



SURREY ADAPT

Progress responding to climate change risks

FOREWORD

Climate Change is impacting Surrey via a range of increasing risks and hazards which are becoming a new normal. In Surrey, we faced our hottest summer on record in 2022, coupled with our most fierce wildfire season. In 2023 we faced the hottest June ever on record, followed by the wettest July, and the rainiest 18 consecutive months, 11 which included impacts from storms such as Storm Henk, and then the wettest September in a hundred years! However, impacts are not just coming via named storms and acute impacts, but also through slow onset changes that are impacting our ecosystems, agriculture, waterways, infrastructure, communities and even finances.

To manage these climate risks Surrey has developed a Climate Change Adaptation and Resilience Strategy, known as “Surrey Adapt”, which was Cabinet endorsed in early 2024. This strategy is built on an evidence base of our climate change risk and opportunities assessment published in 2020.

As a county, we see that it is important our residents are aware that we will face many climate-related impacts in the coming years even if our Net Zero ambitions, as set out in our highly ambitious Greener Futures programmes, are met. We must prepare for, and adapt to, increasing climate hazards, risks and impacts and Surrey Adapt provides a positive framework for Surrey County Council and partners to enhance capabilities to adapt to those impacts and ultimately it will play its role in ensuring that “no-one is left behind.”

This report provides a summary of our recent actions on preparing and responding to climate change impacts and risks. It provides a platform to grow our capabilities as an organisation to ensure enhanced climate resilience and adaptation. Some key highlights for Surrey County Council, include the development of the Surrey Adapt strategy, numerous other policies that include climate change adaptation such as our Local Nature Recovery Strategy, significant investment into flood risk

1 Water situation: March 2024 summary - GOV.UK (www.gov.uk)



management, and ongoing risk assessments and action planning across the organisation, to name a few. One big challenge and gap for climate change adaptation success is around funding and financing. As such our key strategic ask to central government would be to support local authorities through enhanced resourcing of climate change adaptation – for capability growing, social and institutional change management processes, and for implementation.

Overall, this report indicates that Surrey is in a phase of positive change - upskilling and growing our capabilities to tackle significant shifts in our business as usual as our climate changes.



Marisa Heath
Cabinet Member
for Environment



TABLE OF CONTENTS

1. Introduction	6
2. Climate Change Risks in Surrey	7
3. About the Surrey Adapt Strategy	11
4. Progress on Surrey Adapt Priority Programmes	15
5. Strategic Messages	27
6. Next Steps	28



HOW WE'RE ADAPTING TO CLIMATE CHANGE IN SURREY



Creating resilient and healthy communities

Helping residents to enhance their own climate resilience, focussing on supporting schools and healthcare facilities.



Creating a resilient economy

Working with businesses on business continuity planning and response and encouraging economic investment that is resilient to climate impacts.



Making our organisations resilient

Ensuring Surrey organisations and councils understand climate change risks and have clear plans to respond.



Working with partners

Tackling climate change with partners, businesses and land managers to achieve greater impact.



Ensuring we have resilient biodiversity & natural resources

Protecting and enhancing our biodiversity, natural resources and open spaces from climate impacts, to protect our communities and infrastructure.



Resilient water resources

Working with partners to reduce water demand and protect water supplies for dry spells.



Resilient energy, transport and infrastructure

Ensuring our transport networks, energy, and other infrastructure are resilient to climate risks to minimise disruption to society.

Ensuring land use, agriculture & food systems are resilient

Tackling climate change with partners, businesses and working with landowners and the agriculture sector to help them become more resilient to climate risks particularly flooding, drought, heat, and fire.



Resilient buildings and planning

Making homes and public buildings more resilient to climate risks and ensuring planning approaches consider climate resilience.



1. INTRODUCTION

On 9 July 2019 Surrey County Council declared a 'climate emergency' and committed to work with partners to agree Surrey's collective response. Surrey's Climate Change Strategy and Climate Change Delivery Plan detail the actions required to reduce our greenhouse gas emissions.

The past few decades have brought increasing climate risks and extreme weather events to Surrey. As the global climate warms, our weather extremes become more severe, and the underlying temperature changes, which can seem imperceptible, are creating shifts in how well infrastructure, agriculture and our ecosystems can cope. Even our disease burden and health risks are shifting.

In 2024 Surrey County Council launched its first stand-alone climate change adaptation strategy "Surrey Adapt" which sets out Surrey's response to the hazards, risks, vulnerabilities, and opportunities posed by the impacts of climate change. The strategy highlights the importance of our need to adapt, and as a partnership strategy focusses our attention towards finding solutions via collaborative methods.

Beyond having a focussed strategy in place Surrey County Council is adapting to climate change across the organisation via a variety of mechanisms and building its capabilities to integrate climate change risks and impacts understanding into all our services and operations. Critically adaptation is become central to many of our community services, and resilience building efforts.

This report is intended to give a brief snapshot of our current progress as an organisation on responding to the impacts and risks associated with climate change.



2. CLIMATE CHANGE RISKS IN SURREY

Surrey County Council developed a climate change risk and opportunities assessment (CCROA) in 2021. This document outlined, in a similar fashion to UK wide risks assessments that there is a growing burden of risks to manage and adapt to as our climate rapidly changes. Even without this report, recent climate events clearly show us the growing risk we already face. In 2022 we faced our hottest summer with the most severe heatwaves (reaching over 40C for the first time ever), along with record-breaking wildfire season, as well as contending with regular flood events. In 2023 we faced the hottest June ever on record, followed by the wettest July, and the longest heatwave over 30C ever recorded for the month of September. In addition to specific record-breaking climate events, we are seeing changing weather patterns in the county are already impacting the councils service delivery and infrastructure (such as damage to road surfaces and pothole creation, damage to IT infrastructure, impacts on ecosystems and more).

Methodology and Summary of the CCROA

The CCROA assessed climate risks and opportunities for each of Surrey's five key sectors. These were identified as Health & Wellbeing, Buildings & Infrastructure, Business, Agriculture & Forestry, Natural Environment. Assessment of future climate risk for Surrey considered past extreme weather to understand previous impacts on Surrey's key sectors. The assessment of future climate risk drew on UKCPI8 projections for Surrey.

Projections indicate that by the end of the 21st century Surrey could experience hotter summers with average summer temperatures +3.5°C warmer than baseline and milder winters with average winter temperatures +2.2°C warmer than the baseline (1981-2000). Summer heat waves are likely to become more severe over the 21st century. By 2080, the maximum summertime temperature reached during a 20-year event is projected to increase to 36.7°C. Summer months are also likely to be drier, with average summer precipitation projected to decrease by -27.7% from baseline.

Storm Henk

The storm Henk flooding event in 2024 was created by consecutive days of rainfall through the last week of December and into January. If the amount of rain we saw on 4 January, had occurred on a dry catchment, it is unlikely that we would have seen a significant event. However, as it fell on saturated catchments and when the lower tributaries and River Thames were already running high from the previous week's rain, the event was significant. Climate change is stacking the odds in favour of more and more significant extreme events like this one.



Winter peak temperatures are likely to increase. By 2080 the maximum winter temperature reached during a 20-year return period event is likely to increase to 17.9°C. Snow and ice are also projected to decrease during the 21st century, although this does not mean they won't happen. Winters are likely to be wetter with average winter precipitation increasing +15% from baseline. By 2080 the total 5-day winter precipitation during a 20-year return period event is likely to increase to 88 mm.

An assessment was undertaken to understand the current and future climate risk for each of Surrey's key sectors. This highlighted **heat and drought and flooding as key climate risks for Surrey during the 21st century**. Risks were identified for Surrey's health & wellbeing sector where health services could come under increasing pressure from heat and flood related health conditions particularly amongst Surrey's older population.

Surrey's proximity to London and connection by road and rail may also be adversely affected both summertime temperatures, and wintertime flooding, with knock-on impacts on the local economy where commuter connections to London and supply chains within the county are disrupted. Conversely, a decrease in snow and ice during the 21st century may reduce pressures on health services and disruption to transport.

The Climate Change Risk and Opportunities assessment is available on request, and the following two graphics provide a visual infographic summary of the two key scenarios utilised for decisions-making in Surrey County Council.



WHY DO WE NEED TO ADAPT TO CLIMATE CHANGE IMPACTS?

Unless we act rapidly to reduce global emissions and maintain global warming under 2C, by the 2080s, Surrey can expect the following:



An increased likelihood of heatwaves

With temperatures of up to

37.6°C

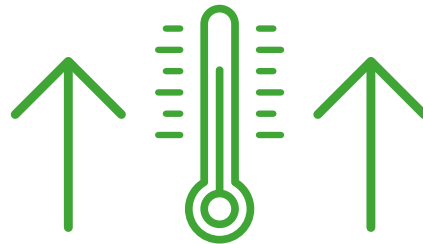
Hotter Drier Summers

With average daily temperatures **rising** by up to

3.5°C

Droughts becoming more common; as Summer rainfall **falls** by

27.7%



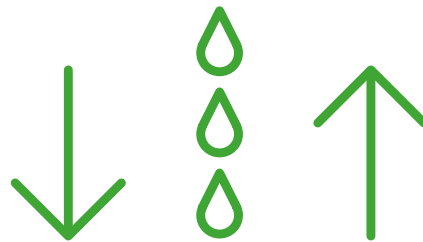
Warmer Winters

With average daily temperatures **rising** by up to

2.2°C

A higher risk of flooding; with Winter rainfall **increasing** by

15%



WHY DO WE NEED TO ADAPT TO CLIMATE CHANGE IMPACTS?

If we do not act rapidly to reduce global emissions and global warming under reaches 4C, by the 2080s, Surrey can expect the following:



An increased likelihood of heatwaves

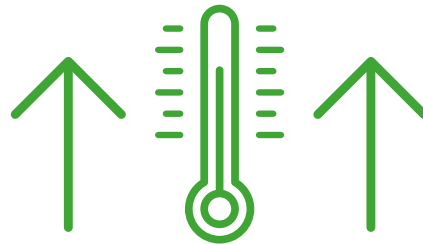
With temperatures of up to

40°C

Hotter Drier Summers

With average daily temperatures **rising** by up to

5.7°C



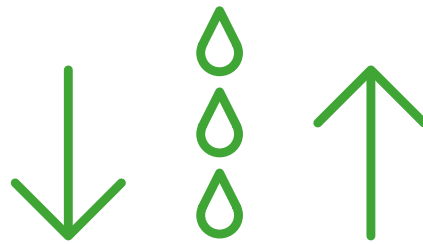
Warmer Winters

With average daily temperatures **rising** by up to

3.6°C

Droughts becoming more common; as Summer rainfall **falls** by

40%



A higher risk of flooding; with Winter rainfall **increasing** by

23%

3. ABOUT THE SURREY ADAPT STRATEGY

The Surrey Adapt Strategy proposes a goal of adapting to a world 2°C warmer and preparing for scenarios up to +4°C, for long lived infrastructure and long-term decision making. This goal is clearly backed by climate science and reflects central government advice.

The vision and high-level goal of the strategy is supported by 3 Objectives, and 9 Priority Programmes. The 9 Priority Programmes detail the work Surrey County and our partners need to invest in and the programmes will be further developed into action plans. The strategy also includes a set of underlying principles guiding how Surrey will approach adaptation and resilience in a changing climate.

This strategy is based on national and international best practice, a growing evidence base, and the key impacts already being experienced in Surrey. It has been produced in collaboration with key partner organisations – a partnership approach we hope will define our action plans into the future.

The strategy presents a ‘direction’ for the County, and action plans for implementation will evolve over time as our understanding and analysis of the risk and appropriate responses develops through the first implementation period of the first



Vision. Surrey adapted to a changed climate - resilient and prepared across communities, ecosystem, infrastructure and the economy.

GOAL. By 2050 we will have resilient people, places and partnerships adapted to 2 C of change and preparing for 4 C of change.

strategy (2024-2029). A more detailed action plan is under development and will be updated as more is known about our risks and challenges and the most appropriate ways of responding.

Uniquely, Surrey is one of few counties with a stand-alone adaptation strategy, highlighting the importance placed on enhancing climate resilience for the organisation, and the residents of Surrey.

Climate Change Adaptation is not a stand-alone set of activities though, and it requires significant investment into behaviour change within the organisation, growing of capabilities to utilise climate change information, and a shift in our everyday business approaches. For this reason, embedding, organisational change and policy integration work is core to our adaptation response. It supports the growing capabilities of the organisation to include climate change considerations into planning, policy and implementation across the organisation.

A variety of other policies and strategies such as the Surrey Local Flood Risk Management Strategy, Climate Change Strategy, Community Risk Profile, Community risk management plan, Local Nature Recovery Strategy, Healthy Streets Guidance, also enable our growing climate change resilience capabilities, with a large programme of flood alleviation schemes, sustainable urban drainage, community resilience building, and natural flood management, and nature recovery programmes underway.

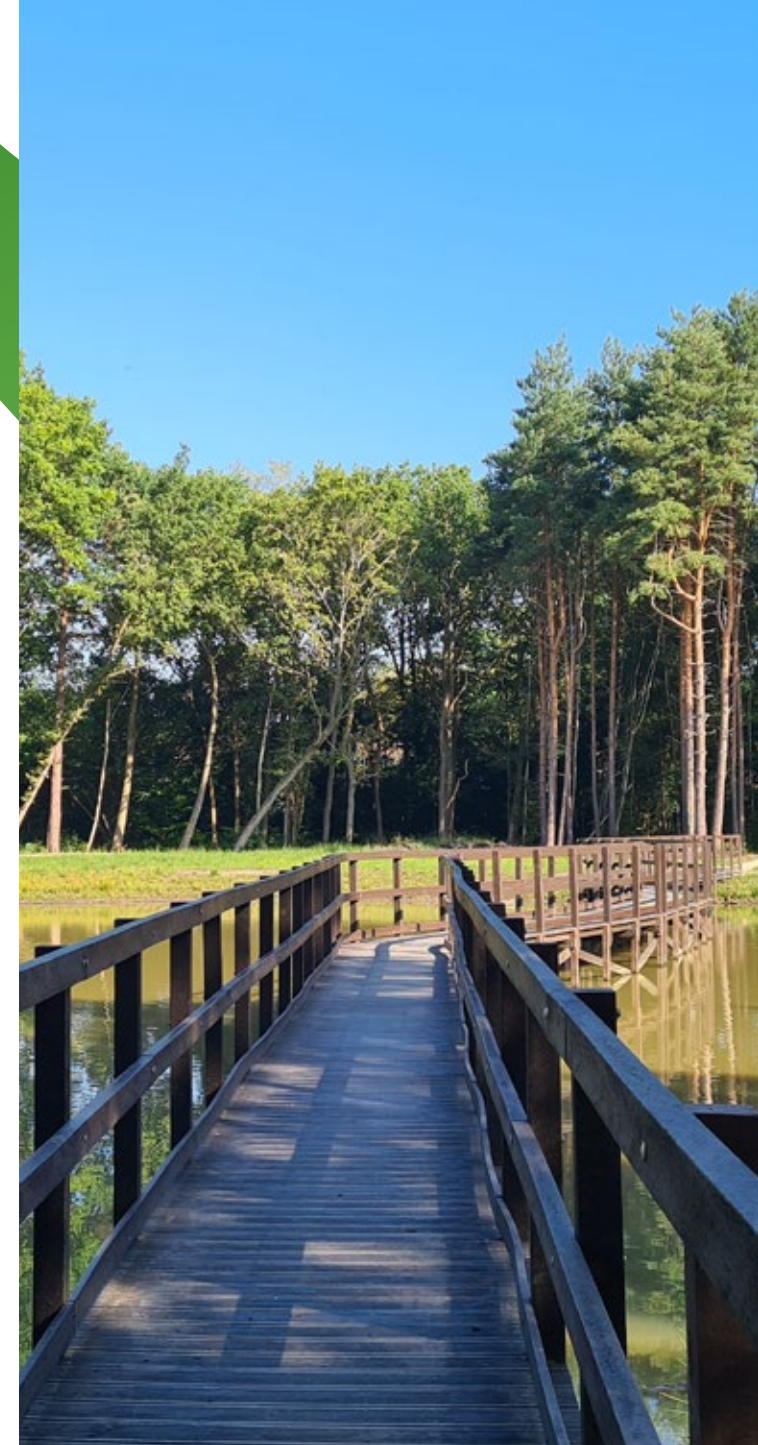
Partnership consultation was undertaken in the development of the Climate Change Strategy in 2021 which also covered aspects of climate change risks, impacts and adaptation. In the development of this strategy, there has been extensive engagement within Surrey County Council and with Borough and District councils - via officers, and the Greener Futures Boards. Multiple sessions and member seminars have taken place with members in the lead up to its approval. One large partnership session utilised a Future Backcasting methodology to support the development of the vision and objectives of the strategy.

How this is different to current risk assessment work, and other strategies in SCC?

The strategy looks at the full suite of climate risks, it is forward looking, based on anticipating the changes that are coming, and those we have already been exposed too, it is designed to move the organisation away from reactionary risk management, to anticipatory forward looking adaptation. **It is a recognition that resilience is not possible without climate change adaptation.**

The Surrey Local Flood Risk Management Strategy

The Surrey Local Flood Risk Management Strategy, is a key sister strategy to Surrey Adapt, and outlines 8 objectives and accompanying sub-objectives agreed by the Risk Management Authorities and monitored by the Surrey Flood Risk Partnership Board. It oversees cross authority work and is delivered through prioritised regions, with a catchment-focused approach to coordinate flood risk management activities. It provides a robust foundation for managing flood impacts effectively. To tackle flood risk, we support residents and businesses, so they are prepared and resilient. Despite limited resources and competing priorities, this strategy involves working in partnership, investing in natural and engineered flood schemes, policy influence, education and careful preparation. The strategy is including a growing science base for decision making on future flood risk under climate scenarios.



ADAPTATION RECENT HIGHLIGHTS



Climate change risk

Climate Change Risk and Opportunities Assessment done in 2021.



Surrey Adapt

Surrey County Council Approved the Surrey Adapt Strategy in 2024.



Flood Resilience

£2.5 million expenditure on Flood Resilience Capital Projects.



Ensuring land use, agriculture & food systems are resilient

558K trees planted across Surrey By SCC and partners.



Carbon Reduction

Carbon reduction courses for business which includes adaptation.



Warm Hubs

Tackling extreme cold via Warm Hubs, and fuel poverty.

Partners and Residents

Launch of the Surrey Adapt Forum in 2024 – a knowledge exchange space unique to Surrey, its partners and residents.



New Strategies

New Strategies and policies (such as Biodiversity and nature recovery) which include climate change risks and adaptation.



4. PROGRESS ON SURREY ADAPT PRIORITY PROGRAMMES

The Surrey Adapt Strategy has 9 Priority Programmes, and this section highlights some of the progress on these over the past year, and prior to the development of the strategy. Some of the key areas of progress are outlined in the following section.

Resilient Organisations

Current Progress

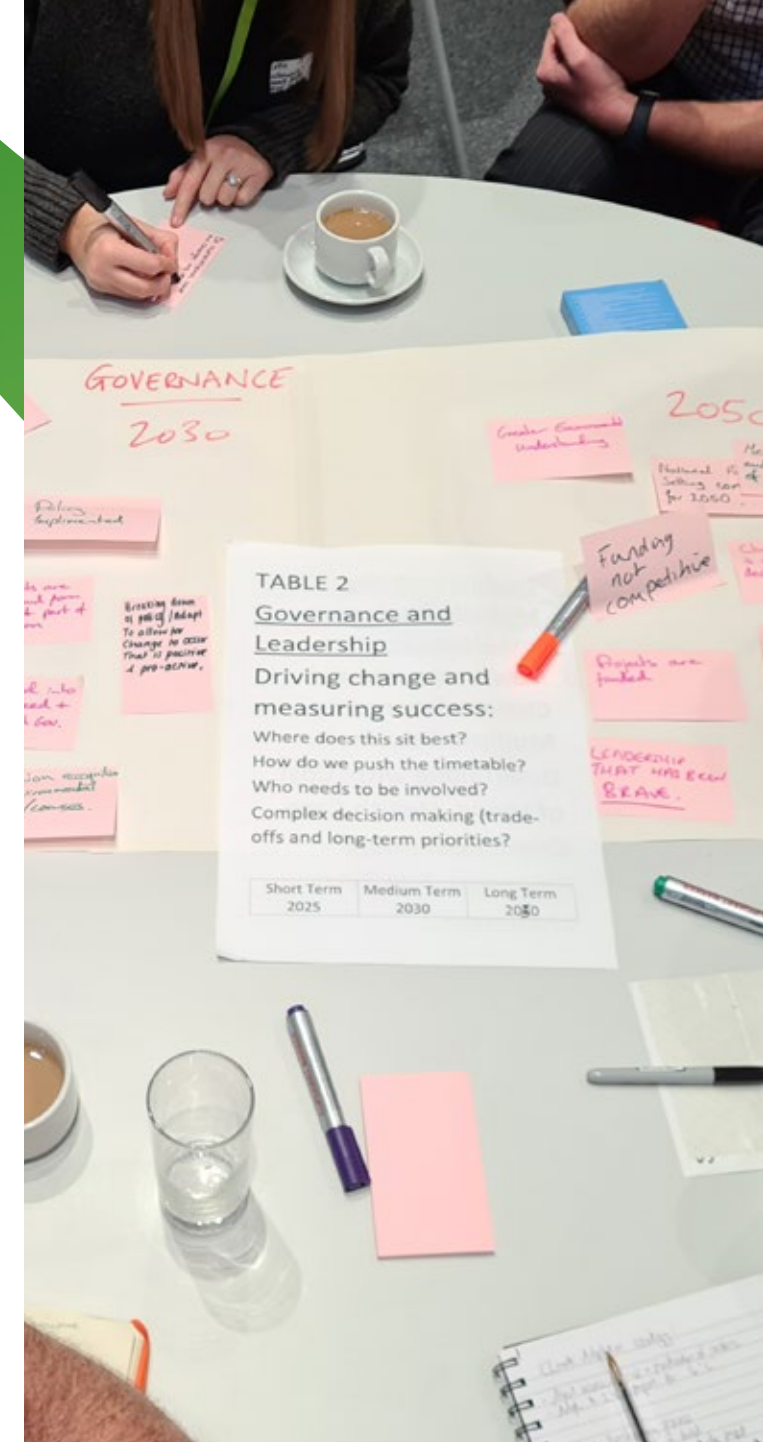
Although many of the climate risks are cross cutting, the level of impact will depend on each particular organisation or department and their exposure to those risks over time.

Surrey County Council and all the District and Borough Councils in Surrey are starting to work collaboratively on this challenge.

- SCC has elevated climate change impacts and risks into its **Corporate Risk Register**, with the risk titled: “Severe weather events exacerbated by Climate Change leads to a loss of service provision and also other community-wide consequences”. Linking the corporate risk to the achievement of the strategy and action plan are key to embedding adaptation across the organisation and includes a suite of mitigation measures at a corporate level.
- SCC is also trialling **different mechanisms for reporting** on progress on the corporate risk via:
 - Directorate level annual business plans.
 - Inclusion of adaptation in the SCC Core Planning Assumptions - CPAs document sets out assumptions about the most likely policy context the council will be operating in for the short to medium term (6-12 months).



- Undertaking climate risk and vulnerability assessments for key priority locations and sectors. SCC is currently undertaking more **detailed Directorate level risk assessments**, and developing actions plans, which will feed into a SCC Adaptation Action Plan in early 2025.
- There is a general move towards **benchmarking the adaptation strategy, risk and vulnerability assessments** and general approach of the organisation’s climate change adaptation and resilience outcomes to ISO 14091 “Adaptation to Climate Change: Guidelines on vulnerability, risks and impact assessments”.
- **Integration of climate risk into policy, planning and infrastructure design** alongside work already on going with partners covering climate change mitigation and nature recovery.
- As a general approach we are aiming to **integrate adaptation with Net Zero programmes** wherever possible, but often find the limited resourcing for adaptation does not allow for both programmes to scale at the same pace.



Partnerships for Resilience

Current Progress

- Surrey has many robust partnerships in the region working on multiple challenges, and many of these are already considering various aspects of climate change, as such many of our partnerships are already contributing positively towards climate resilience. The Greener Futures Partnership, the Flood Risk and Climate Resilience Partnership, and the Surrey Local Resilience Forum (SLRF) are all multi-agency partnerships where climate adaptation and resilience is currently included, although the prominence of the topic is likely to be enhanced into the future. Partnerships where adaptation is emerging as a key area for collaborative working include Surrey Climate Commission, Surrey Nature Partnership, Public Health and Wellbeing Board, and with Water utilities and companies.
- **The Surrey Flood Risk Partnership Board** sets strategic direction and measures the delivery of the Surrey Local Flood Risk Management Strategy. The Surrey Flood Risk Partnership Board Working Group meets quarterly. This is one of our key partnerships for managing one of the largest climate risks in Surrey at present.
- As part of the Surrey Local Flood Risk Management Strategy, Surrey County Council arrange partnership meetings twice yearly for each of the 11 district and borough councils, with all Risk Management Authorities that have a duty to manage flood risk. They meet to update the Priority Flood Areas and Catchment Action Plans and to discuss how actions are being progressed.
- Due to the novel nature of tackling climate change risks and impacts, Surrey has developed an emerging community of practice and knowledge exchange called **the Surrey Adapt Forum**. This had its first session in November 2024 with a thematic topic of Ecosystem-Based Adaptation.



- Governance and partnerships are primarily featured via the **Greener Futures boards**, but because climate change risks and impacts require significant embedding into other work areas, we report via a range of other boards, and are pursuing partnerships via a range of other existing mechanisms e.g: Surrey Flood Risk Partnership, Surrey Prepared, Surrey Food Partnership etc.

Resilient Biodiversity and natural resources

Current Progress

- **Surrey has significant partnerships** (such as Surrey Nature Partnership, Surrey Countryside Partnership, Surrey Wildlife Trust, Surrey Hills National Landscape, Forestry Commissions, Natural England etc.) and policies to build upon and leverage a strong response in this sector, which will underpin and support positive responses across many of the other themes.
- Additional policies such as the **SCC New Tree Strategy** recognises the importance of different land use approaches, championing the ‘right tree in the right place’ approach, noting the need to identify the most appropriate habitat and landscape changes for Surrey.
- The **Local Nature Recovery Strategy** is a key policy also aimed at improving biodiversity outcomes across Surrey. It has a strong climate change adaptation lens within it.
- The variety of new policies and strategies aimed at nature recovery, and better land use management will all support our ability to reduce impacts of flooding and droughts, and heat impacts, and additionally will absorb carbon.

Tree Planting

SCC has an objective to deliver our 1.2 million tree planting strategy. The Tree Planting Programme designs planting projects to deliver multiple benefits and outcomes. During the tree planting season in February 2023, the Tree Planting & Establishment team worked collaboratively with Surrey County Council Flood & Climate Resilience team colleagues to support one of Surrey’s tenant farms in Horne, Horley to deliver a tree planting scheme offering natural flood management. The farm location was recognized as at risk of flooding from surface water and was located within one of Surrey’s identified high priority Flood Areas. The project was designed to deliver targeted planting of shelterbelts and dense planting to intercept water runoff and improve soil condition. This project planted over 5825 new trees, not only helping reduce flood risk for nearby residents, but also offering food for wildlife, increasing canopy cover and supporting Surrey’s greener future.

- **Tree Planting Campaign to plant 1.2M trees**, started as a carbon sequestration programme, but is also delivering additional co-benefits for adaptation and resilience. And thus far 0.5M of the 1.2 million have been planted.
- SCC is about to undertake a **spatial Climate Risk and Vulnerability Assessment**, to identify spaces and areas (ecosystems, communities) at risk, and those that are most vulnerable – will be integrated into the LNRS Spatial assessment, and into the LEIP Spatial Assessment.
- Emergent **Local Environment Improvement Plan (LEIP)** – is being developed by SCC, and may be a key plan for achieving landscape scale climate change resilience by bringing together a variety of environmental benefits and risk reduction measures.
- **Green and blue infrastructure: best practice and case studies** have also been developed.



Resilient Land Use, Agriculture & Food Systems

Current Progress

- The **Land Management Framework** is under development and a cross-cutting policy that will bring together a variety of land use challenges and includes a strong climate change adaptation lens. The Land Management Framework will play a key role in determining success in managing our landscape and land uses for climate resilience.
- **Natural Flood Management (NFM)** aims to emulate or restore the natural mechanisms that attenuate water flows over (and through) the land. As NFM measures generally keep areas wetter for longer, they can also provide climate resilience by mitigating the effects of drought and wildfires. NFM is a fairly new approach to managing flood risk by Surrey County Council. New external funding opportunities and training have recently been made available and we are in the process of upskilling our team to take advantage of these opportunities and lead the Surrey Flood Risk Partnership in delivering a programme of NFM schemes in the future.
- The **Surrey Hills National Landscape** has a variety of projects underway, many of which tackle various climate change risks, such as:
 - Supported planting of over 21 miles of hedges which contributes towards enhanced resilience efforts for native species and connectivity, and for enhanced resilience for agricultural land in the NL.
 - A pilot in partnership with a farm, the Surrey Hills NL and SCC Flood & Climate Resilience team for natural flood management, recently awarded FiPL funding.
 - Fencing on the River Wey to keep cattle out of the river and allow the bank vegetation to regrow, reducing erosion, run off and water pollution.

NFM Dorking Case Study

Dorking NFM Phase 1: The NFM trail project, installed in Winter 2019 to reduce risk of flooding downstream, is being used to better understand how we can deliver such schemes elsewhere to reduce flood risk. The Dorking NFM scheme is one of the research projects that forms part of the DEFRA Pilot NFM Programme.

The overarching objectives of the NFM Pilot Programme are to: 1. Reduce flood risk; 2. Improve habitats and increase biodiversity; 3. Increase our knowledge of NFM interventions; 4. Promote the benefits of partnership working. 5. Future evaluation and monitoring The site, and effectiveness of the features, will be monitored for a number of years post construction through a PhD project being completed in collaboration with the University of Surrey.

Resilient and Healthy Communities

Current Progress

- There are **over 80 Warm Welcome spaces across Surrey** as a response to extreme cold, and the cost-of-living crisis. This is a community resilience measure which can be adapted for other climate risks.
- After the **Heatwaves and associated fire season in 2022**, SCC has applied these conditions as the new norm for summer seasons and invested in resources to manage such a summer as business as usual. The biggest impact for the service was on staff wellbeing in managing the response. There has been investment in enhanced PPE for wild-fire risk, along with welfare support for staff, such as portable toilets, showers, welfare units (stocked with food, drink etc.). Other equipment stocks, vehicles, radio's etc have been enhanced to manage large risk responses. This investment can be utilised for responses to other emergencies as well.
- The **Flood and Climate Resilience team are working with the Surrey Fire and Rescue Service** to trial the addition of flooding into the well-established Safe and Well Visit (SAWV) carried out by firefighters highlighting the risk of fire in the workplace and guidance to prevent it. The additional flood advice is given to businesses at risk of fluvial and surface water flooding, including measures to protect themselves and to continue trading.
- SCC provides a variety of outdoor learning services to the youth of Surrey via the **Surrey Outdoor Learning & Development (SOLD)**. SOLD have already experienced first-hand climate related impacts and adapted their services and practices to ensure visitor safety in changing conditions such as enhanced shading and water fountains in response to extreme heat, ensuring safety of sites with regards severe weather and storms.

Property Flood Resilience

Property Flood Resilience (PFR) Property Flood Resilience is the range of measures that can be installed on and in buildings to reduce the risk of flooding and its impacts. In Surrey, funding routes through Grant in Aid and local levy allow us to install resistance measures only. Recommendations are provided to the homeowners on how they can make their properties more resilient. In the past year over 200 properties have been targeted in one location of Surrey in response to flood risk, with over 2 million spent in installing PFR.



Specialised property flood resilience door, reducing ability of water to enter via the door.

Resilient Energy, Transport and Infrastructure

Current Progress

- Surrey is currently developing a **low carbon and climate resilience infrastructure policy** which will likely guide all new development of infrastructure.
- From a **climate hazards and severe weather response for infrastructure -** Surrey Highways responds to severe weather events during rain events, to help clear and investigate flooding sites. Surrey highways regularly utilise their soakaway machine resources to help support the existing fleet of jetting machines. In addition to this, Surrey highways and their contractor, pool available resources in order to meet the demands presented by those storms.
- We cannot alleviate flood risk through new capital works alone. **Maintenance is an important task** that needs continuous resourcing to ensure our drainage assets function correctly. Unfortunately, poor maintenance and back-logs will undermine climate change adaptation efforts as our risk profile grows.
- In October 2022, SCC Cabinet endorsed the **Healthy Streets for Surrey Guide** and as a policy for the design of streets in all new development in the county – it includes significant advice on climate change resilience and adaptation measures.
- Through both highways, and placemaking initiatives SCC is growing its flood risk reduction portfolio and expertise to include more interventions such as **Sustainable Drainage Systems (SuDS)**, which includes swales, rain gardens and more. Through our planning responses, where new development is proposed without the inclusion of SuDS, Surrey County Council will challenge a developer to do better and justify why small-scale measures cannot be included.



Resilient Buildings and Planning

Current Progress

- SCC is currently developing a climate change policy that will address both **Low Carbon and climate change adaptation related design needs for all new buildings.**
- **Embedding of climate change risks,** impacts, and adaptation is taking place across policies and plans that are newly developed by SCC.
- The Surrey Flood Risk Management Strategy, which is a key risk management strategy related to Surrey Adapt, aims to explore and start documenting **how many of the catchment action plans are adapting to be resilient to a projected '2 to 4 degrees Celsius world'**, and ensuring a coherent future looking response beyond current risk.
- Recent **enhanced efforts at recording highways and drainage related data** reactively in high-risk areas means we are more aware of Surrey's drainage systems and who is responsible for maintaining them which can help us to investigate and resolve future flooding risks.
- There are **currently 140 Priority Flood Areas in Surrey. Of these, 38% are rated as high priority.** There are a total of 455 catchment actions in Surrey, of these 36% actions are classed as ongoing and 18% are complete. The Key Priority Flood Areas will need to be revisited once SCC has its spatial climate change risk and vulnerability assessment developed, and in line with NAFRA2 which will then include climate change scenarios. We aim to analyse new modelling which includes climate risk projections to understand which properties may become at greater risk of flooding due to climate change projections. We will work to better understand the risks of groundwater by engaging with Risk Management Authorities and advocating collaborative learning.

Properties and Insurance Premiums in a Changing Climate

Assessment of SCC properties in terms of climate change risks and impacts is in its early phases of being investigated but seen as a key climate change fiscal risk to the organisation. This area of work will become increasingly important for SCC but also for many organisations, as insurance companies have already indicated needs for including robust climate change risk assessments across our whole portfolio of properties in order to maintain lower insurance premiums. For this reason, our risk assessment process will focus on this area of work in 2025, and we will be building our Land and Property capabilities to internally apply climate change risk assessment methodologies.

Resilient Water Resources

Current Progress

- Our Flood Risk Management approaches and programmes are **integrating a water management approach**, so that we consider both the dual risks of flood risk, and water insecurity in a holistic manner, especially where we are managing water across the landscape with multiple partners.
- Through the Flood Risk Management Partnership Board, water companies are engaged as partners, but a **partnership approach to the topic of water security** is an emerging one. In addition, local authorities can have a role to play in supporting policy changes that can encourage reduced water demand.

Resilient Economy

Current Progress

- Incorporation of climate resilience in the Council's and partners' engagement with the **business sector**, initially through integration of adaptation into a decarbonisation course for small and medium businesses.
- A planned piece of research for 2025 will investigate **climate change economic impacts and impacts on the SCC fiscus**.

Plus Change - Case Study

Plus Change (Planning Land Use Strategies: Meeting biodiversity, climate and social objectives in a Changing world) is a Horizon Europe project proposal submitted by Global Change Research Institute in the Czech Republic. The project partnership is a consortium of 23 universities, research institutes, planning and other public authorities across Europe, including Surrey County Council.

The project aims to create land use strategies and decision-making processes that meet climate, biodiversity and human well-being objectives of sustainability; and to develop interventions that leverage political, economic, societal, material and cultural contexts to achieve these strategies.

This project serves as a stepping stone in looking at our land-use planning with fresh eyes, a collaborative approach, and as a base which could inform better climate-risk focussed land-use planning and decision-making.

Cross Cutting Initiatives

Current Progress

The following are some key cross-cutting areas of focus for achieving and progressing the Strategy:

- **Initiating pilots and approaches** to support more vulnerable groups to adapt such as schools and care homes, as well as specific geographical areas ensuring a just approach and that no one is left behind.
- Developing a collective approach, with partners, to **engagement and communication** to communities that raises awareness of the risks but also what action can be taken to adapt, through partnerships such as Surrey Prepared and the Surrey Local Resilience Forum.
- In supporting science base decision making, SCC has some **key areas of research and tool development** underway which will be utilised to support decision making:
 - A spatial climate change risk and vulnerability assessment
 - Trialling a risk assessment tool for site-specific risk assessment with Zurich Resilience Solutions
 - A fiscal analysis of climate change impacts, outlining fiscal impacts to the SCC budget (2025)



- **Partnerships and funding projects** that include climate change adaptation, such as:
 - **Plus Change – Horizon Europe project** - “Planning Land Use Strategies: Meeting biodiversity, climate and social objectives in a Changing world”
 - **“DIY Greening Prescription for Climate Adaptation in Urban Streets (GP4Streets)”** is backed by £2 million from the Natural Environment Research Council. Led by the University of Surrey, the project brings together experts from five institutions, including the UWE Bristol, the University of Bath, the University of Sheffield, and Imperial College London. Nine local councils, charities, and industry partners are also on board to support the rollout and scaling up of these green solutions across UK towns and cities.



5. STRATEGIC MESSAGES

- Embed understanding of climate risks for all infrastructure, buildings and services under 2C scenario and 4C scenario for long lived infrastructure.
- Resource climate change adaptation – both for capability growing, social and institutional change management processes, and for implementation.
- Funding mechanisms need to be reformed.
- Climate Change Adaptation Reporting under the ARP should become mandatory in order to create a mechanism of accountability for local authorities to act on the robust climate science available and ensure that all decision-making is including known climate risk information within them to create safer communities in the face of a rapidly changing climate.



6. NEXT STEPS

- Develop the full SCC climate change adaptation Action Plan by early 2025.
- Adaptive capacity assessment, to support the Action Plan and the capability development of SCC staff.
- Launch of internal climate change adaptation working group in 2025.
- Spatial Climate Change Risk and Vulnerability Assessments undertaken in 2025.
- An Economic and Fiscal Assessment of climate change impacts and risks on SCC fiscus undertaken in 2025
- Adaptation Pathways processes will be investigated and start to be trialled from 2025 onwards.
- Iterative improvements on risk assessments will be taken annually through annual directorate assessments as well as updating of action plans, this will feed into monitoring and evaluation processes, to track progress of the Surrey Adapt strategy.
- Connecting ARP reporting schedule to internal reporting and evolving monitoring and evaluation processes for climate change adaptation.





SURREY ADAPT

www.surreycc.gov.uk/climateadaptation

adaptation@surreycc.gov.uk