# Climate Adaptation Plan



Funded by

Somerset Rivers Authority



GLASTONBURY 2024

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### **EXECUTIVE SUMMARY**

The climate emergency poses many threats to Glastonbury. Winters are becoming warmer and wetter, increasing flooding risks. Hotter and drier summers are increasing the risk of droughts, heatwayes and wildfires.

Through collaborative events, residents have identified four key themes for how Glastonbury should adapt to the changing climate:



Planting more trees and plants



Adapting to flooding



Installing green walls and roofs



**Engaging with local planning** 

Adapting to climate change is urgent and essential to reduce the impact on our green spaces, buildings and the daily life of Glastonbury's residents.

#### The resulting plan:

- reflects the priorities of Glastonbury's community.
- · outlines adaptation actions under each key theme.
- gives guidance on taking action.
- highlights the co-benefits of each action, such as improving water quality or health and wellbeing.



Explore this plan to discover the actions you and your community can take to adapt to climate change. Your support and contributions will be vital to ensure we can build a better adapted, resilient and connected future for Glastonbury.

To find out how you can get more involved contact Glastonbury Town Council Melissa Taylor - Climate Emergency & Resilience Officer - climate@glastonbury.gov.uk











### INTRODUCTION

Since October 2023, Glastonbury Town Council, Somerset Wildlife Trust and the local community have been working together to address the following challenge:











#### "How can we help Glastonbury adapt to climate change?"

The impacts of the climate emergency are already

unfolding. Sea levels are rising and flooding, extreme heat, droughts and wildfires are all likely to happen more often in Somerset. Thankfully, there are lots of ways that communities can act together to be better prepared for the changes and build a positive future where people and nature can thrive.

Glastonbury has a long-standing commitment to environmental action and has made strides in reducing carbon emissions and improving green spaces. But with climate change already impacting Glastonbury, there is an urgent need to adapt.

Somerset Wildlife Trust has been raising awareness of adaptation and encouraging communities across the county to develop plans. In a unique collaboration with Glastonbury Town Council and funded by the Somerset Rivers Authority (SRA), we started developing a locally tailored Climate Adaptation Plan for Glastonbury.



Beginning with a Climate Adaptation Training event at Glastonbury Town Hall, the 'Act to Adapt' process has brought together residents, community groups, councillors and Somerset Wildlife Trust's Climate Adaptation team, to:

- Talk about climate change projections for Somerset.
- Discuss the need for adaptation in Glastonbury.
- Co-create a bespoke climate adaptation plan, using the Climate Adaptation Toolkit for communities.

This plan shares the key themes and priority adaptation actions chosen by Glastonbury residents, and offers advice on how to make these actions happen. We have also highlighted the adaptation benefits of each action, and additional 'co-benefits' - such as mitigating climate change or supporting biodiversity - to demonstrate how they will support Glastonbury in becoming better adapted and more resilient to our changing climate.

## **SHAPING GLASTONBURY'S**



### **PLAN**

Following our initial events, we compiled participants' suggested adaptation priorities and actions, and turned these into a Draft Climate Adaptation Plan for Glastonbury. To ensure that the plan better reflects the needs and priorities of Glastonbury, we organised a consultation period to gather feedback on the existing priorities and ideas for new adaptation actions from more residents.











In April 2024, we held two in-person sessions where residents could learn more about climate adaptation, read the draft plan, and help shape the full plan by completing a survey and sharing their ideas. For those unable to attend these events, we also created an online survey and opportunities to provide more detailed feedback by email.



Survey respondents reported which of the adaptation priority areas they felt were most important for Glastonbury. In order from most to least important, these were:

- 1. Adapting to flooding
- 2. Engaging with local planning
- 3. Planting more trees and plants
- 4. Installing green roofs and walls

Respondents also shared ideas for strengthening the plan's adaptation actions. We have incorporated as much feedback as possible into the actions in this updated plan. Changes proposed during the consultation period include:

- Using recycled and sustainable materials wherever possible.
- Planting the right tree in the right place.
- · Agreeing maintenance plans for adaptations.
- Strengthening groups and relationships related to local planning.
- Replacing bus stops at the end of their life with ones that can support green roofs.

By collecting more ideas and harnessing local knowledge, we have refined the plan to create a positive, grounded vision for how Glastonbury can better adapt to the changing climate. See Appendix I for more information about consultation responses.

However, to ensure this plan stays flexible and best serves Glastonbury, residents should have regular opportunities to suggest additions, changes and improvements. If you have any suggestions for the plan, get in touch at climate@glastonbury.gov.uk.

## 1. PLANTING MORE TREES **AND PLANTS**













### 1.1 - Plant and replant orchards



#### **Adaptation Benefits**

River flooding

Surface water flooding

Heat and drought

#### **Co-Benefits**

Benefits biodiversity

Benefits climate

Improves water quality

Benefits health and wellbeing

Where:	When:	Who:
<ul> <li>Old Orchard near Chilkwell Street/Bere Lane Roundabout</li> <li>Abbey Park</li> <li>The Park on St Edmund's Hill</li> <li>Other Parks</li> </ul>	End of 2025	<ul> <li>Glastonbury Town Council's Climate Officer</li> <li>Town Council's Grounds Person</li> <li>Orchard Site Owners</li> <li>Reimagining the Levels</li> <li>Woodland Trust</li> </ul>

**Identify suitable planting spaces:** Find suitable places to plant more fruit and nut trees around Glastonbury. This could include revitalising or reestablishing existing orchards, such as the one near the roundabout between Chilkwell Street and Bere Lane. Approaching the site's owners (Gould's) to gauge their interest in reestablishing the orchard would be a sensible first step.











**Identify funding/resources for planting new trees:** Funding could come from the Town Council, through Somerset Council's Tree Officer, or through grants (see "Useful links")

**Choose suitable tree varieties:** Choose species and varieties that are better adapted and more resilient to our changing climate. Aim to choose a selection of species, to support a wider range of birds, insects and other wild species.

**Organise planting days:** After ordering the trees, ensure you have all the equipment and resources necessary to plant them. Schedule planting days over autumn/winter to give the trees the best chance to establish. Arrange staff/contractors to plant trees, or make this a community event, encouraging residents to get involved with the planting.

**Develop a maintenance plan:** For advice on monitoring and maintaining orchards, see "Useful links". Ensure the maintenance and management plan is communicated to any staff, contractors or volunteers responsible for these tasks.







#### <u>Useful links:</u>

- 1. Free Trees for Schools and Communities Woodland Trust
- 2. Orchard grants People's Trust for Endangered Species
- 3. What does a resilient orchard look like? The Orchard Project
- 4. Orchard practical guides People's Trust for Endangered Species
- 5. Guides and advice The Orchard Project

## 1.2 - Add more trees and planters to streets















#### **Adaptation Benefits**

Surface water flooding

Heat and drought

#### **Co-Benefits**

Benefits biodiversity

Benefits climate

Improves water quality

Benefits health and wellbeing

Where:	When:	Who:
<ul> <li>Beckery Old Road</li> <li>New Roads by Morland Industrial Estate</li> <li>Grass Verges on Northload Street</li> <li>High Street - Planters</li> <li>Benedict Street</li> </ul>	2024 - 2026	<ul> <li>Glastonbury Town Council</li> <li>Climate Officer</li> <li>Glastonbury In Bloom</li> <li>Grounds Person</li> <li>Somerset Council, Tree Officers</li> <li>Reimagining the Levels</li> <li>Community Volunteers</li> </ul>

Consult with residents: Talk to residents living near identified locations to canvass support for planters and trees. Explain the benefits and consult on the designs, to ensure they have support from the community. Focus on which materials to use for planters/containers to best complement Glastonbury's character.





Identify funding and resources needed: The Town Council and Reimagining the Levels have been suggested as potential funding sources. The Urban Tree Challenge Fund is also being explored. See "Useful links" for other funding opportunities.



Choose suitable varieties: For plants, consider choosing drought-tolerant varieties, to withstand our projected hotter, drier summers. For trees, choose species based on the advice "right tree, right place". Consider varieties for their size, their resilience to our changing climate and how well they support wildlife. Also consider including fruit trees, to provide food as an extra benefit. Consider how trees and planters can fit into the streetscape, and ensure accessibility for pedestrians is not compromised.





Consider requirements for street trees: Investigate using "tree pits" to enable planting whilst minimising impacts on other infrastructure (see "Useful links").

Organise planting: Arrange planting days at suitable times of the year, encouraging the community to get involved.

**Develop a maintenance plan:** For advice on monitoring and maintenance see "Useful links". Ensure the maintenance and management plan is communicated to any staff, contractors or volunteers responsible for these tasks.







- 1. Free Trees for Schools and Communities Woodland Trust
- 2. UK Community Tree Planting International Tree Foundation
- 3. <u>Drought-resistant plants RHS Gardening</u>
- 4. The right tree for your street Trees for Streets
- 5. A Guide to Successful Urban Tree Pit Design GreenBlue Urban
- 6. A guide to planting street trees City of Trees
- 7. Managing and caring for trees Tree Council
- 8. <u>Guide to Young Tree Establishment Arboricultural Association</u>

## 1.3 - Increase tree planting in parks and green spaces













#### **Adaptation Benefits**

niver flooding

Surface water flooding

Meat and drought

#### **Co-Benefits**

Benefits biodiversity

Benefits climate

Improves water quality

Benefits health and wellbeing

Where:	When:	Who:
<ul> <li>Northover Jubilee Park</li> <li>Paradise Road Green Space</li> <li>Windmill Hill Play Area</li> <li>Wirrall Park</li> <li>Herbie's Field</li> </ul>	2024 - 2030	<ul> <li>Glastonbury Town Council</li> <li>Climate Officer</li> <li>Grounds Person</li> <li>Somerset Council, Tree Officers</li> <li>Glastonbury Conservation Society</li> <li>Reimagining the Levels</li> <li>Community Volunteers</li> <li>Woodland Trust</li> </ul>

**Consult with residents:** Talk to residents and other green space users about planting more trees. Explain the benefits, and consult on where trees could be planted, and what species should be chosen.



Identify funding and resources needed: As suggested in action 1.2.



**Choose suitable varieties:** When selecting trees, choose (a range of) species based on the advice "right tree, right place". Consider varieties for their resilience to our changing climate and how well they support wildlife, with a focus on using native species wherever possible. Also consider including fruit trees, to provide food as an extra benefit to the community.



**Organise planting:** Arrange planting days at suitable times of the year (autumn/winter), encouraging the community to get involved. This could be done in collaboration with the Glastonbury Conservation Society.



**Develop a maintenance plan:** For advice on monitoring and maintenance see "Useful links". Ensure the maintenance and management plan is communicated to any staff, contractors or volunteers responsible for these tasks.

**Protect and maintain existing trees:** Existing trees will likely provide the greatest benefits to the community and wildlife whilst new trees are established. Ensure these trees are protected for the future, and are included in the maintenance and management plan.







- 1. Free Trees for Schools and Communities Woodland Trust
- 2. UK Community Tree Planting International Tree Foundation
- 3. Tree Planting Advice Plant Trees Woodland Trust
- 4. Managing and caring for trees Tree Council
- 5. Guide to Young Tree Establishment Arboricultural Association

## 1.4 - Plant trees in car parks





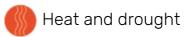








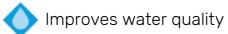




#### **Co-Benefits**

Benefits biodiversity





Benefits health and wellbeing

Where:	When:	Who:
<ul> <li>Tesco, Aldi and surrounding Car Parks</li> <li>St Dunstan's Car Park</li> <li>Premier Inn Car Park</li> <li>Other public Car Parks, where space allows</li> </ul>	2024 - Ongoing	<ul> <li>Climate Officer</li> <li>Council Parks' Officers/Contractors</li> <li>Tesco</li> <li>Aldi</li> <li>Premier Inn</li> </ul>

**Liaise with car park owners:** Approach local supermarkets and the Premier Inn to arrange meetings to discuss incorporating (more) trees into their car parks. Ask if they are interested and willing to fund the installation and maintenance. See pages 38 and 128 of the following document for case study examples: <u>Trees in Hard Landscapes: A Guide for Delivery - Trees and Design Action Group</u>











**Review opportunities to plant trees in other public car parks:** The Town Council could consider resolving to add new trees in car parks when they undergo resurfacing or maintenance works.

**Seek to plant trees in the ground:** Where space allows, and the planting is well planned, this can increase the lifespan and resilience of the tree and reduce maintenance requirements. Where planting in the ground is not feasible, investigate using tree planters.

Choose the right tree for the right place: Look for species that are better adapted to our changing climate, with a focus on native species whenever possible. To avoid issues from honeydew, choose tree varieties that are resistant to aphid attack, and investigate methods of encouraging aphid predators as a further mitigation method.

**Develop a maintenance plan:** For advice on monitoring and maintenance see "Useful links". Ensure the maintenance and management plan is communicated to any staff or contractors responsible for these tasks.







- 1. Managing and caring for trees Tree Council
- 2. Guide to Young Tree Establishment Arboricultural Association

## 1.5 - Increase tree planting in school grounds



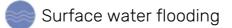


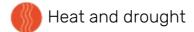












#### **Co-Benefits**

Benefits biodiversity





Benefits health and wellbeing

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Where:	When:	Who:
<ul> <li>Millfield Preparatory</li> <li>St Dunstan's</li> <li>St Benedict's</li> <li>St John's</li> </ul>	2024 - 2030	<ul> <li>Climate Officer</li> <li>Schools</li> <li>SWT's Wilder Communities Officer</li> <li>Woodland Trust</li> </ul>

**Contact local schools:** Ask about their interest in planting trees on their grounds. Mention the multiple benefits trees can provide, from climate adaptation to habitat provision and benefits to health and wellbeing.



**Investigate relevant funding opportunities:** An example is the <u>Woodland Trust's</u> "Free Trees for Schools" scheme.



Plan the necessary resources and planting days: Order trees that are suitable for each school's grounds and the climate, and aim to plant a variety of species (including fruit trees). Order other necessary equipment, and then work with the schools to organise planting days, involving the school community in this action. Choose dates in autumn/winter to give trees the best chance to establish.



**Develop a maintenance plan:** Work with the schools to come up with a plan for looking after their new trees. This could include encouraging students to set up groups that take responsibility for aftercare whilst the trees are established.



**Protect and maintain existing trees:** Existing trees will likely provide the greatest benefits to the community and wildlife whilst new trees are established. Ensure these trees are protected for the future, and are included in the maintenance and management plan.







- 1. Managing and caring for trees Tree Council
- 2. Guide to Young Tree Establishment Arboricultural Association

## 2. ADAPTING TO FLOODING

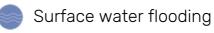


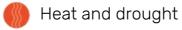
## 2.1 - Install water butts in residential areas





#### **Adaptation Benefits**











#### **Co-Benefits**

Improves water quality

Where:	When:	Who:
<ul> <li>Sharpham Road Estate</li> <li>Manor House Road</li> <li>Northload Street</li> <li>Pound Close</li> <li>Paradise Road</li> <li>Helyar Close</li> <li>Palmers Road</li> <li>Housing West of Wirral Park</li> <li>Housing North of Bretenoux Road</li> <li>Kingsfield Estate</li> </ul>	End of 2025	<ul> <li>Climate Officer</li> <li>Wessex Water</li> <li>Suppliers of Water Butts (i.e. B&amp;Q, Proper Job)</li> <li>Volunteer Network</li> <li>Men's/Women's Shed Groups</li> </ul>

#### Why:

Water butts lower risks of flooding by collecting rainwater from roofs so that less water flows into the drainage system during weather events. With many households using water butts, large volumes of water can be stored.



## 1(1)







#### How:

**Contact potential funders/suppliers of water butts:** Examples include Wessex Water, B&Q or Proper Job.

**Discuss offering free or subsidised water butts:** These could be bought by the Town Council or community groups, in a bulk purchase, and distributed in the identified areas with delivery and installation support for those that need it. Consider if additional funding is needed to buy water butts. Look to buy water butts made from recycled or sustainable materials to reduce their environmental impact.

**Send information to residents:** Compile information on the benefits of water butts and how to install them. See "Useful links" for installation advice. Send information to residents in identified locations, and create a sign-up form for those interested in receiving a water butt, to work out how many are required. Encourage those with an existing water butt to connect a second (or third!) to increase their water capture and storage capacity. For further information on Somerset flooding, the Somerset Rivers Authority have provided details here.

**Arrange installation support:** Work with local volunteer groups, like Men's/Women's Sheds or the Repair Cafe, to offer help to residents with installing water butts. Consider opportunities to make 'leaky' water butts, which slowly release excess water and help to maintain some storage capacity during dry periods. Leaky water butts could be linked to ponds and rain gardens (see action 2.3).







- 1. How to install a water butt B&Q Outdoor & Garden
- 2. Retrofitting a water butt for storm water attenuation Slow The Flow
- 3. Useful Information about Somerset Flooding Somerset Rivers Authority

## 2.2 - Install water butts on suitable public buildings

















#### **Adaptation Benefits**

Surface water flooding

Heat and drought

#### **Co-Benefits**

Improves water quality

Where:	When:	Who:
<ul> <li>Suitable Council-owned Properties</li> <li>Town Hall</li> <li>Libraries</li> <li>St. Dunstan's House Garden</li> <li>Glastonbury Town Council-owned Allotments</li> <li>St. Edmund's Ward Community Hall</li> </ul>	End of 2025	<ul> <li>Climate Officer</li> <li>Suitable suppliers who may be able to provide cheap/free Water Butt(s) for this project;</li> <li>Wessex Water</li> <li>B&amp;Q</li> <li>Proper Job</li> </ul>

**Identify suitable locations:** Identify Council and public-owned properties that would be suitable places to install a water butt. Aim to include water butts on as many public buildings as possible.

1(1)

**Contact building owners and managers:** Share information about the benefits of water butts and how to install them. Where buildings have an existing water butt, encourage them to connect a second (or third!) to increase water capture and storage capacity. See "Useful links" for installation advice.



**Bulk purchase water butts:** if funding/support allows. Look to buy water butts made from recycled or sustainable materials to reduce their environmental impact. Organise dates for delivery and installation support. Coordinate buying the water butts at the same time as those for residents (see action 2.1).



**Coordinate installation support:** Work with the Council's grounds team and/or local volunteer groups, like Men's/Women's Sheds or the Repair Cafe, to offer help with installing water butts. Consider opportunities to make 'leaky' water butts, which slowly release excess water and help to maintain some storage capacity during dry periods. Leaky water butts could be linked to ponds and rain gardens (see action 2.3).



**Encourage the use of stored water:** Remind building occupants/owners to use the water in gardens at the property. Ask the Council Grounds team/contractors to use these sources for watering public planted areas, such as trees and planters (see action 1.2).







#### <u>Useful links:</u>

- 1. How to install a water butt | Outdoor & Garden B&Q
- 2. Retrofitting a water butt for storm water attenuation | Slow The Flow
- 3. <u>Useful Information about Somerset Flooding Somerset Rivers Authority</u>

## 2.3 - Encourage residents to create rain gardens and ponds













#### **Adaptation Benefits**

River flooding

Surface water flooding

Wildfire

🦔 Heat and drought

#### **Co-Benefits**

Benefits biodiversity

Benefits climate

Improves water quality

Benefits health and wellbeing

Where:	When:	Who:
Glastonbury-wide	2024 - 2030	<ul> <li>Climate Officer</li> <li>SWT Wilder Communities         Officer</li> <li>Local Volunteers</li> </ul>

#### Why:

Rain gardens and ponds act as Nature-Based Solutions (NBS) to reduce flooding risks by collecting and storing rainwater during weather events, therefore reducing the volume of water entering the drainage system.











#### How:

**Develop information material and advice:** Create posters, leaflets, social media posts and blogs (etc.) to share information about how residents can create ponds or rain gardens on their properties, how to maintain them, and describe the many benefits this can bring. For further information on Somerset flooding, the Somerset Rivers Authority have provided details <a href="here">here</a>.

**Coordinate installation/creation support:** Meet with local gardening, community action and volunteering groups to discuss offering support to residents to help create rain gardens and ponds in gardens. Encourage residents to support each other in creating ponds and rain gardens, and to share any expertise they have.







- 1. The UK Rain Gardens Guide: managing water in our towns and cities
- 2. drainage Susdrain
- 3. How to build a pond The Wildlife Trusts
- 4. Pond Creation Toolkit Freshwater Habitats Trust
- 5. <u>Useful Information about Somerset Flooding Rivers Authority</u>

## 2.4 - Create and enlarge ponds at Bride's Mound















Surface water flooding

Wildfire

Heat and drought

#### **Co-Benefits**

Benefits biodiversity

Benefits climate

Improves water quality

> Benefits health and wellbeing

Where:	When:	Who:
Bride's Mound	2024 - 2025	<ul> <li>Friends of Bride's Mound</li> <li>Town Deal Board</li> <li>Somerset Wildlife Trust</li> </ul>

**Plan a pond at Bride's Mound:** Organise a meeting with Friends of Bride's Mound and other stakeholders to discuss enlarging the existing pond on site, and/or creating additional ponds. Review advice on pond creation and maintenance and develop a plan to implement. For further information on Somerset flooding, the Somerset Rivers Authority have provided details <a href="hee-time-hee-time











**Organise the pond creation:** Discuss whether the work can be undertaken by volunteers, or if contractors will be needed. If contractors are required, discuss how the work will be funded. Agree on dates for the pond creation to occur, and ensure aftercare and maintenance have been agreed upon and planned.

**Create an interpretation panel:** To increase local engagement and understanding, investigate creating an interpretation panel to highlight the benefits the pond(s) bring for wildlife, climate adaptation, health and wellbeing and more. Consider design and funding needs for the panel, and plan an installation date, to be completed by volunteers.







- 1. How to build a pond The Wildlife Trusts
- 2. Pond Creation Toolkit Freshwater Habitats Trust
- 3. <u>Useful Information about Somerset Flooding Somerset Rivers Authority</u>

## 2.5 - Build rain gardens and ponds in parks and green spaces















Surface water flooding

Wildfire

🦣 Heat and drought

#### **Co-Benefits**

Benefits biodiversity

Benefits climate

Improves water quality

OBenefits health and wellbeing

Where:	When:	Who:
<ul> <li>Parks and green spaces</li> <li>Edges of Wirrall Park</li> <li>St Dunstan's School fields</li> <li>Areas around Glastonbury Abbey</li> </ul>	2024 - 2028	<ul> <li>Climate Officer</li> <li>Owners/Managers of Wirrall Park</li> <li>Users of Wirrall Park</li> <li>SWT's Wilder Communities officer</li> <li>St Dunstan's School</li> <li>Glastonbury Abbey</li> </ul>

**Identify suitable locations for rain gardens or ponds:** Work with stakeholders of green spaces (including residents, space users and clubs like the Cricket Club) to identify areas that would be suitable for rain gardens or ponds.



Glastonbury Town Council to consider opportunities to deliver rain gardens and ponds through potential asset transfer of appropriate parks and green spaces from Somerset Council.



**Identify funding sources:** Consider how to fund any planned rain gardens or ponds. Funds could come from the Town Council, from interested stakeholders, or by applying to grant schemes, such as those run by The National Lottery or Wessex Water. If grants are required, create and submit a funding application detailing the works, the adaptation and other benefits it could provide.



**Contract design work and construction work:** Approach landscape architects about designing and carrying out the necessary work for rain garden/pond creation. Organise a tender process if required. Ensure local stakeholders' opinions are reflected in the design process.



**Plan for maintenance:** Review information on rain garden and pond maintenance (see "Useful links"), and advise green space managers to follow this guidance to ensure rain gardens and ponds are well looked after and performing at their best.







#### <u>Useful links:</u>

- 1. Funding The National Lottery Community Fund
- 2. The Environment Fund Wessex Water
- 3. Pond Creation Toolkit Freshwater Habitats Trust
- 4. The UK Rain Gardens Guide: managing water in our towns and cities

# 2.6 - Replace public paved surfaces with permeable alternatives













#### **Adaptation Benefits**

R

River flooding

Surface water flooding

#### **Co-Benefits**



Improves water quality

Where:	When:	Who:
Glastonbury-wide	Ongoing - 2050	<ul> <li>Town Council</li> <li>Climate Officer</li> <li>Permeable Paving Experts and Contractors</li> </ul>

#### Why:

Permeable pavement enhances water infiltration into the underlying soil, therefore reducing surface runoff and the risk of flooding.











#### How:

**Develop a plan for replacing paved surfaces:** Create a plan that outlines the key details involved in replacing impermeable paving with permeable surfaces. This plan might:

- Plot out 'lifetimes' of public paved surfaces, like car parks (well-used surfaces likely need replacing every 10 years)
- Include research on suitable contractors who could undertake any resurfacing work
- Include the need to conduct ground testing within any timelines
- Include information about any maintenance required

**Resolve to commit to using permeable surfaces:** Discuss the plan at full Council and make a resolution to commit to replacing surfaces at the end of their 'lifetime' with permeable alternatives. To better understand sustainable drainage systems (SuDS), the Somerset Rivers Authority have provided the <u>design standards</u> for Somerset.

**Communicate the benefits of permeable surfaces:** Share the climate, environmental and wellbeing benefits of gardens, green spaces and permeable surfaces with residents. Encourage residents to maintain their gardens or use permeable paving, to avoid paving over front gardens and to remove impermeable paving where possible, to extend these benefits across Glastonbury.







- 1. Pervious surfaces overview Susdrain
- 2. Permeable Pavements Guide: Types, Benefits, Design, Maintenance UrbanWater
- 3. Permeable Paving Pavingexpert
- 4. Somerset Local SuDS Design Standards Somerset Rivers Authority

## 2.7 - Recommend permeable paving around business parks















Surface water flooding

Heat and drought

#### **Co-Benefits**

Improves water quality

Where:	When:	Who:
<ul> <li>Wells Road Industrial Estate</li> <li>Industrial Estates around Dyehouse Lane</li> <li>Adlam Central Park</li> <li>Business parks around Morland Road</li> </ul>	Meet with stakeholders by 2026  Resurfacing ongoing to 2050	<ul> <li>Climate Officer</li> <li>Owners/Managers of Industrial Estates and Business Parks</li> <li>Lost Projects</li> <li>Permeable Paving Experts and Contractors</li> </ul>

**Develop information materials about permeable paving:** Compile information about permeable paving options and their benefits to share with owners and managers of industrial estates and business parks. Include any information about efforts the Council has taken to use permeable paving in resurfacing projects. To better understand sustainable drainage systems (SuDS), the Somerset Rivers Authority have provided the <u>design standards</u> for Somerset.

**Organise a meeting with managers/owners of industrial estates and business parks:** Discuss climate risks to properties and tenants' businesses on industrial estates and business parks, and any potential impact on surrounding locations. Discuss actions they could take to adapt and increase resilience, such as installing permeable paving following the end of the current surface 'lifetime'.

















- 1. Pervious surfaces overview susdrain
- 2. Permeable Pavements Guide: Types, Benefits, Design, Maintenance UrbanWater
- 3. Permeable Paving Pavingexpert
- 4. Somerset Local SuDS Design Standards Somerset Rivers Authority

# 2.8 - Encourage rainwater harvesting around business parks





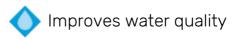








#### **Co-Benefits**



Heat and drought

**Adaptation Benefits** 

Where:	When:	Who:
<ul> <li>Wells Road         <ul> <li>Industrial Estates</li> <li>Industrial Estates</li> <li>around Dyehouse</li> <li>Lane</li> </ul> </li> <li>Adlam Central Park</li> <li>Business parks         <ul> <li>around Morland</li> <li>Road</li> </ul> </li> </ul>	Meet with stakeholders by 2026  Installation ongoing to 2050	<ul> <li>Climate Officer</li> <li>Owners/Managers of Industrial Estates and Business Parks</li> <li>Rainwater Harvesting System Experts and Contractors</li> </ul>

#### Why:

Rainwater that is collected and stored will reduce the volume of water entering drainage systems during weather events, therefore reducing the risk of flooding.











#### How:

**Develop information materials about rainwater harvesting systems:** In tandem with action 2.7, compile information about rainwater harvesting and reuse systems and their benefits to share with owners and managers of industrial estates and business parks. Many of these are based on underground storage tanks, but consider researching above-ground solutions as a temporary or more achievable solution.

**Organise a meeting with managers/owners of industrial estates and business parks:** In tandem with action 2.7, discuss how rainwater harvesting and reuse systems could make industrial estates and business parks better adapted and more resilient to the impacts of climate change, and raise their other benefits. Consider inviting rainwater harvest system experts to give a presentation at this meeting, outlining the technical details and the business case for companies thinking about installing such systems. Encourage interested companies to look for grants or other opportunities to lower the costs of installing a system.

**Synchronise works:** Encourage interested businesses to look for opportunities to synchronise the installation of rainwater harvesting systems with any other work required on-site (such as resurfacing or construction). This could help limit disturbance, find cost efficiencies, and reduce environmental impact.

**Encourage businesses to find uses for stored water:** Develop material on how stored water could be used, such as for toilet systems, for watering plants on site or for collection to water trees, planters and flower beds around the town, etc.







#### <u>Useful links:</u>

- 1. <u>Large Scale & Commercial Rainwater Harvesting The Renewable Energy Hub UK</u>
- 2. <u>Useful Information about Somerset Flooding Somerset Rivers Authority</u>

## 3. INSTALLING GREEN **ROOFS AND WALLS**

### 3.1 - Install green roofs on bus shelters





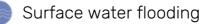












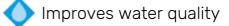


Heat and drought

#### **Co-Benefits**

Benefits biodiversity





Benefits health and wellbeing

Where:	When:	Who:
<ul> <li>Magdalene Steet X 2</li> <li>Top of High street X 2</li> <li>Wells Road &amp;</li></ul>	From 2025 onwards	<ul> <li>SWT Wilder Communities Officer, Wildlife Corridor Project</li> <li>Climate Officer</li> <li>Town Council</li> <li>Wessex Water</li> <li>Clear Channel</li> </ul>

**Learning from others:** Research existing green bus shelter projects in Leicester, Derby, Newcastle, Sunderland, Oxford, and Glasgow. Review their plant selections, design features, and maintenance practices to identify successful strategies suited to Glastonbury's climate. Consider their approaches to long-term maintenance and structural integrity.





2





**Identify bus shelters:** Identify bus shelters nearing the end of their working life that would be suitable for replacement with new structures incorporating integrated green roof systems. Communicate this replacement strategy clearly to the community.

**Choose a green roof system:** Explore modular green roof systems designed for ease of installation and maintenance on bus shelters. Consider drought-resistant plants to address community concerns about watering.

**Planting and maintenance:** Select low-maintenance, native wildflowers or sedum varieties. Develop a clear, long-term maintenance plan addressing watering, plant replacement, and structural checks. Communicate the maintenance plan to the community and consider involving community groups or local companies in maintenance to promote buy-in and ownership.

**Policy change:** Create a policy to replace unsuitable bus stops with green-roofed versions at the end of their lifespan. Ensure the policy includes provisions for ongoing maintenance responsibilities and associated costs.







- 1. Bee-friendly bus shelters coming to Derby Derby City Council
- 2. New living roofs are causing a buzz Sunderland City Council
- 3. Bee-friendly bus shelter helps Newcastle go green
- 4. RHS Green roof advice
- 5. Best plants for a green roof: 9 options to try Homes & Gardens
- 6. Clear Channel Living roofs project
- 7. Bee Bus Stops: The Pioneering UK Initiative for Sustainable Urban Green Spaces
- 8. M-Tray® Modular Green Roofs Wallbarn
- 9. Living Roof Bus Shelters Euroshel

## 3.2 - Build green roofs on suitable council buildings













#### **Adaptation Benefits**

- 🤰 River flooding
- Surface water flooding
- Wildfire
- Heat and drought

#### **Co-Benefits**

- Benefits biodiversity
- Benefits climate
  - Improves water quality
  - >> Benefits health and wellbeing

Where:	When:	Who:
<ul> <li>Toilet Block in St. Dunstan's carpark</li> <li>Police Hub and Burns The Bread in St. Dunstan's Car Park</li> <li>Magdalene Street Toilets</li> <li>Honeybees playgroup</li> <li>Somerset Rural Life Museum</li> <li>Beckery Resource Centre</li> <li>Glastonbury Library</li> <li>Registrars office</li> <li>Family centre</li> <li>Adult day centre</li> </ul>	2024 - 2028	<ul> <li>SWT Wilder Communities Officer, Wildlife Corridor Project</li> <li>Climate Officer</li> <li>Town Council</li> <li>Wessex Water</li> <li>SRA</li> <li>Somerset Council</li> </ul>

**Evaluate the suitability of Town Council buildings for green roofs:** Assess the structural integrity, location, and local climate considerations. Ensure the roof can support the additional weight of the green roof system. Check local planning regulations. Keep in mind consultation concerns about maintenance requirements, especially during droughts.





2 %





**Research suitable plant, substrate, irrigation, waterproofing and drainage needed:** Choose native or adapted plant species that thrive in the local climate. Select appropriate growing medium, waterproofing, and drainage layers. Consider consultation feedback on the need for hardy, drought-resistant plants and the challenges of creating a low-maintenance system.

**Hire experienced contractors specialising in green roofing:** Ensure contractors have specific experience in green roof installation. Consider installing an irrigation system if needed, addressing community concerns about watering requirements.

**Develop a long-term maintenance plan:** Include irrigation, weeding, and periodic inspections. Address consultation concerns by clearly outlining responsibilities and budgeting for ongoing maintenance tasks. Communicate plans for widespread adoption of green roofs across Glastonbury to highlight cumulative benefits, addressing perceptions of minimal impact raised during the consultation period.

- 1. Royal Horticulture Society Green roof advice
- 2. <u>Homes & Gardens Best plants for a green roof</u>
- 3. <u>BritishFlora Biodiverse green roof information</u>
- 4. <u>Buglife: The Invertebrate Conservation Trust Creating Green Roofs for Invertebrates</u>
- 5. <u>The Green Roof Organisation Guidance for designing, specifying, installing and maintaining a green roof</u>
- 6. ICB Projects Modular Green Roof Systems
- 7. The Renewable Energy Hub UK Green Roof planning permission and insurance
- 8. <u>Deko Garden supplies Planning permission for a green roofs</u>
- 9. Roofers insights Installing Green Roofs: A Step-by-Step Guide
- 10. Big home Projects Drainage Layer in a Green Roof: 5 Essential Aspects
- 11. <u>Bauder Maintenance guides and services</u>
- 12. Pritchard & Pritchard Green roof maintenance and services
- 13. Permagard Green Roof Maintenance
- 14. <u>Green Roofers Green Roof professionals</u>
- 15. Somerset Council Climate and Ecological Emergency Built environment guidance

## 3.3 - Build green roofs on schools













Wildfire

Heat and drought

**Adaptation Benefits** 

#### **Co-Benefits**

Benefits biodiversity

Benefits climate

Improves water quality

A CONTRACTOR	

Where:	When:	Who:
<ul> <li>Tor School</li> <li>St Benedict's Junior School</li> <li>St John's Infants' School</li> <li>St Dunstan's School</li> </ul>	2024 - 2028	<ul> <li>Schools</li> <li>The Green Roof Project</li> <li>SWT Wilder Communities     Officer, Wildlife Corridor     Project</li> <li>Climate Officer</li> <li>Town Council</li> <li>Wessex Water</li> <li>SRA</li> </ul>

Steps as above for "Green roofs for town council buildings"



**Create a partnership with schools:** Create partnerships to share information, best practice and funding sources for green roof installation and maintenance on their sites.















- 1. <u>Living roofs Benefits of living roofs on schools</u>
- 2. Greenroofs.com Sharrow Primary School case study
- 3. Bristol City Council Barton Hill School case study
- 4. University of Sheffield Green Roof Centre
- 5. <u>Living Architecture Monitor What the Children Have To Say About Their School</u> Green Roof Classroom
- 6. Grow NYC Guide to Green Roofs on Existing School Buildings
- 7. <u>Environmental and Energy Study Institute Laying the Groundwork for a Better, Cleaner Public School System with Green Roofs</u>
- 8. The Conversation UK government pledges £1 billion to rebuild schools here's why they need to be sustainable
- 9. <u>Government website Condition Improvement Fund 2024-25 Information for applicants</u>

# 3.4 - Support a green roof for the Scout Hut

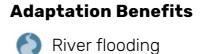


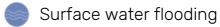












Wildfire

Heat and drought

#### **Co-Benefits**

Benefits biodiversity



lmproves water quality

	4	5	84
N. Desire			

Where:	When:	Who:
Benedict Street	2024 - 2028	<ul> <li>Glastonbury Scout Group</li> <li>The Green Roof Project</li> <li>SWT Wilder Communities     Officer, Wildlife Corridor     project</li> <li>Climate Officer</li> <li>Town Council</li> <li>Wessex Water</li> <li>SRA</li> </ul>

#### Steps as above for "Green roofs for town council buildings"



Create a partnership with the Scouts: Create a partnership to share information, best practice and funding sources for green roof installation and maintenance on their sites. In addition, consider linking in with the ongoing renovation crowd funder.

















- 1. Somerset Scouts Glastonbury Scout Group
- 2. Glastonbury Nub News Warming hearts and halls: Glastonbury's big push to revamp Scout HQ
- 3. Crowdfunder FordHaven CIC Transforming Glastonbury Scout Hall into a vibrant community hub
- 4. Scouts UK Grants and funds for your local group
- 5. Baker-Mill Foundation Scout Group funding

# 3.5 - Install green roofs on Town Deal buildings













#### **Adaptation Benefits**

niver flooding

Surface water flooding

Wildfire

Heat and drought

#### **Co-Benefits**

Benefits biodiversity

A Benefits climate

Nmproves water quality

Where:	When:	Who:
<ul> <li>Bridie's Farm Roundhouses (Green Roofs)</li> <li>Baily's Building</li> <li>Red Brick Building</li> <li>Toilet Blocks</li> <li>Enabling Project (new travellers' sites)</li> </ul>	2024 - 2028	<ul> <li>The Green Roof Project</li> <li>SWT Wilder Communities Officer, Wildlife Corridor Project</li> <li>Climate Officer</li> <li>Town Council</li> <li>Wessex Water</li> <li>SRA</li> <li>Friends of Bride's Mound</li> <li>Beckery Island Regeneration Trust</li> </ul>

Steps as above for "Green roofs for town council buildings"



**Create a partnership with Town Deal project:** Create a partnership to share information, best practice and funding sources for green roof installation and maintenance on their sites.













- 1. Glastonbury Town Deal Introduction
- 2. Glastonbury Town Deal Projects
- 3. Glastonbury Nub News 11 projects that will transform Glastonbury forever
- 4. <u>Somerset County Gazette Baily's Buildings in Glastonbury to undergo major regeneration</u>
- 5. Somerset Council Funding and grants for business
- 6. <u>Somerset Council Support and grants available to help Somerset businesses 'Go Green'</u>

# 3.6 - Install green walls on suitable public buildings and Town Deal buildings













#### **Adaptation Benefits**

Surface water flooding

Wildfire

Heat and drought

#### **Co-Benefits**

Benefits biodiversity

Benefits climate

Where:	When:	Who:
<ul> <li>Zig Zag Building</li> <li>Red Brick Building</li> <li>Baily's Building</li> </ul>	2024 - 2028	<ul> <li>SWT Wilder Communities         Officer, Wildlife Corridor         Project</li> <li>Climate Officer</li> <li>Town Council</li> </ul>

**Evaluate the suitability of existing buildings for green walls:** This will depend on factors such as the building's structure, the local climate, and the building's exposure to sunlight. Consult with professionals for expert advice if needed.



**Choose suitable green walls:** The choice of green wall system depends on the specific requirements of the building and its environment (Direct Greening, Indirect Greening, Living Wall Systems).



**Research suitable plant, substrate, irrigation, waterproofing and drainage needed:** Choose suitable plants based on local climate, available light, and maintenance requirements. Select an appropriate substrate for plant growth: The substrate should be specifically designed for green walls, considering factors such as weight and water-holding properties. Research an efficient irrigation systems to keep plants hydrated if needed.





**Develop a long-term plan:** Regular pruning, fertilisation, and pest control are essential for the health and longevity of a green wall. Regularly inspect green walls for plant health, irrigation efficiency, and structural integrity, to identify and address any issues promptly, ensuring the longevity of the green wall.







- 1. Royal Horticultural Society Green walls Information
- 2. Architizer Green wall types
- 3. Exubia Green Walls: The Ultimate Guide
- 4. Gardeners World Plants for a living wall
- 5. Green Shack 13 Plants For A Green Wall
- 6. <u>European Federation of Green Roof & Wall Associations Green Wall</u> advice
- 7. Access Irrigation Green Wall Irrigation Systems
- 8. <u>Better Building Partnerships Maintaining and monitoring green</u> infrastructure
- 9. Oasis Living Green Wall Services
- 10. Fantastic Services Living walls installations
- 11. Green Wall UK Green Wall Services
- 12. Manchester Climate Ready Green Walls case studies
- 13. <u>TUGC Living wall maintenance</u>
- 14. Pritchard & Pritchard Living roof, wall and roof-garden maintenance

# 4. ENGAGING WITH LOCAL PLANNING















#### **Adaptation Benefits**

🧎 River flooding

Surface water flooding

Wildfire

Heat and drought

#### **Co-Benefits**

Benefits biodiversity

Benefits climate

Improves water quality

Where:	When:	Who:
<ul> <li>Bridie's Farm</li> <li>St Bride's Mound</li> <li>Beckery Island</li> </ul>	2024 - 2028	<ul> <li>Wessex Water</li> <li>FWAG SW</li> <li>Crops Not Shops - Growing Food on Urban Sites with People</li> <li>Beckery Island Regeneration Trust</li> <li>Somerset Council</li> </ul>

Assess the specific climate risks that the project area faces: Glastonbury is already experiencing impacts from climate-related hazards such as extreme heat, flooding, and storms. Understanding these and future risks will inform your design decisions.











Incorporate adaptation measures when developing the Town Deal Project: Actively include climate adaptation measures in the plans. Actions like designing structures to withstand extreme weather events, elevating buildings to mitigate flood risks, or incorporating green infrastructure for heat resilience.

Foster interdisciplinary collaboration: Collaboration between planners, architects, engineers, and climate specialists can aid successful adaptation. This can lead to more comprehensive and effective solutions.

Organise workshops: In-person or virtual workshops can facilitate knowledge sharing, idea generation, and alignment on adaptation strategies. These sessions can bring together town planning and adaptation staff to collaborate and learn from each other.

Explore successful examples from other towns: Many towns for example Glasgow have effectively combined adaptation and urban planning. Studying these examples can provide valuable insights and inspiration for your own projects.







- 1. C40 Knowledge Hub Integrating Climate Adaptation: A toolkit for urban planners and adaptation practitioners
- 2. Sniffer Glasgow City Region Case study
- 3. UN A Practical Guide to Climate-resilient Buildings & Communities
- 4. EU Technical Guidance and Best Practice Guidance for adapting buildings to climate change
- 5. Climate Just Adapting buildings guidance

# 4.2 - Form a group for networking on planning issues















#### **Adaptation Benefits**

River flooding

Surface water flooding

🞧 Wildfire

Heat and drought

#### **Co-Benefits**

Benefits biodiversity

Benefits climate

Improves water quality

Where:	When:	Who:
<ul> <li>Hosted on WhatsApp</li> <li>Town Hall</li> </ul>	2024 - 2028	<ul> <li>Glastonbury's Climate         Resilience Group</li> <li>FWAG SW, Water         Management - research         how water flows before         planning is approved</li> <li>Local Community</li> <li>Glastonbury Town Council</li> <li>Rights Community Action</li> </ul>

**Set up a group:** Establish a group with a sole focus to review and comment on planning applications with climate issues in mind. This could be a formal or informal group, depending on needs and resources. This could be linked to or part of the existing Glastonbury Town Council planning committee.



**Set up a WhatsApp group and a regular meeting:** Communication is key for the success of any group. Setting up a WhatsApp group can facilitate quick and easy communication among members. In addition, scheduling regular meetings (either inperson or virtual) can provide a platform for members to discuss issues, plan actions, and share knowledge.



**Provide training on responding to planning applications:** Not everyone may be familiar with the process of responding to planning applications. Providing training sessions can equip group members with the necessary knowledge and skills. These sessions could cover topics like understanding planning applications, effective

strategies for responding and staying updated on relevant laws and regulations.











- 1. <u>Campaign to Protect Rural England How to respond to planning applications: an 8-step guide</u>
- 2. Commons Library Influencing the planning process (England)
- 3. <u>Somerset Council Information requirements for planning applications</u>
- 4. Mendip Local Plan (still applicable until Somerset Council produce one)
- 5. Rights Community Action

## 4.3 - Engage with Somerset's emerging Local Plan





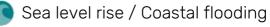


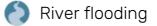


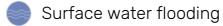












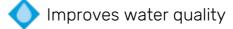


Heat and drought

#### **Co-Benefits**







Where:	When:	Who:
Somerset Council surveys and consultations	2024 - 2028	<ul> <li>Somerset Councillors</li> <li>Somerset Council, Head of Resilience &amp; Adaptation</li> <li>Local MPs</li> <li>Glastonbury Town Council</li> </ul>

Influence Somerset Local Plan: Get involved in the local planning process and advocate for climate adaptation to be well considered, integrated and represented throughout the Local Plan. Attend public meetings, participate in consultations, and provide feedback on proposals. This is key as the Somerset Local Plan will set a framework for future development.











Climate adaptation strategies: Advocate for the inclusion of climate adaptation strategies in the Local Plan. This could involve advocating for sustainable building practices such as natural shading, renewable energy use, Sustainable Drainage Systems (SuDS), Natural Flood Management (NFM) and green spaces. Other existing Local Plans (like Mendip's) with strong climate aspects can serve as a reference point. They include policies and strategies for housing, economic development, and infrastructure.

Reference climate focuses on the current Local Plans: Referencing climate focuses from current Local Plans allows communities to influence emerging local planning policies directly. By highlighting how existing plans prioritise climate change adaptation and mitigation, residents can advocate for even stronger climate provisions in new plans. This gives local plans more legal weight and can demonstrate to Somerset Council that climate adaptation is a top public concern.

Raise concerns with local MP: If there are concerns about the Local Plan, raise them with your local Member of Parliament. MPs can help give a boost to local concerns and can write to ministers in the Department for Levelling Up, Housing & Communities on your behalf.

- 1. Somerset Council Adopted Local Plans
- 2. Somerset Council Local Plan Part 2 Sites and Policies
- 3. Somerset Council Somerset Local Plan
- 4. Somerset Council Local Development Scheme
- 5. Climate Change Committee Spatial planning for climate resilience and Net Zero (CSE & TCPA)
- 6. Local Government Association Sustainable drainage systems
- 7. Government Website Natural flood management programme
- 8. The Flood Hub Natural Flood Management (NFM)
- 9. Post parliament Natural mitigation of flood risk
- 10. Government website Natural flood management programme prospectus
- 11. Government website Guidance on plan-making
- 12. Government website Factsheet: Local Plans
- 13. Planning advisory service Planning for Climate Change
- 14. TCPA The Climate Crisis a guide for local authorities on planning for climate change

# 4.4 - Strengthen the relationship with the local planning office















Surface water flooding

🎧 Wildfire

Heat and drought

#### **Co-Benefits**

Benefits biodiversity



Improves water quality

Where:	When:	Who:
Town Hall     County Hall, Taunton	2024 - 2028	<ul> <li>Glastonbury's Climate         Resilience Group</li> <li>Local planning office</li> </ul>

**Expand on your existing relationship:** Start by reaching out to the planning office and planning officer. Express your interest in pushing forward climate issues and your desire to collaborate on planning decisions.



**Run an event for planning officers:** Organise an event focused on the climate emergency and the role of planning officers. This could be a seminar, workshop, or informal gathering. The goal should be to facilitate discussion, share knowledge, and brainstorm solutions. Use the event as an opportunity to discuss the climate emergency. Talk about its impacts on your local area and the importance of climate adaptation in planning decisions.







**Highlight how they can help:** Planning officers have a crucial role to play in addressing the climate emergency. Discuss how they can incorporate climate considerations into their work, such as by advocating for sustainable building practices, green infrastructure, and climate-resilient urban design.

**Maintain regular communication:** Keep the lines of communication open after the event. Regularly update planning officers on your activities, share relevant news and resources, and invite them to future events.







#### <u>Useful links:</u>

- 1. <u>Advice Services Alliance Building and maintaining relationships with your Local</u>
  Authority
- 2. <u>Maytree Five Good Ideas for building effective relationships between community organizations, governments, and businesses</u>
- 3. Civil Service Collage Building Relations and Asserting Influence in the Civil Service

# 4.5 - Include climate adaptation in the Neighbourhood Plan



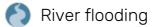












Surface water flooding

🚮 Wildfire

Heat and drought

#### **Co-Benefits**

Benefits biodiversity



Improves water quality

Denefits health and wellbeing

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Where:	When:	Who:
Neighbourhood Plan     Meetings	2024 - 2028	<ul> <li>Town Council</li> <li>Neighbourhood Plan     Committee</li> <li>Planning Response Group</li> <li>The Community</li> </ul>

**Advocate for climate adaptation in the Neighbourhood Plan process:** Attend meetings, provide input online, and engage directly with subgroup members to ensure climate adaptation benefits are thoroughly integrated. Reference local climate projections, impacts, and vulnerability assessments. Cite authoritative guidance on green infrastructure, sustainable design, and planning as adaptation strategies.











#### Integrate climate-adapted design standards for new developments:

Recommend policies requiring SuDS, green roofs, permeable paving, shade structures, and other adaptation measures in new developments. Encourage design standards prioritising energy efficiency and resilience. Compile case studies demonstrating benefits. Consider consultation suggestions for mandating renewable energy, natural building materials, and prohibiting construction in flood-prone areas.

**Maintain your collaborative involvement:** Build partnerships with local environmental groups, academic institutions, and other stakeholders to maximise the integration of adaptation solutions. Consultation responses called for reformed planning rules allowing more sustainable living solutions, such as eco-villages and tiny home communities.







- 1. Glastonbury Neighbour Plan Website
- 2. Glastonbury Town Council Neighbour Plan Focus groups and contact details
- 3. Glastonbury Town Council Climate Emergency & Resilience
- 4. Glastonbury Town Council Glastonbury Neighbourhood Plan: Call for Sites
- 5. Woodland Trust Creating a neighbourhood plan
- 6. Woodland Trust Neighbourhood Planning
- 7. <u>MDPI Climate Change, Adaptation Planning and Institutional Integration: Literature</u>
  Review and Framework
- 8. <u>European Financing Institutions Working Group on Adaptation to Climate Change Integrating Climate Change Information and Adaptation in Project Development</u>

# 4.6 - Reference climate advice from the National Planning Policy Framework into local processes













#### **Adaptation Benefits**

- River flooding
- Surface water flooding
- Wildfire
- Meat and drought

#### **Co-Benefits**

- Benefits biodiversity
- Benefits climate
- Improves water quality
- Benefits health and wellbeing

Where:	When:	Who:
National Planning Policy     Framework	2024 - 2028	<ul><li>Somerset Council</li><li>Town Council</li><li>Neighbourhood Plan Committee</li></ul>

When commenting on planning applications and local and neighbourhood plans, these paragraphs from the National Planning Policy Framework (NPPF) can be used to assess whether the proposed development is in line with national policies on climate change.





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These specific paragraphs can be referenced to highlight the need for adaptation in planning decisions:

**Paragraph 11** states that all plans should improve the environment and mitigate and adapt to climate change. This means that any planning decision should consider its impact on the environment and contribute to climate change mitigation and adaptation.

**Paragraph 20** highlights the need for planning measures to address climate change mitigation and adaptation. This states the need for conservation and enhancement of the natural, built and historic environment, including landscapes and green infrastructure.

**Paragraph 102** emphasises the importance of access to a network of high-quality open spaces in supporting efforts to address climate change. This should protect existing green spaces and create new ones, which can help absorb carbon dioxide, cool urban areas, and provide habitats for wildlife.

**Paragraph 136** recognises the important contribution of trees to the character and quality of urban environments and their role in mitigating and adapting to climate change. It suggests that planning policies and decisions should ensure that new streets are tree-lined, trees are incorporated into developments, and existing trees are retained wherever possible.

**Section 14** is dedicated to meeting the challenges of climate change, flooding, and coastal change. It provides a range of policies that local authorities can use to address these issues, such as promoting renewable and low-carbon energy, managing flood risk, and planning for coastal change.

- 1. Government website National Planning Policy Framework
- 2. Government website National Planning Policy Framework PDF
- 3. <u>Government website National Planning Policy Framework Section 14. Meeting the challenge of climate change, flooding and coastal change</u>
- 4. Government website Planning practice guidance
- 5. Somerset Council Somerset Local Plan
- 6. Somerset Council South Somerset Local Plan 2040 Review
- 7. <u>The Climate Change Committee Advice on draft National Planning Policy</u> Framework

### CONCLUSION

This plan shares the community's priority actions for helping Glastonbury thrive through our changing climate. Some can happen quickly, like planting trees, to give an instant adaption boost. Other actions, such as shaping planning policies, are longer-term projects that will significantly enhance Glastonbury's adaptation and preparedness.

Every action in this plan will also bring many other benefits to Glastonbury. These "co-benefits" include:

- · improving community health and wellbeing
- making space for wildlife
- mitigating climate change

By working on these actions together, you can also strengthen community links, which is vital for making the town well-adapted and resilient.





Glastonbury's Climate Adaptation Plan should be seen as a living document, at the starting point of a wider process. The plan should:

- be reviewed regularly
- be updated as needed
- reflect the changing climate and the changing priorities and needs of Glastonbury's community

By staying flexible, and continuing to listen to Glastonbury's residents, the plan can best guide the community in adapting to climate change.

#### Now it is time to act!

Everyone can play a role in making Glastonbury better adapted. To find out more about how you can get involved in implementing this plan, contact Glastonbury Town Council - climate@glastonbury.gov.uk

## **Acknowledgements**

Thank you to everyone who shared their ideas to create such a positive and ambitious Climate Adaptation Plan for Glastonbury. In addition to the many community members who shaped this plan, we would like to thank Melissa Taylor, Climate Emergency & Resilience Officer, Councillor Indra Donfrancesco and the elected members of Glastonbury Town Council for their work to develop Glastonbury's Climate Adaptation Plan.

If you are concerned about your individual preparedness to emergency events, check out <a href="Somerset Prepared">Somerset Prepared</a> for detailed advice and support.

For future funding, the SRA are launching a grant scheme toward flood action projects - launching in January 2025.



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#### **Disclaimer**

The links provided in this document are intended to serve as information and advice, and do not reflect a recommendation from Somerset Wildlife Trust, or our partners and funders, for particular companies, products or services.

### Consultation responses to tree planting



Strong support emerged for planting diverse fruit and nut trees throughout the community, seen as a multifaceted solution offering free food and wildlife support. A suggestion involved reinstating orchards with an emphasis placed on the variety, of indigenous species, and avoiding monocultures. "Free-to-pick" community fruit trees were particularly popular, addressing food security and poverty. While finding suitable spaces was noted as challenging, enthusiasm for increasing edible landscaping was high, with calls for education on sustainable harvesting.

The community demonstrated a collective desire for increased wooded areas and diverse tree-planting initiatives. Enthusiasm for community woodlands, tree planting events, and sharing resources (e.g., community nurseries) indicates a strong willingness to participate actively in creating greener, more resilient spaces. There is support for increased planting in private gardens and new developments, as well as additional suggestions to encourage volunteer-led maintenance.





Glastonbury emphasised the importance of "right tree, right place," particularly in town centres. Concerns were raised about pavement space, underground infrastructure, and potential root damage to buildings. There were calls for technical advice on selecting appropriate tree sizes and species to avoid blocking views or causing structural issues. While tree planting in urban areas was seen as valuable for shade, the community stressed careful planning and to consider maintenance costs. There were some suggestions for removing traffic to create space on narrow streets like Glastonbury High Street.

Strong support emerged for planting strategies that benefit wildlife, especially birds and insects. Residents advocated for transforming available spaces, including fields and grassy areas, into diverse habitats with trees and water features. There was criticism of excessive mowing practices that hinder wildflower seeding, with specific mention of struggles at Windmill Hill. The community expressed a desire for a more considered approach with calls to convert manicured spaces into wildlife-friendly areas with wildflowers, trees, and fruit trees, emphasising the need for maintenance practices that support biodiversity.





While there was strong support for more trees, concerns were raised about aftercare. Residents emphasised the importance of ensuring that newly planted trees receive proper care to flourish. There were doubts about trees in pots due to high water requirements. Protecting existing trees was highlighted as equally crucial as planting new ones. The community stressed the need for strategic planting, suggesting autumn as the optimal season. Overall, there was a call for a comprehensive approach that considers long-term maintenance alongside initial planting efforts.

### Consultation responses to adapting to flooding



Strong support emerged for rainwater collection, especially from large buildings and industrial units. The community emphasised educating residents and ensuring public buildings have collection points.

Suggestions included underground reservoirs and water storage on industrial sites. There was interest in using harvested water for various purposes, including greywater usage in homes. Overall, the community favoured a multi-faceted approach to rainwater harvesting, coupled with plans for effective usage during dry periods.

Community members advocated for increased adoption of water butts, highlighting their importance in managing extreme weather events and mitigating sewage overflow. While some expressed doubts about the impact of individual water butts, the community emphasised the need for broader, environmentally friendly water management strategies. Calls for sustainable alternatives and addressing large-scale water waste, such as spring runoff, were raised alongside suggestions for council-supported residential solutions. The overall consensus underscored the significance of both individual and collective efforts in developing comprehensive water conservation approaches.





The community stressed the importance of integrating flood mitigation measures in new developments, emphasising the need for the installation of Sustainable Drainage Systems (SuDS), solar panels and water butts in new builds. Implementing rain gardens as part of SuDS has good support. Overall, residents underscored the necessity for balance between existing and future developments to enhance water preservation and overall climate resilience.

There was a preference for solutions that benefit wildlife, such as ponds, over simple water storage. Re-establishing water meadows was suggested as a priority. Significant concern was expressed about agricultural runoff polluting rhynes on the Levels, damaging water quality and wildlife habitats. The community emphasised the importance of cleaner rivers for improved drainage. Overall, there was a strong desire for integrated water management approaches that address pollution, enhance natural habitats, and improve overall ecosystem health, rather than focusing solely on water storage solutions.





Strong support emerged for permeable paving, with calls to make it "the latest and sexy thing to do" and change the cultural zeitgeist around it. Many viewed it as a "tremendous idea" for managing water runoff. There was also emphasis on increasing green areas over concrete surfaces. However, some noted the complexity of implementation, particularly in existing developments. Overall, the community favoured a shift towards more permeable urban surfaces, especially in new developments.

### Consultation responses to green roofs and walls



While recognising the appeal of green roofs on bus stops, during the consultation phase concerns were raised about ongoing maintenance requirements, such as watering during droughts, replacing plants that die, and ensuring the roofs have sufficient structural integrity to support the weight of soil and vegetation over time. When talking to communities it would be good to communicate the long term care plan and clarify that the plan would be to replace bus stops at the end of their working life with the a new bus stop with a integrated green roof systems.

Questions were posed about who would be responsible for this maintenance, the associated costs and budgeting. The long-term viability was questioned, with an acknowledgement that extensive care may be required until the green roofs become fully established over several seasons. When installed, the communication of the long-term care plan will be key. There was a suggestion of community groups or companies taking responsibility for maintaining certain green roofs, such as through buy-in and ownership.





During the consultation phase, questions centred on the high maintenance requirements of green roofs, including watering, which is a particular issue during droughts and until they become established over multiple seasons. Doubts were expressed about whether hardy, drought-resistant plants alone could create a genuinely low-maintenance "plant and forget" system. Recurring themes included determining responsibility and budgeting for vital ongoing maintenance tasks. Making the long-term maintenance plan robust and clear to the community will be vital when undertaking this action.

There was a perceived minimal impact on reducing warmer temperatures, with some viewing green roofs as a tokenistic effort that would be expensive relative to the difference made. So communications centred on the plan for the widespread adoption and integration of green roofs across Glastonbury, therefore having a cumulative benefit.





Community responses regarding green roofs were balanced. While some residents voiced enthusiasm and support, identifying benefits such as enhanced aesthetics, biodiversity, and temperature regulation, others expressed concerns. The diverse opinions highlighted the importance of further dialogue and education to address various perspectives and develop comprehensive, widely accepted solutions.

### **Consultation responses to planning**



There were calls for a sustainable building approach in new developments to include requirements for renewable energy sources, energy efficiency, and climate change adaptation in all new developments. Specific recommendations included: mandating insulation, solar panels, double glazing, and other energy/water conservation measures as standard. Running a pilot scheme for low-impact, self-sufficient communities using ecological materials was proposed, as well as affordable, small-home solutions. Overall, a systems-level policy shift was sought toward truly sustainable, climate-adapted buildings across all sectors.

There were recommendations to prioritise insulation and other building materials derived from sustainable, natural sources rather than synthetic man-made products, such as plastic. Proposals included mandating ecofriendly materials in all new construction and renovation projects. Overall, there was a strong emphasis on construction practices that minimise environmental disruption and reduce plastic/petrochemical use, with a preference for renewable, biodegradable materials that can be sustainably sourced or recycled.





Challenges were noted around retrofitting older constructions, originally designed for their time period's climate conditions. A key barrier identified was the lack of financial means for many households to invest in sustainable upgrades, with families already struggling from rising costs and living day-to-day. There were calls for more accessible and effective grant programs encouraging affordable adaptation measures, like insulation, shutters and other low-cost solutions that do not overburden homeowners.

There was overwhelming agreement for the need to urgently reform planning rules to allow more sustainable and climate-adapted living solutions. Suggestions included provisions for tiny home communities with growing spaces, eco-villages integrating low-impact dwellings, food/water sources, habitat creation and environmental education. There were also recommendations to prioritise people and planet over strict heritage rules. Overall, a flexible, imaginative overhaul of planning policies were sought to facilitate a range of sustainable adaptations.





There were widespread calls to prohibit any further construction on floodplains and other flood-susceptible zones. In tandem with development restrictions, recommendations were made to require flood mitigation strategies in already built-up areas, such as integrating rainwater capture systems and green infrastructure to better manage stormwater. Overall, there was a strong consensus that cities and towns must get ahead of escalating flooding dangers by enacting policies preventing new vulnerable development, while also retrofitting existing communities with protective and adaptive measures. Safeguarding against these climate impact threats was deemed an urgent necessity.