and are unable to sleep or rest during rainfall events after a flood. We will work with experts in mental health to ensure that support is provided to impacted residents following an incident.
<b>Benefit(s)</b>	Ensuring that recovery coordinating groups involve mental health trusts and representatives from organisations with expertise in mental health at the start of a recovery phase following a flooding event ensures that our recovery efforts address the mental health needs of our community. This not only enhances the effectiveness of our recovery efforts but also supports the mental health and well-being of our community.
<b>Target timescale</b>	Short to Medium Term following an incident
<b>Critical dependencies (for delivery)</b>	Resources within support groups / teams
<b>Cost</b>	Varies; Typically, £1,000 to provide support post event, per event. Cost of Mental Health impacts estimated at £5,000 - £10,000 per household per flooding incident
<b>Funding option(s)</b>	CCBC Revenue Grant Welsh Government FCERM Revenue Grant Welsh Government Flood Recovery Grant
<b>Delivery partner(s) / option(s)</b>	Gwent Public Services Board Aneurin Bevan University Health Board Local Mental Health Charities
<b>Type(s) of flood management</b>	Response and Recovery
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan Corporate Plan including Well-Being Goals
<b>How we measure progress</b>	CCBC will record the involvement of mental health trusts and representatives from organisations with expertise in mental health in recovery coordinating groups following flooding events.

<b>A49</b>	
Action #	

<b>Action</b>	Implement a continuous programme of Natural Flood Management (NFM) schemes, commencing with delivery of schemes identified and promoted through Welsh Government's NFM Accelerator Programme (2023-25).
<b>Description</b>	The Welsh Government's NFM Accelerator Programme for 2023-2025 was developed in partnership between the Flood branch and the Food and Rural Affairs Branch as a transition to the Sustainable Farming Scheme following the success of an earlier pilot scheme. We were successful in bidding for £649,050 of funding for the 2023-2025 period, which is allowing for the implementation of schemes across the Borough. We will look to build on this success through a continuous programme of NFM schemes beyond the current funding period.
<b>Benefit(s)</b>	Implementing a continuous programme of Natural Flood Risk Management (NFM) schemes, commencing with delivery of schemes identified and promoted through Welsh Government's NFM Accelerator Programme (2023-25), ensures that our flood risk management efforts are aligned with the latest scientific understanding and best practices in NFM. This not only enhances the effectiveness of our efforts but also supports the sustainability and resilience of our local ecosystems.
<b>Target timescale</b>	Short to Medium Term
<b>Critical dependencies (for delivery)</b>	Availability of funding beyond 2025
<b>Cost</b>	£649,050 through to 2025 Varies per scheme from £30,000 to £300,000
<b>Funding option(s)</b>	Welsh Government NFM Accelerator Grant (100% funded) Welsh Government FCERM Capital Grants UK Government Grants Developer and Beneficiary Contributions
<b>Delivery partner(s) / option(s)</b>	Natural Resources Wales (NRW) Neighbouring Local Authorities
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Biodiversity Action Plan
<b>How we measure progress</b>	CCBC will record the number of NFM schemes its implemented via the Welsh Government's NFM Accelerator Programme and facilitate this information as a means of monitoring progress should such programme remain available and subject to grant approval.

Action #

**A50**

<b>Action</b>	Work with other service areas, partners and neighbouring authorities to enable Natural Flood Management (NFM) delivery (e.g., tree planting).
<b>Description</b>	Natural Flood Management will often include techniques or interventions such as tree planting that the Lead Local Flood Authority (LLFA) team are not best placed to deliver, but that we may be able to enable other Council service areas (e.g., Parks or Countryside departments), partners such as 3 <sup>rd</sup> sector organisations or neighbouring authorities to deliver on our behalf.
<b>Benefit(s)</b>	Working with other service areas, partners and neighbouring authorities to enable NFM delivery (e.g., tree planting) ensures that our NFM efforts are integrated with broader environmental management and conservation efforts. This not only enhances the overall resilience of our local ecosystems but also strengthens our relationships with partners and stakeholders.
<b>Target timescale</b>	Short to Medium Term
<b>Critical dependencies (for delivery)</b>	Resources in other service areas, partner organisations and neighbouring authorities
<b>Cost</b>	Varies; Up to £300,000 per scheme
<b>Funding option(s)</b>	CCBC Capital Budget Welsh Government FCERM Capital Grant, including NFM Accelerator UK Government Grant Developer or Beneficiary contributions
<b>Delivery partner(s) / option(s)</b>	Other CCBC Service Areas (Parks, Countryside, Education, etc) Neighbouring Local Authorities 3 <sup>rd</sup> Sector and Charitable organisations
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Biodiversity Action Plan
<b>How we measure progress</b>	To enhance collaborative efforts, we will record the number of collaborations established with service areas, partners, and neighbouring authorities for NFM delivery.

<b>Action #</b>	<b>A51</b>
<b>Action</b>	Incorporating Natural Flood Management (NFM) techniques into decision making.
<b>Description</b>	Welsh Government policy and the National Strategy require us to consider NFM options for all schemes and proposals and to incorporate NFM elements or solutions wherever appropriate and possible. We will ensure that all schemes both delivered by ourselves and by our partners consider NFM options first.

<b>Benefit(s)</b>	Incorporating NFM techniques into decision making ensures that our decisions are informed by the latest scientific understanding and best practices in NFM. This not only enhances the effectiveness of our decisions but also supports the sustainability and resilience of our local ecosystems.
<b>Target timescale</b>	Ongoing and Recurring
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Varies; Typically, £1,000 - £60,000 per scheme for assessment, options appraisal and feasibility study
<b>Funding option(s)</b>	CCBC Capital Budget Welsh Government FCERM Capital Grant, including NFM Accelerator UK Government Grant Developer or Beneficiary contributions
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Biodiversity Action Plan
<b>How we measure progress</b>	CCBC will ensure transparency in our decision-making process by tracking the inclusion of NFM techniques in our decisions.

<b>Action #</b>	<b>A52</b>
<b>Action</b>	Incorporate PAS2080:2023 into the formal brief and decision-making process for any schemes and interventions.
<b>Description</b>	PAS2080 is a UK standard for managing carbon in building and infrastructure. It looks at the whole value chain and aims to reduce carbon and cost through intelligent, design, construction and use. It's a key reference document in the UK Government's Construction Playbook. We will ensure that our schemes fully consider PAS2080 within the design and implementation. We will review and assess 3 <sup>rd</sup> party and developer schemes against the requirements of PAS2080.
<b>Benefit(s)</b>	Incorporating PAS2080:2023 into the formal brief and decision-making process for any schemes and interventions ensures that our efforts are aligned with the latest standards for managing infrastructure carbon. This not only enhances the sustainability of our efforts but also supports our commitment to reducing our carbon footprint.
<b>Target timescale</b>	Short to Medium Term

<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Varies; Typically, £1,000 for review of schemes per scheme. Typically, £5,000 - £10,000 for incorporation of principles into schemes for delivery.
<b>Funding option(s)</b>	Application Fees (for review of submitted schemes) CCBC Capital Budget Welsh Government FCERM Capital Grant UK Government Grant Developer and Beneficiary Contributions
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention and Preparedness
<b>Link to Other Council Plans</b>	Decarbonisation Strategy: Reduce, Produce, Offset, Buy
<b>How we measure progress</b>	CCBC will record the integration of PAS2080:2023 into scheme briefs and decision-making processes.

<b>Action #</b>	<b>A53</b>
<b>Action</b>	Investigate and implement catchment-based approaches with neighbouring authorities.
<b>Description</b>	River catchments do not just follow administrative boundaries and often interventions at the upper reaches of a catchment can have considerable benefits to the lower lying areas at the bottom of the catchment. We will work with neighbouring authorities to identify where there could be opportunities outside of Caerphilly Borough to implement schemes for improving flood risk within the Borough.
<b>Benefit(s)</b>	Investigating and implementing catchment-based approaches with neighbouring authorities ensures that our flood risk management efforts are integrated with broader catchment management efforts. This not only enhances the overall resilience of our catchments but also strengthens our relationships with neighbouring authorities.
<b>Target timescale</b>	Short to Medium Term (within Strategy period)
<b>Critical dependencies (for delivery)</b>	Neighbouring Local Authority Local Flood Risk Strategy and Plans
<b>Cost</b>	Varies; Typically, £30,000 - £60,000 for detailed catchment analysis and feasibility studies; Scheme costs potentially up to £200,000 (Small-Scale Schemes); Scheme costs potentially over £200,000 via Business Case Development (FCERM Capital scheme)
<b>Funding option(s)</b>	CCBC Capital Budget Welsh Government FCERM Grant Funding

	UK Government Grant Funding Neighbouring Authority Contributions Developer or Beneficiary Contributions
<b>Delivery partner(s) / option(s)</b>	Neighbouring Local Authorities Natural Resources Wales (NRW)
<b>Type(s) of flood management</b>	Prevention and Preparedness
<b>Link to Other Council Plans</b>	Gwent Public Services Board Well-Being Plan
<b>How we measure progress</b>	The efficacy of catchment-based approaches will be monitored by recording the number of such initiatives implemented with neighbouring authorities.

<b>Action #</b>	
<b>Action</b>	Promote increased public awareness of the importance of biodiversity and broadening public involvement.
<b>Description</b>	We will look at opportunities to increase public awareness and involvement with processes that will help to protect and enhance biodiversity. This could be through the inclusion of information boards or signs associated with schemes (both ours and those of 3 <sup>rd</sup> parties), information leaflets, updates on our website and social media pages and direct engagement and involvement through community gardens or community led maintenance.
<b>Benefit(s)</b>	Promoting increased public awareness of the importance of biodiversity and broadening public involvement ensures that our community is informed and engaged in our biodiversity conservation efforts. This not only enhances the effectiveness of our efforts but also builds trust and strengthens our relationship with the community.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	Scheme specific A44
<b>Cost</b>	Varies; Typically, £100 for information provision through social media; Typically, £1,000 for community events
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Grant funding Developer and Beneficiary Contributions
<b>Delivery partner(s) / option(s)</b>	Community Groups 3 <sup>rd</sup> Sector or Charity Organisations
<b>Type(s) of flood management</b>	Prevention, Preparedness and Recovery
<b>Link to Other Council Plans</b>	Biodiversity Action Plan

<b>How we measure progress</b>	The success of our public awareness initiatives will be measured by tracking the number of such initiatives and the extent of public participation and facilitate this method as a means of monitoring progress.
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<b>A55</b>	
<b>Action #</b>	
<b>Action</b>	SAB technical review of submitted application and determined within accordance with the Statutory Standards and Guidance.
<b>Description</b>	The Sustainable Drainage Approving Body (SAB) was created in 2019 through the implementation of Schedule 3 of the Flood and Water Management Act. Most new developments over 100m <sup>2</sup> require approval from the SAB for their drainage proposals prior to construction. We will thoroughly review all applications in line with the Welsh Government statutory standards to ensure that systems are designed and constructed accordingly.
<b>Benefit(s)</b>	SAB technical review of submitted application and determined within accordance with the Statutory Standards and Guidance ensures that our decisions are informed by the latest standards and guidance. This not only enhances the effectiveness of our decisions but also supports our commitment to regulatory compliance.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Varies; Typically, £1,000 per application
<b>Funding option(s)</b>	Application Fee CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention, Protection and Preparedness
<b>Link to Other Council Plans</b>	None
<b>How we measure progress</b>	The SuDS Approval Body (SAB) will monitor compliance with Statutory Standards and Guidance by recording the number of submitted applications and their decisions.

<b>A56</b>	
<b>Action #</b>	
<b>Action</b>	Implement Natural Flood Management (NFM) techniques and features when creating natural channels and water bodies.

<b>Description</b>	Natural Flood Management involves techniques that work with natural hydrological and morphological processes to support and enhance the natural features of water bodies. For example, it could be the inclusion of woody debris dams similar to beaver dams to hold back water or could be re-introducing meanders and natural movement to a watercourse.
<b>Benefit(s)</b>	Implementing Natural Flood Management techniques and features when creating natural channels and water bodies ensures that our efforts are aligned with the latest scientific understanding and best practices in NFM. This not only enhances the effectiveness of our efforts but also supports the sustainability and resilience of our local ecosystems.
<b>Target timescale</b>	Recurring
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Varies; Scheme specific. Up to £300,000 per scheme
<b>Funding option(s)</b>	CCBC Capital Budget Welsh Government FCERM Capital Grants, including NFM Accelerator UK Government Grants Developer or Beneficiary Contributions
<b>Delivery partner(s) / option(s)</b>	Natural Resources Wales (NRW) Dŵr Cymru Welsh Water (DCWW)
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Biodiversity Action Plan
<b>How we measure progress</b>	CCBC will measure the application of NFM techniques by recording the number of natural channels and water bodies created.

<b>Action #</b>	<b>A57</b>
<b>Action</b>	Determine Ordinary Watercourse Consents applications in line with Water Framework Directive (WFD) requirements.
<b>Description</b>	The WFD is a pioneering piece of European legislation, fully transposed into UK law prior to the departure from the EU and not rescinded in Wales. It aims to ensure the protection and enhancement of all water bodies with the goal that all water bodies should be at “good” ecological status (equivalent to having no detrimental impacts from human activities) as soon as possible.
<b>Benefit(s)</b>	Determining Ordinary Watercourse Consents applications in line with Water Framework Directive (WFD) requirements ensures that our decisions are informed by the latest standards and guidance.

	This not only enhances the effectiveness of our decisions but also supports our commitment to regulatory compliance.
<b>Target timescale</b>	Recurring
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Varies; typically, £500 per application
<b>Funding option(s)</b>	Application fees CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention, Protection and Preparedness
<b>Link to Other Council Plans</b>	Biodiversity Action Plan
<b>How we measure progress</b>	To ensure adherence to Water Framework Directive (WFD) requirements, CCBC will monitor the number of Ordinary Watercourse Consents applications determined accordingly.

<b>Action #</b>	<b>A58</b>
<b>Action description</b>	Regularly attend relevant Continuous Personal Development (CPD) training events.
<b>Description</b>	Caerphilly County Borough Council has a policy of continuous personal development and growth where we look to build knowledge and skills across all levels of the organisation. We will monitor and attend training courses relevant to flood risk management that will help the team to develop more detailed understanding and to keep pace with new products, systems and services.
<b>Benefit(s)</b>	Regularly attending relevant Continuous Personal Development (CPD) training events ensures that our staff are equipped with the latest knowledge and skills to manage flood risks effectively. This not only enhances the effectiveness of our efforts but also supports our commitment to staff development.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Varies; Typically, £10,000 - £15,000 per year
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	Wales Apprenticeship Alliance

<b>Type(s) of flood management</b>	All Types
<b>Link to Other Council Plans</b>	Corporate Plan, including Well-being Objectives
<b>How we measure progress</b>	CCBC commit to continuous learning and will measure this by recording the number of training courses attended by staff.

<b>A59</b>	
Action #	
<b>Action</b>	Undertake relevant training courses.
<b>Description</b>	Caerphilly County Borough Council has a policy of internal development and growth where we look to build knowledge and skills across all levels of the organisation. We will monitor and attend training courses relevant to flood risk management that will help the team to develop more detailed understanding and to keep pace with new products, systems and services.
<b>Benefit(s)</b>	Undertaking relevant training courses ensures that our staff are equipped with the latest knowledge and skills to manage flood risks effectively. This not only enhances the effectiveness of our efforts but also supports our commitment to staff development and links to our delivery of the Wellbeing of Future Generations objectives.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Varies; Typically, £10,000 - £15,000 per year
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	Wales Apprenticeship Alliance
<b>Type(s) of flood management</b>	All Types
<b>Link to Other Council Plans</b>	Corporate Plan, including Well-being Objectives
<b>How we measure progress</b>	CCBC commit to continuous learning and will measure this by recording the number of training courses attended by staff.

<b>A60</b>	
Action #	
<b>Action</b>	Seek opportunities to deliver wider environmental and well-being benefits (e.g., air quality improvements, enhanced biodiversity, improving access to and connection with nature) through Nature-

	Based Solutions (NBS), Green infrastructure (GI), Natural Flood Management (NFM), Sustainable Drainage Systems (SuDS).
<b>Description</b>	Nature-Based Solutions look to harness the power of nature to address some of our most pressing societal challenges, such as threats to water security and climate change. These solutions involve protecting, restoring and sustainably managing ecosystems in ways that increase their resilience and ability to address those societal challenges, whilst also safeguarding biodiversity and improving human wellbeing.
<b>Benefit(s)</b>	Seeking opportunities to deliver wider environmental and well-being benefits (e.g., air quality improvements, enhanced biodiversity, improving access to and connection with nature) through Nature-Based Solutions, Green infrastructure, Natural Flood Management, Sustainable Drainage Systems ensures that our flood risk management efforts are integrated with broader environmental and well-being efforts. This not only enhances the overall resilience of our local ecosystems but also supports the health and well-being of our community.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Varies; Scheme specific
<b>Funding option(s)</b>	CCBC Capital Budget Welsh Government FCERM Capital Grants, including NFM Accelerator UK Government Capital Grants Developer or Beneficiary Contributions
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Decarbonisation Strategy: Reduce, Produce, Offset, Buy
<b>How we measure progress</b>	Success will be measured by the number of opportunities we have identified and taken to deliver wider environmental and well-being benefits, such as improvements in air quality, biodiversity enhancement, or improved access to and connection with nature.

<b>Action #</b>	<b>A61</b>
<b>Action</b>	Promote the use of construction material used within schemes that has lower 'embedded' greenhouse gas emissions than alternatives (e.g., the use of wooden fencing rather than steel)

<b>Description</b>	<p>Materials such as steel, aluminium and concrete are created by a production process of raw material extraction, processing, manufacturing and transportation to construction sites. Each of these steps consumes energy and has an impact on our wider environment.</p> <p>Materials such as wood have “locked in” carbon that has been captured in the wood whilst it was growing and therefore has a reduced impact or even beneficial effect on the wider environment. We will promote the use of sustainable low carbon or carbon sink materials and locally sourced materials both within our own schemes and where we are able to influence others.</p>
<b>Benefit(s)</b>	Promoting the use of construction material used within schemes that has lower 'embedded' greenhouse gas emissions than alternatives (e.g., the use of wooden fencing rather than steel) ensures that our construction efforts are aligned with our commitment to reducing our carbon footprint. This not only enhances the sustainability of our efforts but also supports our commitment to climate change mitigation.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Varies; Typically, £100 - £500 for promotion; Can be higher for implementation into schemes
<b>Funding option(s)</b>	CCBC Revenue Budget for promotion CCBC Capital Budget or Welsh Government FCERM Grants for implementation
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention
<b>Link to Other Council Plans</b>	Decarbonisation Strategy: Reduce, Produce, Offset, Buy
<b>How we measure progress</b>	CCBC will monitor the promotion and usage of construction materials with lower 'embedded' greenhouse gas emissions. Success might be quantified as a reduction in overall emissions from construction activities, or an increase in the usage of these materials.

<b>Action #</b>	<b>A62</b>
<b>Action</b>	Promote adaptive management practices to adjust to changing climate conditions.
<b>Description</b>	Adaptive management practices in relation to flood risk could include “soft” measures such as replanting forests and restoring

	damaged ecosystems and “hard” measures such as defence walls. The key to adaptive measures is in enabling the intervention to adjust or adapt to changing conditions. For example, it could be providing additional space for trees to expand naturally once the initial planting has been carried out or for watercourses to change over time. Similarly, it could be designing defences to allow them to be altered if future conditions change.
<b>Benefit(s)</b>	Promoting adaptive management practices to adjust to changing climate conditions ensures that our flood risk management efforts are flexible and responsive to changing climate conditions. This not only enhances the resilience of our flood risk management system but also supports our commitment to climate change adaptation.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Varies; Typically, £500 - £2,000
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention and Protection
<b>Link to Other Council Plans</b>	Decarbonisation Strategy: Reduce, Produce, Offset, Buy
<b>How we measure progress</b>	Progress will be evaluated by tracking the implementation of adaptive management practices to adjust to changing climate conditions. Review at 3 yearly intervals to align with the review of the Local Flood Risk Management Plan and response to new climate change data or projections will set the matrix for monitoring progress.

<b>Action #</b>	<b>A63</b>
<b>Action</b>	Review and update climate change projection in accordance with Welsh Government Guidance at least every <b>3</b> years in line with the Local Flood Risk Plan updates or as necessary when Welsh Government policy and guidance is updated.
<b>Description</b>	The UK Climate Change Projections (UKCP) form the basis for assessing the impacts of climate change in the UK and are periodically updated. Welsh Government also periodically update guidance in relation to adapting to climate change, including climate change allowances that should be included when designing flood alleviation or mitigation schemes. Natural Resources Wales (NRW) are responsible for updating the Flood Map for Planning that

	<p>includes the effects of climate change when new climate projections are released.</p> <p>As we have decided to embed climate change in our decision making and flood risk assessment, we will ensure that we are using the most up to date information possible.</p>
<b>Benefit(s)</b>	<p>Reviewing and updating climate change projection in accordance with Welsh Government Guidance at least every <b>3</b> years in line with the Local Flood Risk Plan updates or as necessary when Welsh Government policy and guidance is updated ensures that our flood risk management efforts are always based on the most current climate change projections. This not only enhances the accuracy and relevance of our efforts but also supports our commitment to climate change adaptation.</p>
<b>Target timescale</b>	Recurring at least every 3 years
<b>Critical dependencies (for delivery)</b>	<p>Met Office UK Climate Change Projections (UKCP)</p> <p>Welsh Government Adapting to Climate Change Guidance</p> <p>Flood Map for Planning</p>
<b>Cost</b>	Typically, £10,000
<b>Funding option(s)</b>	<p>CCBC Revenue Budget</p> <p>Welsh Government FCERM Revenue Grant</p>
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Review
<b>Link to Other Council Plans</b>	Decarbonisation Strategy: Reduce, Produce, Offset, Buy
<b>How we measure progress</b>	CCBC will monitor how often and comprehensively; we review and update our climate change projections in line with Welsh Government Guidance.

<b>Action #</b>	<b>A64</b>
<b>Action</b>	Working with Planning to direct developers in terms of proposed future development opportunities.
<b>Description</b>	We will contribute to the update and progress of the Local Development Plan (LDP) and will provide Planners and Developers with detailed advice in relation to their proposed developments through responses to Statutory Pre-Planning Applications, Sustainable Drainage Pre-Applications and joint Planning and Sustainable Drainage Pre-Applications.
<b>Benefit(s)</b>	Working with Planning to direct developers in terms of proposed future development opportunities ensures that our flood risk management efforts are integrated with broader urban planning efforts. This not only enhances the overall resilience of our urban environment but also supports sustainable urban development. It

	also ensures that new developments are planned with a thorough understanding of flood risks, which can lead to safer, more resilient communities.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	Local Planning Authority
<b>Cost</b>	Varies; Typically, £250 - £1,500 depending on scale and complexity of application
<b>Funding option(s)</b>	Pre-Application Advice Fees
<b>Delivery partner(s) / option(s)</b>	Local Planning Authority
<b>Type(s) of flood management</b>	Prevention
<b>Link to Other Council Plans</b>	Local Development Plan (LDP) Supplementary Planning Guidance (SPGs)
<b>How we measure progress</b>	Number of Planning

<b>Action #</b>	
<b>A65</b>	
<b>Action</b>	Ensure that the requirements of Technical Advice Note 15 (TAN15) is adhered to.
<b>Description</b>	We will respond to planning application consultations in accordance with the requirements of TAN15. When the new TAN15 is put into force, this is anticipated to include the detailed review of Flood Consequences Assessments relating to flooding from surface water and ordinary watercourses.
<b>Benefit(s)</b>	Ensuring that the requirements of Technical Advice Note 15 (TAN15) is adhered to ensures that our flood risk management efforts are aligned with the latest technical advice and guidance. This not only enhances the effectiveness of our efforts but also supports our commitment to regulatory compliance. Adherence to TAN15 also ensures that development in areas at risk of flooding is appropriately managed, reducing potential damage and disruption from flood events.
<b>Target timescale</b>	Ongoing / recurring
<b>Critical dependencies (for delivery)</b>	Local Planning Authority
<b>Cost</b>	Varies; typically, £300 - £500 per planning application
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	None

<b>Type(s) of flood management</b>	Prevention
<b>Link to Other Council Plans</b>	Local Development Plan
<b>How we measure progress</b>	Number of planning application consultation responses issued.

<b>A66</b>	
Action #	
<b>Action</b>	Maintain an Asset Register & Record using appropriate asset management software.
<b>Description</b>	We will update our Asset Register & Record with the latest information available in relation to both private and publicly maintained assets. We will introduce a new asset management system and ensure that all records are transferred to the new system and quality checked.
<b>Benefit(s)</b>	Maintaining an Asset Register & Record using appropriate asset management software ensures that we have a comprehensive and up-to-date record of all our flood risk management assets. This not only enhances the efficiency of our asset management efforts but also supports our commitment to regulatory compliance.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	Asset owners / operators
<b>Cost</b>	£10,000 per annum
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention and Review
<b>Link to Other Council Plans</b>	None
<b>How we measure progress</b>	CCBC will monitor the maintenance and use of appropriate asset management software.

<b>A67</b>	
Action #	
<b>Action</b>	Populate our Asset Register with new structures and features that have a 'significant influence on flood risk' (Severe Weather Culverts; adopted SuDS; structures designated under Schedule 1 of FWMA)

<b>Description</b>	Whenever we become aware of new structures or features that have a significant influence on flood risk, we will add them to the asset register and record.
<b>Benefit(s)</b>	Populating the Asset Register with new structures and features that have a 'significant influence on flood risk' (Severe Weather Culverts; adopted SuDS; structures designated under Schedule 1 of FWMA) ensures that we have a comprehensive understanding of all the structures and features that influence flood risk in our area. This not only enhances the effectiveness of our flood risk management efforts but also supports our commitment to regulatory compliance.
<b>Target timescale</b>	Ongoing / Recurring
<b>Critical dependencies (for delivery)</b>	Asset owners / operators
<b>Cost</b>	Varies; typically, £100 per structure
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention and Review
<b>Link to Other Council Plans</b>	None
<b>How we measure progress</b>	CCBC will track the number of significant structures and features added to the Asset Register.

<b>Action #</b>	<b>A68</b>
<b>Action</b>	Update flood risk maps for the whole of Caerphilly County Borough Council by facilitating available data e.g., topography, Flood Map for Planning, etc in line with the LFRMS and Plans review.
<b>Description</b>	Following on from updates to national maps or data sets, e.g., when NRW update the Flood Risk Assessment Wales maps or Flood Map for Planning, we will ensure that we update the maps, systems and tools that we use on a day-to-day basis to ensure that these are consistent with the national datasets.
<b>Benefit(s)</b>	Updating flood risk maps for the whole of Caerphilly County Borough Council by facilitating available data e.g., topography, Flood Map for Planning etc in line with the LFRMS and Plans review ensures that our flood risk management efforts are always based on the most current and accurate data. This not only enhances the accuracy and relevance of our efforts but also supports our commitment to evidence-based decision making.
<b>Target timescale</b>	Every 6-months recurring following update to NRW maps

<b>Critical dependencies (for delivery)</b>	Natural Resources Wales (NRW); Data Map Wales
<b>Cost</b>	£500 per update
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention and Review
<b>Link to Other Council Plans</b>	None
<b>How we measure progress</b>	Monitoring progress in this regard will consist of reviewing the frequency and quality of flood risk map updates on a 3 yearly cycle to align with the update to our Local Flood Risk Management Plan.

<b>Action #</b>	
<b>Action</b>	<b>A69</b> Complete and publish Flood Investigation Reports in accordance with S.19 of the Flood and Water Management Act 2010 for all incidents of flooding to 20 or more residential properties.
<b>Description</b>	Whenever there is a flooding incident that results in internal flooding to 20 or more residential properties, we will thoroughly investigate the causes of flooding, the actions taken by ourselves and others to mitigate or alleviate the flooding both before, during and after the event and highlight lessons learnt and what could have been done differently or what needs to change in order to lessen the likelihood or impact of the flooding. We will publish the reports on our website.
<b>Benefit(s)</b>	Completing and publishing Flood Investigation Reports in accordance with S.19 of the Flood and Water Management Act 2010 for all incidents of flooding to 20 or more residential properties ensures that we have a comprehensive understanding of the causes and consequences of major flood events. This not only enhances the effectiveness of our flood risk management efforts but also supports our commitment to transparency and accountability.
<b>Target timescale</b>	Short-Term (publish report within 1 year of incident)
<b>Critical dependencies (for delivery)</b>	Other Risk Management Authorities (RMAs) where multiple sources of flooding are prevalent; Emergency services and other incident responders
<b>Cost</b>	Varies; typically, £10,000 per incident
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	Other Risk Management Authorities (RMAs) where multiple sources of flooding are prevalent

<b>Type(s) of flood management</b>	Prevention and Review
<b>Link to Other Council Plans</b>	Emergency Planning
<b>How we measure progress</b>	CCBC will record the number of completed and published Flood Investigation Reports (Section 19 Report).

<b>Action #</b>	<b>A70</b>
<b>Action</b>	Carry out internal investigations and reporting of all incidents of internal property flooding below the threshold for S.19 reporting.
<b>Description</b>	Where there is a flooding incident that results in internal flooding to less than 20 residential properties or to businesses, commercial premises or community facilities, we will investigate the cause of the flooding and highlight lessons learnt and key areas for improvement to lessen the likelihood or impact of flooding. We will record the findings of our investigation and share these with other Risk Management Authorities (RMAs) where appropriate.
<b>Benefit(s)</b>	Carrying out internal investigations and reporting of all incidents of internal property flooding below the threshold for S.19 reporting ensures that we have a comprehensive understanding of the causes and consequences of all flood events, not just those that meet the threshold for S.19 reporting. This not only enhances the effectiveness of our flood risk management efforts but also supports our commitment to comprehensive flood risk management.
<b>Target timescale</b>	Short-Term (post incident) Recurring
<b>Critical dependencies (for delivery)</b>	Other Risk Management Authorities (RMAs) where multiple sources of flooding are prevalent; Emergency services and other incident responders
<b>Cost</b>	Varies; typically, £500 - £1,000 per incident
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	Other Risk Management Authorities (RMAs) where multiple sources of flooding are prevalent
<b>Type(s) of flood management</b>	Review
<b>Link to Other Council Plans</b>	Emergency Planning
<b>How we measure progress</b>	CCBC will record the number of internal investigations and reports completed associated with internal flooding that lie below the Section 19 Report threshold.

<b>A71</b>	
Action #	
<b>Action</b>	Respond to Service Requests and investigate in line with Council procedures and policies.
<b>Description</b>	We will respond to all Service Requests received in relation to flooding in accordance with Council procedures and policies. We will record our responses on the appropriate internal systems.
<b>Benefit(s)</b>	Responding to Service Requests and investigating in line with Council procedures and policies ensures that we are responsive to the needs and concerns of our community. This not only enhances the effectiveness of our flood risk management efforts but also builds trust and strengthens our relationship with the community.
<b>Target timescale</b>	Short-Term (post incident) and recurring Emergency Request – 2-hr response time Councillor Request – 10-day response time Routine Service Request – 20-day response time
<b>Critical dependencies (for delivery)</b>	None
<b>Cost</b>	Varies; typically, £100 per incident
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Response, Recovery and Review
<b>Link to Other Council Plans</b>	None
<b>How we measure progress</b>	CCBC will track the number of Service Requests responded to and investigated.

<b>A72</b>	
Action #	
<b>Action</b>	Maintain and record flooding incidents on relevant asset management systems.
<b>Description</b>	Where flooding incidents are reported to us, we shall ensure that these are recorded on our asset management and geographical information system (GIS) tools.
<b>Benefit(s)</b>	Maintaining and recording flooding incidents on relevant asset management systems ensures that we have a comprehensive and up-to-date record of all flooding incidents. Through maintenance of this record, we can establish flooding history and trends that can help to inform where intervention is required.

	This not only enhances the effectiveness of our flood risk management efforts but also supports our commitment to evidence-based decision making.
<b>Target timescale</b>	Short Term (post incident) and recurring
<b>Critical dependencies (for delivery)</b>	Upgrade of internal asset management system A71 A70 A69
<b>Cost</b>	Initial set-up costs £140,000 Ongoing maintenance costs £10,000 per annum
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Review
<b>Link to Other Council Plans</b>	Highways Asset Management Plan
<b>How we measure progress</b>	CCBC will track the number of flooding incidents recorded within asset management systems.

<b>Action #</b>	
	<b>A73</b>
<b>Action</b>	Record and maintain a register of all appropriate structures/assets on watercourses so that ownership and responsibility can be identified in the event when flooding occurs.
<b>Description</b>	We will keep as up to date a record as possible of structures, such as weirs, sluices, etc on watercourses.
<b>Benefit(s)</b>	Recording and maintaining a register of all appropriate structures/assets on watercourses so that ownership and responsibility can be identified in the event when flooding occurs ensures that we are prepared to respond effectively to flood events. This not only enhances the effectiveness of our flood risk management efforts but also supports our commitment to regulatory compliance. Supports the provision of updates to national mapping tools.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	Upgrade of internal asset management system
<b>Cost</b>	Initial set-up costs £140,000 Ongoing maintenance costs £10,000 per annum
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant

<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention and Review
<b>Link to Other Council Plans</b>	Highways Asset Management Plan
<b>How we measure progress</b>	CCBC will record the number of structures/assets on watercourses and maintain a register identifying ownership and responsibility.

<b>Action #</b>	<b>A74</b>
<b>Action</b>	Record and maintain data relating to Flood Asset (T98) inspections onto Asset Register.
<b>Description</b>	We will ensure that inspections are carried out on critical flood risk assets in accordance with the Environment Agency's Flood Asset Visual Inspection (T98) protocol by inspectors who have the appropriate accreditation. We will record the findings of these asset inspections and ensure that any maintenance works or recommendations from the inspections are carried out.
<b>Benefit(s)</b>	Carrying out Flood Asset inspections (T98 inspections) and recording and maintaining data onto Asset Register ensures that we have a comprehensive and up-to-date understanding of the condition of our flood risk management assets. This not only enhances the effectiveness of our asset management efforts but also supports our commitment to regulatory compliance.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	A22 A23 A73
<b>Cost</b>	£10,000 per annum
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Grant
<b>Delivery partner(s) / option(s)</b>	None
<b>Type(s) of flood management</b>	Prevention and Review
<b>Link to Other Council Plans</b>	None
<b>How we measure progress</b>	CCBC will record the number of T98 inspections conducted and the data recorded in the Asset Register.

<b>A75</b>	
Action #	
<b>Action</b>	Provide updates to the National Flood Asset Database (NAD).
<b>Description</b>	<p>The NAD provides a comprehensive, publicly accessible resource showing the locations, ownership and maintenance responsibility for flood infrastructure in Wales.</p> <p>We will provide updated information relating to flood risk assets to Natural Resources Wales (NRW) on a 6-monthly basis to enable NRW to update the NAD. This could include details of assets that we own and operate as well as information that we hold in relation to private or 3<sup>rd</sup> party owned and maintained assets.</p>
<b>Benefit(s)</b>	Providing updates to the National Asset Database (NAD) ensures that our flood risk management efforts are integrated with broader national flood risk management efforts. This not only enhances the effectiveness of our efforts but also supports our commitment to collaborative flood risk management.
<b>Target timescale</b>	Every 6 months
<b>Critical dependencies (for delivery)</b>	Upgrade of internal asset management systems A74 A73
<b>Cost</b>	Initial set-up costs £140,000 Ongoing maintenance costs £10,000 per annum
<b>Funding option(s)</b>	CCBC Revenue Budget Welsh Government FCERM Revenue Funding
<b>Delivery partner(s) / option(s)</b>	Natural Resources Wales (NRW) as administrators of the NAD
<b>Type(s) of flood management</b>	Prevention, Preparedness and Review
<b>Link to Other Council Plans</b>	Highways Asset Management Plan
<b>How we measure progress</b>	CCBC will monitor the frequency and quality of updates provided to the NAD.

<b>A76</b>	
Action #	
<b>Action</b>	Provide data to the National Underground Asset Register (NUAR).
<b>Description</b>	<p>The NUAR is a UK Government Geospatial Commission led project aimed at providing a single source digital reference for underground pipes and cables.</p> <p>We will regularly update the NUAR team with information relating to our below ground assets, such as pipes or manholes.</p>
<b>Benefit(s)</b>	Providing data to the NUAR ensures that our flood risk management efforts are integrated with and visible to other

	infrastructure asset managers and operators and minimises the risk of accidental damage to our assets This supports our commitment to collaborative asset management.
<b>Target timescale</b>	Ongoing
<b>Critical dependencies (for delivery)</b>	Upgrade of internal asset management systems A74 A73
<b>Indicative Cost</b>	Initial set-up costs £140,000 Ongoing maintenance costs £10,000 per annum
<b>Funding option(s)</b>	CCBC Revenue Budget
<b>Delivery partner(s) / option(s)</b>	NUAR
<b>Type(s) of flood management</b>	Prevention and Review
<b>Link to Other Council Plans</b>	Highways Asset Management Plan
<b>How we measure progress</b>	CCBC will monitor the frequency and quality of data provided to the NUAR.