Climate Change Adaptation Plan for Somerset Integrated Care System 2025

Part of the Greener Digital Project Somerset 2024-25

Report information

Title: Climate Change Adaptation Plan for the Somerset Integrated Care System 2025

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Disclaimer: This report represents the independent advice commissioned from Sustainability West Midlands and partners and not necessarily that of the funders.

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This project is part of the wider Greener Digital Project. Funded by Greener Digital (NHS England), this is a partnership project between NHS England, Somerset Foundation Trust (SFT), Somerset Council and NHS Somerset ICB, to develop the digital chapter of the climate adaptation plan. The project aims to complete a deep dive into adaptation and resilience within Integrated Care System (ICS) digital systems, assets, hardware and software and contingency plans for any digital service provision that could be affected by climate-related impacts.

About Sustainability West Midlands

Sustainability West Midlands (SWM) was established in 2002 as an independent, not-for-profit company and our purpose is to help the West Midlands become more sustainable, greener and fairer for all. Our vision is that the West Midlands is leading in contributing to the national target of Net Zero greenhouse gas emissions by 2050 whilst addressing health inequality and driving inclusive growth. We monitor the West Midlands Sustainability 2030 Roadmap which acts as a framework that all organisations based or operating in the region can use to help them make changes to their activities in the knowledge that they will contribute to wider regional, and national, ambition. SWM support our members and other local stakeholders in the public, private and third sectors to implement these changes by enabling them to demonstrate innovation and leadership and provide opportunities to collaborate and celebrate success.

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Front cover image: River Avon in Flood © Leading Lights Getty Images

Foreword

In 2026 Climate change poses significant health risks, including increased heat-related illnesses, the spread of infectious diseases, and mental health impacts. Extreme weather events, like heatwaves and floods, can cause direct injuries and deaths, while also disrupting food and water supplies, leading to malnutrition and illness.

Image 1. Wimbleball Reservoir on Exmoor in drought. ©Environment Agency

Furthermore, climate change can exacerbate air pollution and create conditions for the proliferation of disease-carrying vectors, such as mosquitoes and ticks. In future years and decades climate change will mean we will see more frequent and intense heatwaves, more droughts, and more rain including more heavy downpour events and storms.

Somerset had the second wettest January on record with more than double the average rainfall. A third of this rain fell during Storm Chandra, which saw around 1.2 million cubic metres of water per hour moving though the Parrett and Tone catchments. Most of this water spilled into the floodplain of the Levels and Moors. Wet weather continued into February, which had almost double the average rainfall by mid-month. Across the county, there have been widespread impacts from flooding.

Somerset Council declared a major incident on 27 January, with the support of the Environment Agency and Local Resilience Partners, including NHS Somerset ICB. Adapting to reduce the impact of these events on public health and the healthcare system will be one of the biggest challenges in the decades to come.

The focus on adapting to climate change in the ICS Adaptation Report is welcomed and will help achieve other priorities and objectives of Somerset ICB, Somerset Foundation Trust and Somerset Council. Adaptation must be done collaboratively; the Community of Practice has been established with partners across VCFSE, SWAST, Somerset Council, and NHS Somerset ICB and Trust to manage and mitigate climate risks across our Somerset system.

Foreword by Christine Young, Head of Sustainability and Estates at Somerset Integrated Care Board and Richard Harper, Head of Sustainability, Energy and Carbon at Somerset NHS Foundation Trust.

1 Purpose of this document

Climate change is not a future problem, it is happening now. It is affecting all our lives, but particularly people from the most vulnerable populations. Even when the NHS achieves net zero, there will still be a changing climate to adapt to. Climate change adaptation seeks to manage this risk to services, adapting or designing buildings and processes to ensure continuity of care.

In recognition of this, Somerset Integrated Care Board (ICB) have commissioned Sustainability West Midlands (SWM) to develop this climate change adaptation plan, in line with their commitment to publishing and delivering a system Adaptation Plan as per their Green Plan 2025-28. This work is one part of the broader Greener Digital Project, funded by NHS England (NHSE) Greener Digital and in partnership with NHSE, Somerset Foundation Trust (SFT), Somerset Council.

The objectives of this project are:

- To build an understanding of the risks to public health and NHS service delivery in the Somerset ICS and existing adaptation activities in the region.
- To provide an adaptation action plan for addressing these risks.
- To build momentum and give strategic direction to climate adaptation in the ICS.

The NHS was founded to provide high quality care for all, now and for future generations. Somerset Integrated Care System (ICS) has the potential to drive improvements in population health and tackle health inequalities by reaching beyond the NHS to work alongside local authorities and other partners to address these wider social and economic determinants of health. As such, this adaptation plan is not only for the ICB, but for the whole system, with many actions directly related to SFT and other partners including Somerset Council, Somerset Rivers Authority and Primary Care Organisations.

The outputs summarised in this report are:

- A climate change risk assessment covering impacts on communities and clinical and non-clinical service delivery in the ICS.
- An adaptation plan with actions for Somerset ICB and other partners, within and beyond the ICS, in the context of other organisational strategic priorities.

In addition to this adaptation plan, Somerset ICB were provided with:

- A Somerset ICS adaptation plan Evidence Report, which includes further results from the climate projections and impact analysis and a methodology for the project.
- The full Adaptation Plan in spreadsheet format, with further information on each action.
- The full risk and opportunity assessment in spreadsheet format.

2 Context

2.1 Scope: Somerset ICS

Somerset ICS formalises the arrangements for NHS organisations, local councils and other partners in Somerset to work together to deliver more joined up services, tackle inequalities and improve the health of the population. For the purpose of this project, the geography of the Somerset ICS has been determined from the boundary given by the ONS Integrated Care Boards (April 2023) dataset. This region has then been further broken down into five 'districts' to help show spatial variation across the ICS. These represent the historical districts of West Somerset, Taunton Deane, Sedgemoor, South Somerset and Mendip, and have been taken from the historical ONS Local Authority Districts Boundaries (April 2019) dataset (Figure 1).

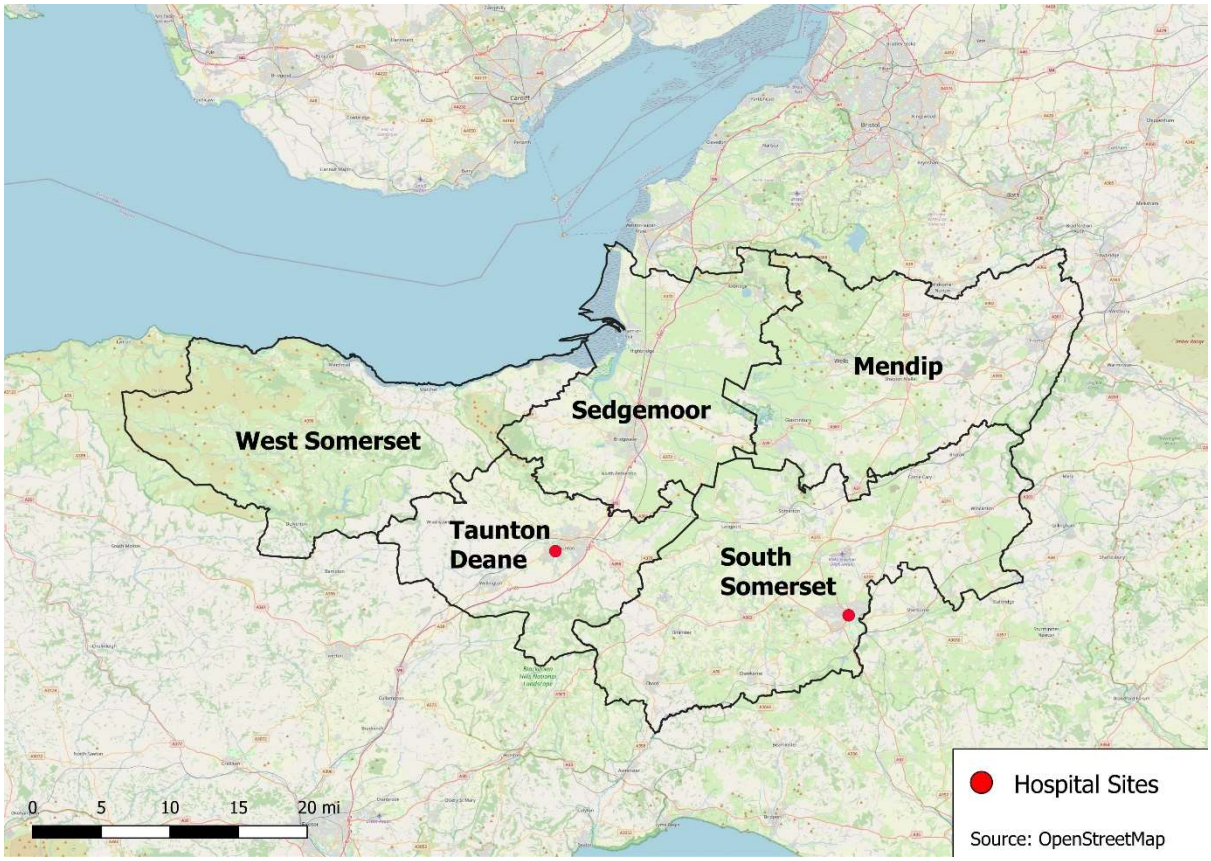

Figure 1. Map of the Somerset ICB boundary, including the five districts covered by this report. Acute Hospital sites are highlighted by a red dot, located in Taunton and Yeovil.

The Evidence Report that accompanies this adaptation plan provides more details on the organisations and sites selected for consideration within the risk assessment and adaptation plan and the justification behind this.

Table 1 in Section 2.2 shows the actions within the ICB Green Plan 2025-28 that mention adaptation, including the commitment to develop a climate change adaptation plan which this report fulfils.

2.2 Actions in Green Plan

Table 1. Actions within the ICB Green Plan 2025-28 relating to adaptation as per the Green Plan Delivery Document.

Performance Target	Steps to implementation	Target	Timeline breakdown
SMCT3: Consider sustainability requirements for future commissioning.	Future care needs to adapt to the challenges of climate change.	As well as choosing low carbon care options, future care needs to adapt to the challenges of 'locked-in' climate change impacts, for example: the health impacts of excess heat and cold; higher incidences of certain contagious diseases such as Dengue fever; Mental health issues, e.g., eco-anxiety. Building on the work from the Climate Adaptation Plan.	• Recognise the ICBs role as strategic commissioners and the broader impact of how, where and who services are commissioned with. Sustainability needs to be a key consideration. • Understand how cluster partners manage commissioning of services and the environmental responsibilities and commitments and how services will be commissioned in a rapidly changing climate. Q1 2026/27 • Working with commissioning teams to develop an aligned approach. Q1 2026/27
DTT4: Work towards digital climate resilience.	Continue to develop and deliver actions set out in the Adaptation Plan.	Continue to develop and deliver actions set out in the digital climate resilience chapter of the climate adaptation plan supported by appropriate governance routes.	• Sustainability representation at the Digital Transformation Board to ensure workstreams are linked. • Develop adaptation communities of practice to ensure accountability and delivery of actions from the Adaptation Plan. Q4 2027/28.
AT1: Commitment to publish an Adaptation Plan.	Working in partnership across our Somerset system. Adaptation should be planned for all critical infrastructure, not just those where issues have been known in the past.	Continue to work with Somerset Wildlife Trust, SFT, Somerset Council, Spark, South West Ambulance Trust, Wessex Water. Set up Communities of Practice to support delivery of each chapter of the Adaptation Plan.	• Climate projections for Somerset, as well as climate change risk and vulnerability mapping are required. • Continue the work with SWM to build a comprehensive adaptation plan project, which should be used to inform and prioritise adaptation measures. Q3 2025/26.
AT2: Embed risk and resilience into NHS Somerset ICB specific policy.	Building on the work with IG, EPRR and Risk teams informed by the climate adaptation plan.	Using common formalised standards of resilience, such as the new ISO 14091 standard, across different infrastructure sectors including telecoms and ICT to help build systemic resilience across the whole infrastructure system.	• Ensuring NHS regulatory frameworks (GDPR, UK Data Protection Act, MHRA guidelines) adapt to climate-driven IT failures. • Carry out more detailed risk assessments and scenario testing for Somerset.

3 Climate Projections and Vulnerability Mapping

To inform the climate change risk assessment (Section 4) and the actions in this adaptation plan (Section 5), it is important to understand the risks posed by climate change at a local level. Risk is made up of three main features:

- **Likelihood**: How likely a hazard is to occur. Hazards include events such as flooding, heatwaves, heavy rainfall and extreme weather. Climate change has increased the likelihood of these hazards occurring and thus potential impacts resulting from them.
- **Exposure**: This includes one's physical location relative to a hazard, e.g. being in close proximity to a river that could flood and whether you have features physically protecting you from hazards, such as a flood barrier or shading from trees.
- **Vulnerability**: How severe a hazard would affect an individual, community, organisation, asset or system. For people, vulnerabilities include features of socioeconomic deprivation and pre-existing health vulnerabilities. Systems and physical assets may be more vulnerable if they have single points of failure or are already under significant stress.

Several exercises have been carried out to inform the development of this adaptation plan to understand these three features of risk in Somerset, along with key sites and features within the ICS. These include:

- **Climate change projections** providing an overview of the current climate and how the climate may change in Somerset in the short-, medium- and long-term future.
- **Flood risk mapping** for key sites within the ICS.
- An initial look at the **vulnerability** of the population contextualised with mapping of key climate impacts in Somerset.

This section provides an overview of the key findings of both the climate projections analysis and the risk and vulnerability mapping. For full details, results and methodologies, an Evidence Report can be made available upon request.

This analysis considers the questions:

- What are the climate impacts likely to affect key healthcare sites in Somerset?
- Where are vulnerable individuals and communities (e.g. due to poor health or living in poverty) situated relative to local climate impacts?
- What and where are the more systemic climate impacts in Somerset affecting health and healthcare? This includes drought/water supply, agricultural productivity and biodiversity.
- Where should further adaptation action in the short and long-term take place, both within and beyond the sphere of control of the NHS? This should take into consideration priorities (i.e. current risk levels) and opportunities for adaptation.

3.1 Climate Change Projections

Changes in climate can result in hazards including heatwaves, droughts, storms, heavy rainfall and subsequent flooding and overall climatic variations. By building a picture of the change expected in Somerset, we can better predict the likelihood and severity of impacts, thus feeding into the Climate Change Risk Assessment (Section 4).

Table 2 shows an overview of the projected changes for various climate factors in Somerset in the medium- and long-term with a written summary for Temperatures, Precipitation, and Sea Level Rise in the rest of this section. The main takeaway from these projections is that much like the rest of England, **Somerset is likely to experience hotter, drier summers and warmer, wetter winters.**

The severity of these changes varies slightly across the county, but a significant change in weather and climate will be felt everywhere in the coming decades. The Evidence Report that accompanies this adaptation plan provides a more detailed breakdown and figures representing the climate projections for Somerset; this is available upon request.

Table 2. Projected changes in various climatic factors compared to the baseline period (1981-2000) for the five historical districts in Somerset. Medium-term equates to a scenario of 2 degrees C average global warming by the 2040s and end of century refers to a scenario of 4 degrees C average global warming by the 2100s. Source of data: UKCP18, Met Office. Abbreviations: Av.=Average; Temp.=Temperature; Precip.=Precipitation.

	West Somerset		Taunton Deane		Sedgemoor		South Somerset		Mendip	
	Medium-term	End of Century	Medium-term	End of Century	Medium-term	End of Century	Medium-term	End of Century	Medium-term	End of Century
Change in av. winter temp. (°C)	+1.3	+2.7	+1.3	+2.7	+1.3	+2.7	+1.3	+2.8	+1.3	+2.8
Change in av. summer temp. (°C)	+2.0	+4.2	+2.1	+4.4	+2.1	+4.3	+2.2	+4.4	+2.2	+4.5
% change in av. winter precip. (mm)	+5%	+13%	+6%	+12%	+8%	+18%	+8%	+17%	+8%	+20%
% change in av. summer precip. (mm)	-19%	-35%	-18%	-34%	-15%	-32%	-16%	-32%	-18%	-34%
Annual number of days above 25°C (days/yr)	+10.9	+32.5	+18.5	+49.2	+19.7	+51.7	+21.0	+54.7	+19.1	+49.4
Annual number of nights above 20°C (days/yr)	+0.0	+1.4	+0.0	+1.7	+0.3	+4.6	+0.1	+2.5	+0.1	+2.9
Change in Drought Severity Index	+4.5	+14.3	+7.6	+20.3	+4.1	+10.7	+6.5	+13.2	+5.4	+10.6

3.1.1 Temperatures

All five districts in Somerset are likely to experience higher average summer temperatures to the order of between 4.3-4.5°C, and average winter temperatures around 2.7°C higher, when compared to the baseline (1981-2000) by the end of century.

- The current and projected average summer temperature across Somerset is similar, with West Somerset likely to be the coolest and Sedgemoor the warmest.
- All five districts in Somerset have experienced 1.5 to two times as many hot summer days (above 25°C) in recent years compared to the baseline. All should continue to expect a large increase in days above 25°C, with at least three times as many by the end of the century than the recent past (2001-2020).
- Hot nights (above 20°C) are extremely rare in Somerset and this is likely to continue to be the case, with no significant increase expected until the end of the century.

3.1.2 Precipitation (rain, hail, sleet and snow)

By the end of the century, winters in Somerset could be 16% wetter and summers could be 34% drier than the baseline (1981-2000).

- All five districts have already seen an increase in winter precipitation and a decrease in summer precipitation in recent years (2001-2020) compared to baseline (1981-2000).
- West Somerset is by far the wettest district, already receiving 66% more precipitation in winter than in the rest of the county and this trend is likely to continue.
- Sedgemoor is projected to receive the least amount of rain in winter, although Taunton Deane and South Somerset are expected to be the driest in the summer by the 2040s.
- Drought can be expected to increase in severity in the coming decades, with high variation between the districts. By the end of the century it is likely that Taunton Deane will experience significantly higher drought severity than the rest of Somerset.
- However, even the districts that are not expected to have drought as severe (Sedgemoor in the medium-term and South Somerset in the long-term) are still likely to experience levels of drought much higher than the present day.

3.1.3 Sea Level Rise

Somerset could experience sea level rise of around 20cm by the end of the 2030s, increasing by between 33 and 40cm by the 2050s and by as much as 115cm by the end of the century.

The following four figures, Figures 2 to 5, show maps (© UKCP18) showing various projected climatic changes compared to a baseline (1981-2000) in a two degrees Global Warming Level scenario, expected by the 2040s or 50s. The boundary of the Somerset ICB, including the breakdown into five districts, is shown by a black outline, with key towns/ cities labelled. Images in the top left corner of each map show results for the UK as a whole for comparison.

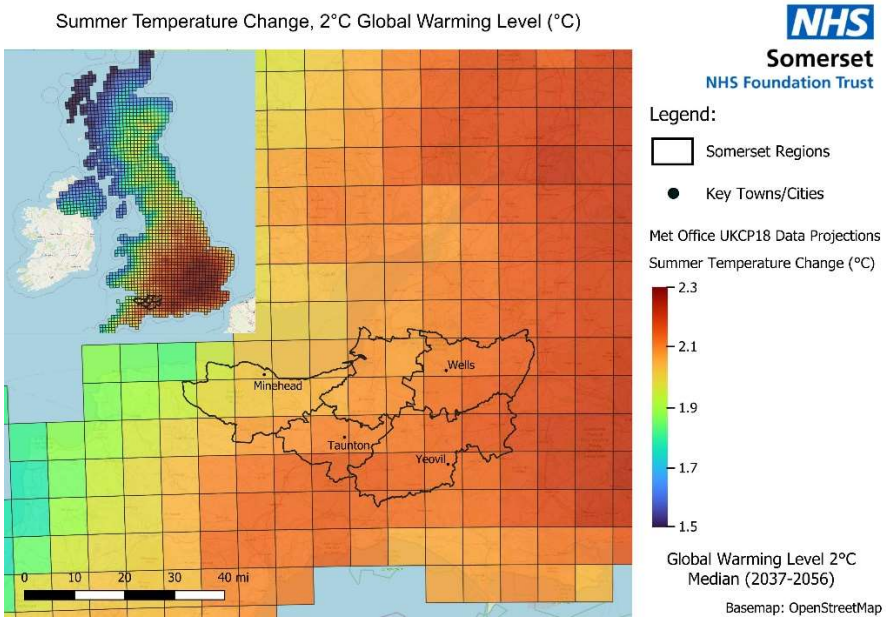

Figure 2. Map showing change in average summer (Jun-Jul-Aug) temperature projected by 2037-2056 compared to the period from 1981-2000, showing hotter summers. Data from UKCP18, figure by SWM.

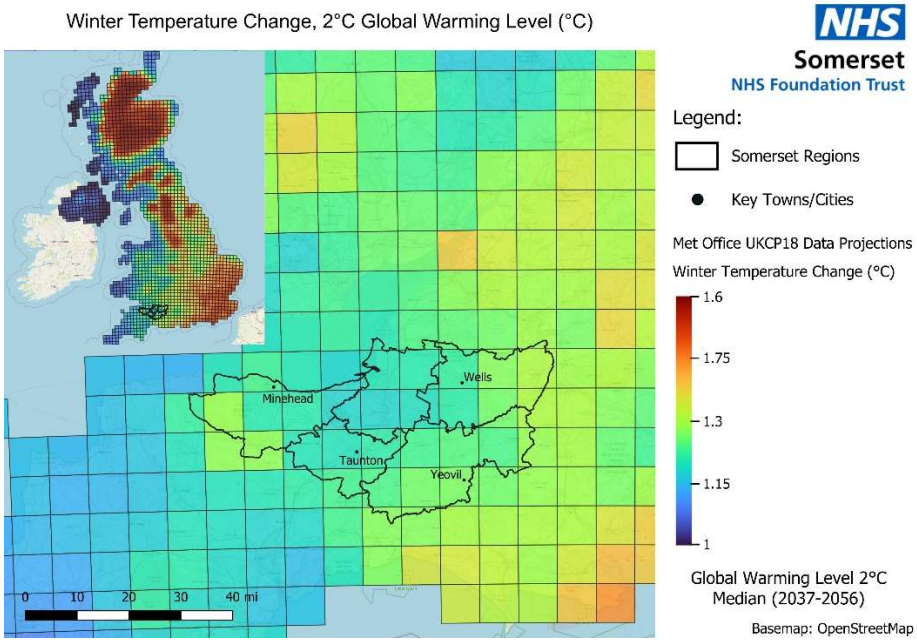

Figure 3. Map showing change in average winter (Dec-Jan-Feb) temperature projected by 2037-2056 compared to the period from 1981-2000, showing warmer winters. Data from UKCP18, figure by SWM.

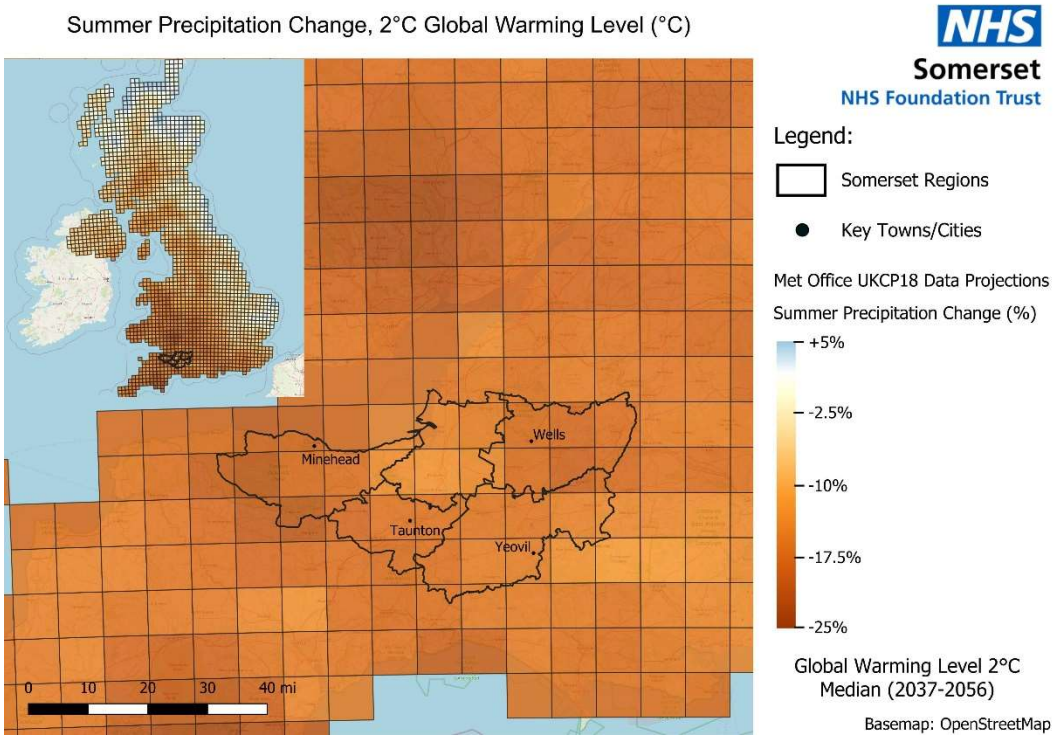

Figure 4. Map showing change in average summer (Jun-Jul-Aug) precipitation by 2037-2056 compared to the period from 1981-2000, showing a reduction in rainfall. Data from UKCP18, figure by SWM.

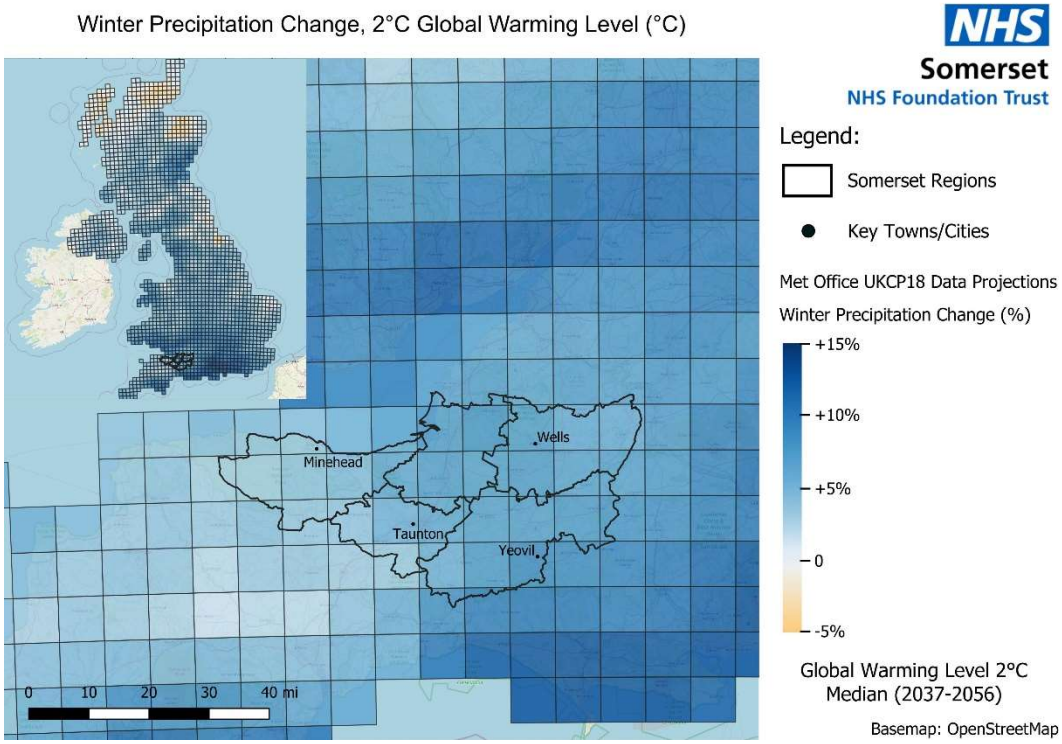

Figure 5. Map showing change in winter (Dec-Jan-Feb) precipitation by 2037-2056 compared to the period from 1981-2000, showing an increase in rainfall. Data from UKCP18, figure by SWM.

3.2 Risk and vulnerability mapping

This section provides an overview of the risk and vulnerability mapping completed for Somerset ICS and summarises the most pertinent findings which were then used to inform the CCRA (Section 4) and the adaptation plan (Section 5). The Evidence Report that accompanies this adaptation plan provides more detailed information on the risk and vulnerability mapping completed for Somerset, including all the site level flood risk maps. This report is available upon request, along with the GIS files of the maps produced.

Office for National Statistics (ONS) data on deprivation and health and social care site locations were overlaid with climate impact data. It is important to recognise that people's health, but also socioeconomic status, impact vulnerability to climate risks. Climate impact data mapped included:

- Heat impacts:
    - Maps showing heat and cold-related mortality now, the 2050s and the 2080s.
    - The average number of days annually that different residential building types overheat now, and how this will look in the 2050s and 2080s.
    - Maps showing the percentage of people affected by overheating in different areas of Somerset.
    - Average monthly summer temperatures in recent years.
    - Drought severity maps.
- Flooding:
    - Risk of flooding from rivers and sea across Somerset now and by the 2050s.
    - Risk of flooding from rivers, sea and surface water in six focus areas taken from Somerset ICB's infrastructure strategy: Bridgwater, Burnham and Highbridge, Chard, Taunton, Wellington and Yeovil.

The results show that both heat and flood risk are increasing in many areas of Somerset, and are likely to impact the areas where people are already experiencing the highest levels of deprivation and who are, therefore, likely to be the most vulnerable to climate change. There are also many health and care sites across Somerset at risk, including SFT sites, but also sites such as General Practices and Care Homes.

Cold and heat mortality across Somerset and flood risk in Taunton are depicted in Figures 6 and 7 respectively, providing a sample of the climate-related hazards, risks and vulnerabilities in the area that the ICS should be aware of. A full suite of additional maps is available in the Evidence Report (available on request), which can be used by any team, department or organisation within the ICS.

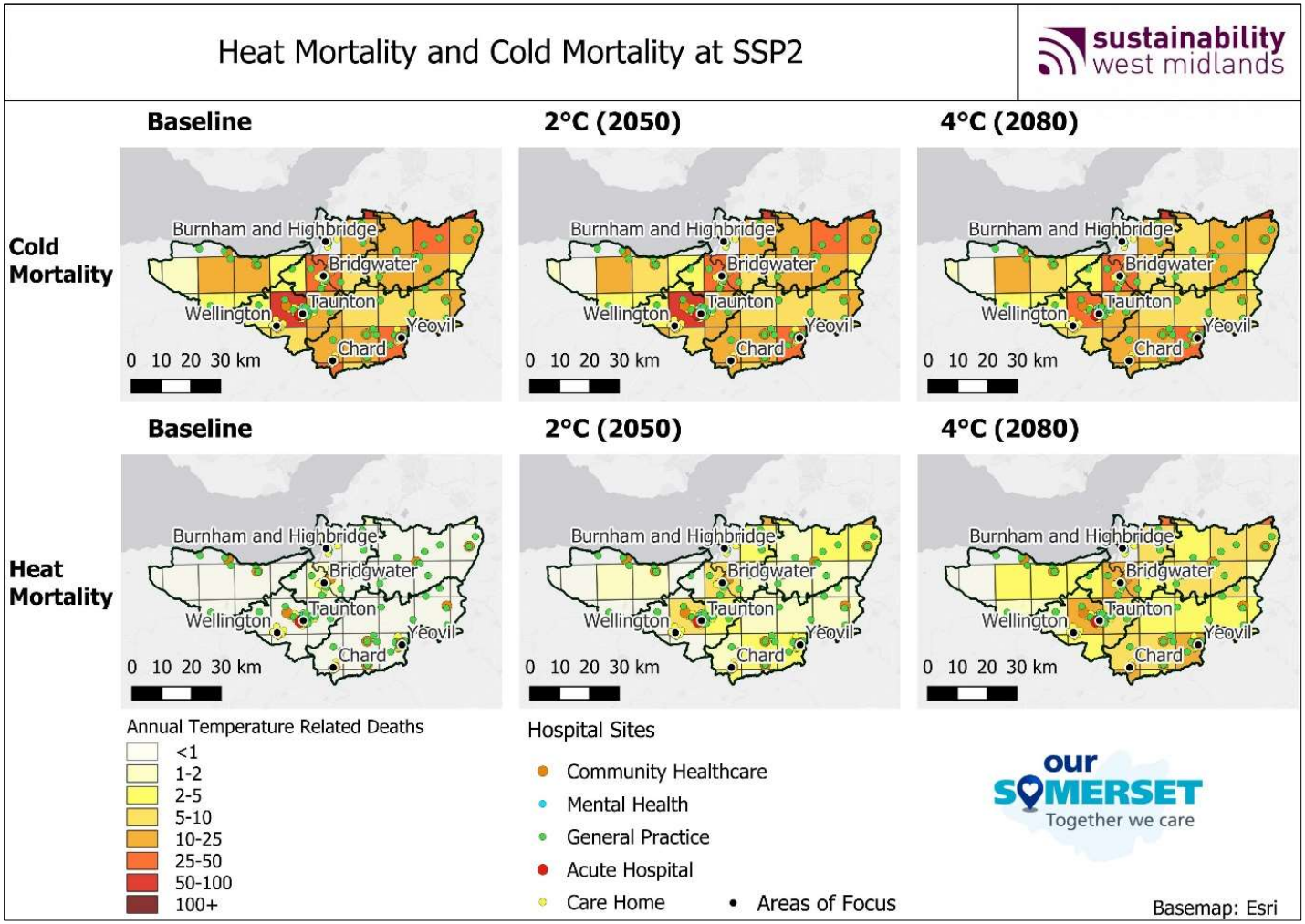

Figure 6. Cold and heat mortality maps showing the number of annual temperature related deaths across the Somerset ICS at three time periods (baseline, 2050 and 2080) under RCP8.5 and under population projection scenario SSP2. Data are given for cold and heat related mortality. Healthcare sites are identified in coloured dots as per the legend. Black dots show six areas of focus for addressing health inequalities from the Somerset ICS infrastructure strategy. Source: heat and cold mortality data from OpenCLIM, healthcare site information from Somerset ICB.

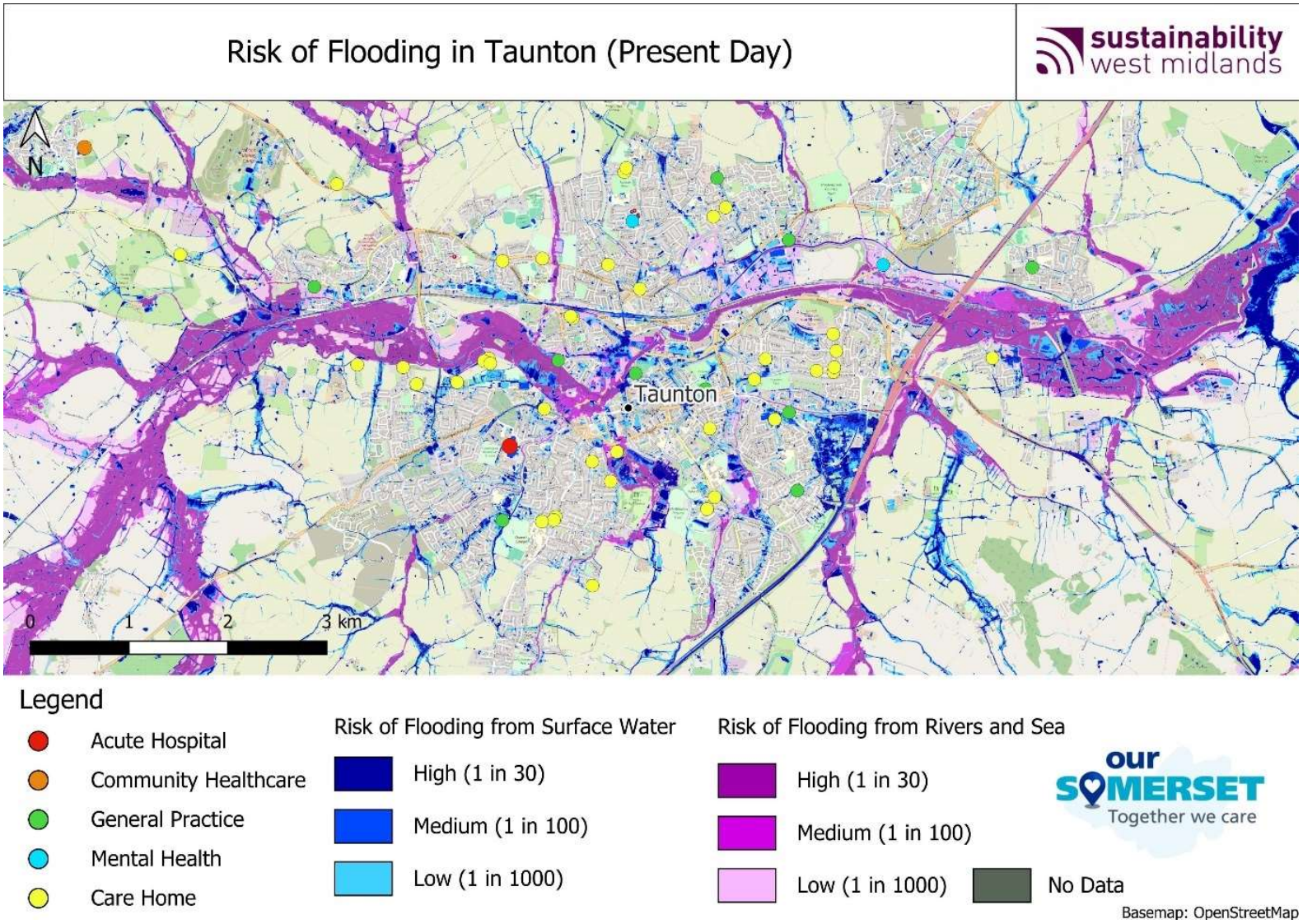

Figure 7. Map showing the flood risk for Taunton for the present day. The location of key healthcare buildings is also shown. Source: Flood risk data from the Environment Agency.

Flood risk mapping alongside evidence gained from engaging with stakeholders has been used to highlight the key areas at risk of flooding across key SFT sites. For the purpose of this project, site level flood risk maps were made and reviewed for:

- The two acute hospitals (Yeovil and Musgrove Park)
- Four community hospitals that were selected as a sample of community hospitals due to their size, location and level of flood risk:
    - Burnham-on Sea Community Hospital
    - Minehead Community Hospital
    - Bridgwater Community Hospital
    - Dene Barton Community Hospital

Tables 3 to 8 below list the key SFT sites where actions to address flood risk should be considered, ordered by importance based on the severity and immediacy of flood risk. Adaptation actions for these sites as appropriate have been included in the full action plan spreadsheet, available separately.

Table 3. Areas at risk of flooding at Yeovil Hospital, based on Environment Agency flood data.

Yeovil Hospital	
Areas at medium- to high-risk currently and in the future	All car parks are likely to flood from surface water.
Areas at low-risk currently and in the future	Access roads to the site could be impacted from surface water (although mostly in ditches alongside the road).

Table 4. Areas at risk of flooding at Musgrove Park Hospital, based on Environment Agency flood data.

Musgrove Park Hospital		
Areas at medium- to high-risk currently and in the future	Surface water flooding is likely around the Queens and the Duchess buildings, which could become internal.	Surface water flooding is likely on one access road to the site exiting the A38.

Table 5. Areas at risk of flooding at Burnham-on-Sea Community Hospital, based on Environment Agency flood data.

Burnham-on-Sea Community Hospital			
Areas at medium- to high-risk currently	Roads entering the site and Medical Centre across the road both severely impacted by surface water.	North side of the hospital externally impacted by surface water.	
Areas at low risk currently	Entrance/car park to the Ambulance station across from the Hospital is at risk from surface water.		
Areas at medium-high risk by 2040s	Further surface water flooding on the north side of the hospital externally.	Surface water at the Hospital car park on the south side.	Further flooding to roads entering the site.

Table 6. Areas at risk of flooding at Bridgwater Community Hospital, based on Environment Agency flood data.

Bridgwater Community Hospital	
Areas at medium- to high-risk currently	Surface water is likely to block both the main and rear entrances.
Areas at low risk currently	Small pools of surface water flooding are likely in both car parks.
Areas at medium-high risk by 2040s	Surface water is likely at the south side of the building externally.

Table 7. Areas at risk of flooding at Minehead Community Hospital, based on Environment Agency flood data.

Minehead Community Hospital			
Areas at medium- to high-risk currently	Surface water flooding is likely around the south and west sides of the building, which could become internal.	Flooding from rivers is likely in all car parks.	Flooding from rivers is likely on the road into the hospital (Luttrell Way), but not on the footpath at the east of the site.

Table 8. Areas at risk of flooding at Dene Barton Community Hospital, based on Environment Agency flood data.

Dene Barton Community Hospital	
Areas at medium- to high-risk currently	There is likely to be surface water flowing around the whole building, which could become internal flooding.

Flood risk maps should be consulted as specific adaptation projects are being planned and implemented, alongside any records of climate change impacts that have since been developed, to ensure flood management and resilience measures are being carried out in the most at risk/ effective locations. This information can also be used by teams such as Estates and Facilities when planning any site developments across SFT and the ICB to ensure flood risk has been sufficiently considered. All flood risk maps completed for this project are available upon request.

4 Climate Change Risk Assessment

The climate change risk assessment has been split into three sections to help different functions across the ICS understand the risks to their roles and responsibilities. Presented below are the most significant risks for each category in the short- and long-term. The accompanying Evidence Report includes the detailed Climate Change Risk Assessment, available upon request. See the Glossary at the end of this document for more detail on acronyms and terms listed in the CCRA.

4.1 Risks to Community Health

In the short-term, some of the most significant risks are:

- **Increased health risks for people with pre-existing health conditions** that are exacerbated by high temperatures (e.g. people at risk of stroke, pregnant women, infants etc.) and associated increased air pollution (e.g. asthma), in particular in urban areas and for people living in deprived areas.
- **Psychological stress** on communities vulnerable to flooding, including farming communities, from experiencing or anticipating severe weather events such as flooding.
- **Psychological stress** from a reduced quality of life due to climate change, for example as a result of food, water or energy insecurity or the rising cost of living.
- **Delays to receiving emergency treatment** if emergency services cannot access patients in the community that are cut-off due to flooding.

As well as the above risks increasing in severity, other significant risks in the longer-term to community health include:

- **In urban and deprived areas**, an increase in incidence of long-term health conditions such as respiratory conditions (e.g. asthma), sleep disorders, cardiovascular and cerebrovascular conditions and skin cancer due to higher temperatures and poorer indoor and outdoor air quality.
- **Psychological stress** on the general population from a reduced quality of life.
- **The interrelated impact of mental health on physical health** and vice-versa. As the occurrence of physical conditions increase, mental health is also negatively impacted, in particular for people with pre-existing health conditions.
- **Increased incidence of vector-borne diseases and pathogenic infections**, including tropical diseases and an increase in seasonal diseases such as tick-borne Lyme disease.

4.2 Risks to Clinical Services

Currently, the most significant risks to clinical services are:

- **Delays or disruption to treatment**, in particular emergency treatment, including from utility disruption (e.g. power cuts or water supply disruption) but also from transport disruption affecting patients, staff and deliveries to healthcare sites.
- **Increased admissions to A&E** and other emergency treatment from acute injuries during heavy rain, flooding and storms, as well as heatstroke, dehydration and other extreme heat-related illnesses.
- **An increase in service demand during extreme incidents** resulting in a greater workload and higher demand on staff alongside harsher working conditions such as high temperatures, putting a strain on staff wellbeing and safety.
- **Exacerbation of existing health issues** from dehydration or overheating (particularly vulnerable people include stroke patients, pregnant women and the elderly).
- **Decreased treatment space** and the disruption of moving patients and equipment during an extreme event in Acute Hospitals. For example, wards could become too hot during a heatwave, or roof leaks could occur or sites could become flooded during heavy rainfall, meaning that areas of buildings are temporarily unsafe or unusable.

As well as the risks above increasing in severity, the most significant risks in the longer-term include:

- **Decreased treatment space** and disruption of moving patients and equipment during an extreme event in Community Hospitals and mental health inpatient wards, as well as in Acute Hospitals.
- **Increased workload** for moving patients and/or equipment/medicines etc. to cope with extreme weather, putting a strain on staff capacity.

4.3 Risks to Non-Clinical Services

Currently, the biggest risks to non-clinical services include:

- **Disruption to various sites across SFT due to flooding** (see Section 3).
- **An increasing need for maintenance** across sites during emergencies in extreme weather but also overall due to faster wear and tear.
- **A reduction in staff wellbeing**, including those in offices and working outdoors, due to uncomfortable working conditions in high temperatures.
- **IT servers overheating** in Primary Care resulting in local IT issues such as staff not being able to access online applications, files or communication systems such as email.
- **Increased energy required for cooling** (equipment and people) impacting carbon emissions.

In the longer term, significant risks also include:

- **Delays to maintenance** or planned works due to extreme weather.
- **Damage to utilities and buildings** on-site. This could lead to utilities (e.g. water or electrics) requiring repairing or replacement, and buildings becoming damp and mouldy due to water ingress.
- **Supply chain disruption** due to an increase in extreme weather and rising temperatures, resulting in increased costs and decreased security for supplies including food, building materials and other equipment.

4.4 Risks to Digital Services

It should be noted that an assessment of the risks to digital infrastructure, services and supply chain from climate change was carried out as part of the Digital Resilience Project funded through the Greener Digital Project. This Digital Resilience for Somerset Report, which includes this risk assessment along with adaptation recommendations, is available upon request.

Overleaf is the summary adaptation plan.

5 Adaptation Plan

The Adaptation Action Plan uses all the information collected during this project, including the climate change projections, risk mapping and stakeholder engagement, along with SWM's Adapt to Survive Climate Change Adaptation Planning tool for the NHS and the Climate Adaptation Framework for NHS Organisations in England, to produce a list of adaptation actions for Somerset ICB, SFT and partners to implement.

A total of 75 actions have been identified for partners to implement, 41 of which are a 'Very High' or 'Very High Immediate' priority. Table 11 lays out the 41 highest priority actions recommended for Somerset ICS to enable and deliver adaptation. The actions are split into categories that reflect the type of interventions and/or the locations and functions within the ICS that they address. These categories and their respective codes are shown in Table 9 and Table 10 shows the priority levels assigned to each action. See the Glossary at the end of this document for more detail on acronyms and terms listed in the action plan.

Table 9. Categories used in the adaptation action plan and their action codes.

Category	Action code
Governance and Strategy	G
Resource	R
Capacity Building	CB
Data, Monitoring and Evaluation	ME
Working Together	WT
People, Communications and Engagement	CE
Built Environment	BE
Suppliers and Procurement	P
Organisational and strategic shifts in the NHS	S
Site Specific Measures – Yeovil	Y
Site Specific Measures – Community Healthcare sites	CH
Site Specific Measures – Musgrove	M
Site Specific Measures – Ambulance Trust	SWA

Table 10. Priority levels used in the adaptation action plan.

Priority code	Priority
VH-I	Very High and Immediate
VH	Very High
H	High
M	Medium

The full adaptation action plan has been provided as a spreadsheet, available separately, which provides:

1. **Other actions** that are a Medium or High priority
2. **Further information** and guidance for those who may be responsible for delivering the actions
3. **Partner organisations** and specific teams/ departments that can support the lead organisation(s) listed in delivering actions
4. Further columns indicating potential **funding sources**, **timelines** and **resource** required for actions
5. A second table, Tab 2 in the spreadsheet, which provides **a list of more specific practical measures**. Somerset ICS and partners will need to use the actions in the full action plan to be able to appraise this list of suggested measures and determine which are the most appropriate and feasible to start implementing.

Please note the action codes in Table 11 below will have gaps in numerical sequencing (e.g. ME1, ME2, ME5) because the Medium- and High-priority actions included in the full spreadsheet-version of the action plan are not included in this document. Organisations listed as partners include Somerset Rivers Authority, Community and Voluntary Sector Organisations (CVSOs), and the General Practice Support Unit (GPSU), and teams within ICS organisations range from Clinical to Estates, to EPRR to Finance.

The action plan table starts overleaf.

Table 11. Adaptation Action plan summary, showing the highest priority actions.

Action Code	Action	Lead organisation(s)	Timescales	Priority
Governance and Strategy				
G1	Use the draft Terms of Reference produced by SWM to form a Somerset ICS Climate Adaptation Working Group.	ICB, SFT	Short-term, on-going	**VH-I**
G2	Appoint a Climate Change Adaptation Lead Officer.	ICB, SFT	Short-term	**VH-I**
G3	Integrate climate risk into board and department level risk registers.	ICB, SFT	Medium-term	**VH-I**
G4	Include climate change risks in templates/guidance/requirements for project level risk assessments across Somerset ICS.	ICB, SFT	Short-term, ongoing	**VH**
G5	Incorporate adaptation into existing strategies and procedures.	ICB, SFT	Short-term	**VH**
G6	Ensure consideration of extreme weather cognisant of climate change is included in Trust severe weather planning and community emergency plans.	ICB, SFT, LRF	Short-term, ongoing	**VH-I**
Resource				
R1	Formalise adaptation roles and responsibilities across functions.	ICB, SFT	Medium-term	**VH**
R2	Confirm who is responsible for the delivery of individual adaptation actions.	Working Group	Short-term	**VH-I**
R3	Carry out an exercise to identify and secure human resources for adaptation.	Working Group	Short-term	**VH-I**
R4	Identify financing options and funding sources suitable for adaptation option implementation.	Working Group	Short-term	**VH-I**
R5	Embed adaptation into TMO activities and budgets.	ICB	Short-term	**VH-I**
Capacity Building				
CB1	Ensure key staff undergo basic training on climate change risks and adaptation.	ICB, SFT, PC	Medium-term	**VH**
CB2	Provide training and develop resources for senior management to gain board-level buy-in for adaptation.	ICB, SFT, PC	Medium-term	**VH**
CB3	Carry out team specific workshops to build climate awareness and carry out adaptation planning.	ICB, SFT	Medium-term	**VH**
CB4	Support organisations throughout the ICS to incorporate climate change considerations in Business Continuity Planning.	ICB, SFT, PC	Medium-term	**VH**

Action Code	Action	Lead organisation(s)	Timescales	Priority
CB5	Support organisations throughout the ICS to plan and deliver their own adaptation measures.	ICB, SFT, PC	Medium-term	**VH**
Data, Monitoring and Evaluation				
ME1	Use existing spatial data to understand the impacts from climate change and plan adaptation activities.	ICB, SFT	Short-term	**VH**
ME2	Use existing non-spatial data to understand the impacts from climate change on your services and people.	Working Group	Ongoing	**VH**
ME5	Include ways to link to climate and extreme weather impacts in existing data collection processes across all functions.	ICB, SFT, PC	Short-term, on-going	**VH**
ME6	Develop an appraisal process for selecting and prioritising from an emerging set of adaptation options.	ICB, SFT	Medium-term, ongoing	**VH-I**
ME7	Update this Action Plan annually and set up a monitoring framework.	Working Group	On-going	**VH-I**
Working Together				
WT1	Map out external stakeholders to engage with on adaptation.	ICB, SFT	Short-term	**VH-I**
WT2	Engage with external organisations to drive adaptation planning and reduce duplication of efforts.	ICB, SFT	Medium-term	**VH**
WT5	Collaborate with external partners to deliver adaptation.	ICB, SFT	Medium- to long-term	**VH**
People, Communications and Engagement				
CE1	Ensure relevant staff sign up for weather warnings.	ICB, SFT, PC	Short-term	**VH-I**
CE2	Identify existing climate change communications being disseminated by organisations within the ICS.	Working Group	Short-term	**VH-I**
CE3	Develop an external communications and engagement strategy for climate change and public health, working collaboratively with partners in the LRF and wider ICS.	Working Group, LRF	Medium-term	**VH**
CE4	Develop an internal communications strategy and action plan focused on climate change risks and resilience.	SFT	Medium-term	**VH**
CE5	Create and disseminate awareness-raising resources for general staff to support behaviour-related adaptation measures.	ICB, SFT	Short- to Medium-term	**VH**
CE6	Carry out consultations and stakeholder engagement to plan effective adaptation measures.	Working Group	Medium-term, ongoing	**VH**

Action Code	Action	Lead organisation(s)	Timescales	Priority
Built Environment and Infrastructure				
BE1	Prioritise locations that are critical for essential services for adaptation and resilience measures.	ICB, SFT	Short-term	**VH**
BE2	Prioritise maintenance to address water ingress into buildings.	SFT	Short-term	**VH-I**
BE3	Set standards for equipment and facilities for functioning within conditions cognisant of climate change.	SFT	Ongoing	**VH-I**
BE4	Include specifications, guidance and requirements for addressing climate change adaptation in building designs.	ICB, SFT	Short- to Medium-term	**VH**
BE8	Plan a programme of works for addressing overheating risks in key treatment spaces across SFT.	SFT	Medium-term	**VH**
BE10	Use the Digital Resilience for Somerset report to plan and prioritise actions specific to digital infrastructure.	Working Group	Short- to Medium-term	**VH**
Suppliers and Procurement				
P1	Conduct a review of external suppliers and their climate change resilience.	ICB, SFT	Short-term	**VH-I**
P2	Create an engagement plan for working with external suppliers on their climate resilience.	ICB, SFT	Short-term	**VH**
P4	Develop procurement guidelines or requirements to enhance supply chain resilience.	ICB, SFT	Short-term	**VH**
Organisational and strategic shifts in the NHS				
S6	Use this adaptation plan to ensure the legacy of adaptation work in Somerset ICS is carried over to the new ICS Cluster.	Working Group	Short-term	**VH**
S7	Continue to develop and deliver actions set out in the digital climate resilience chapter of the climate adaptation plan.	ICB	Medium-term	**VH**

6 Next steps and recommendations

This Action Plan, and the engagement and analysis that informed it, is just the first step in ensuring that Somerset ICS can adapt to climate change. SWM can support with the actions included, especially in a catalysing role to ensure action takes place, but cannot enforce the actions or resource them.

SWM recommends the following next steps be prioritised and applied as soon as possible, to ensure best chance of successful implementation of this adaptation plan:

1. **Set up governance and effective monitoring and evaluation.**

2. **Re-visit the plan and identify co-benefits and funding opportunities.**

3. **Carry out a strategic alignment exercise within the ICB and SFT.**

Key points to remember:

- **Keep raising awareness:** ensure that senior leadership understand the importance of adaptation in the context of wider strategic goals of the ICB, SFT and the wider ICS.
- **Maintain engagement:** use the momentum from this project to keep engaged with partners across the ICS, especially in the context of resource constraints for adaptation delivery.
- **Ensure this plan is shared** with relevant teams in the NHS and wider system.
- **Be innovative!** Look for financing options or collaborators outside of the usual suspects.
- **Use co-benefits** and existing activities to build a case for adaptation in your organisation.

Further notes expanding on these points are provided in the Evidence Report, available upon request.

Glossary

Table 12. Glossary of terms and acronyms used throughout this document.

Term	Description
Definitions	
Climate Change	Long-term changes in the average weather patterns that have come to define the local, regional and global climates. Human activities such as burning fossil fuels have led to a surplus of Greenhouse gases such as carbon dioxide trapping heat in our atmosphere, resulting in an observed increase in global temperatures and thus accelerated climate change.
Climate Change Adaptation	Any action to reduce our exposure or vulnerability to the actual or expected impacts of climate change. This includes hard infrastructure, nature-based solutions, or adapting our processes, policies, systems and behaviour.
Departments or teams	
Clinical	Unless specified, this means teams directly supporting or delivering treatment and care in the ICS.
EPRR	Emergency Planning, Response and Recovery. Unless specified, this means teams from all organisations across the ICS.
Estates	Teams responsible for the built environment in the ICS, also covering Facilities functions. Unless specified, this means teams from all organisations across the ICS.
Finance	Unless specified, this means teams from all organisations across the ICS responsible for allocating and managing budgets.
TMO	Transformation Management Office within Somerset ICB.
Working Group	Members of the Somerset ICS Adaptation Working Group.
Organisations	
Ambulance Trust	South West Ambulance Service Trust
Council	Somerset Council
CVSO	Community and Voluntary Sector Organisations
Greener NHS	NHS body responsible for the Greener NHS Programme
GPSU	General Practice Support Unit
ICB	Somerset Integrated Care Board
ICS	Somerset Integrated Care System
LRF	Avon and Somerset Local Resilience Forum, responsible for the Community Risk Register
NHS	National Health Service
NHSE	NHS England
PC/ Primary Care	All Primary Care services in Somerset (Pharmacies, Optometrists, Dentists, GPs)
SFT	Somerset Foundation Trust
Somerset Rivers Authority	Partnership for reducing the risks and impacts of flooding across Somerset

~END~