East Sussex

Addressing the Health Effects and Impacts of Climate Change

Addressing Environment, Climate and Health
A Systemwide Health Impact Assessment for East Sussex (ECH-HIA)

Taking a Whole Systems Approach for Integrating and Advancing Population and Planetary Health in All of Our Approaches

Main Technical Report

Part 3E: Considerations, Opportunities and Actions Steps to Address the Health Effects of a Changing Climate with regards to Vulnerable Settings



Contents

1. Explanation, Rationale and Principles for formulation and Implementation of the Consideration and Opportunities for the Whole of the East Sussex System 4

2. Introduction..... 6

3. Overview and Wider Context..... 7

4. Care Homes 9

High Level Strategic Opportunity: 9

Rationale: 9

Considerations, Opportunities and Action Steps 9

Context and Impacts 13

5. Community Sports Facilities 17

High Level Strategic Opportunity: 17

Rationale: 18

Considerations, Opportunities and Action Steps 18

Context and Impacts 21

6. Hospices 26

High Level Strategic Opportunity: 26

Rationale: 26

Considerations, Opportunities and Action Steps 26

Context and Impacts 30

7. Hospitals.....33

High Level Strategic Opportunity: 33

Rationale: 33

Considerations, Opportunities and Action Steps 33

Context and Impacts 36

8. Nurseries and Early Years Settings 39

High Level Strategic Opportunity: 39
Rationale: 39
Considerations, Opportunities and Action Steps 40
Context and Impacts 42

9. Nursing Homes 46
High Level Strategic Opportunity: 46
Rationale: 46
Considerations, Opportunities and Action Steps 46
Context and Impacts 49

10. Schools Buildings 52
High Level Strategic Opportunity: 52
Rationale: 52
Considerations, Opportunities and Action Steps 52
Context and Impacts 55

11. 3E Section Conclusion 59

1. Explanation, Rationale and Principles for formulation and Implementation of the Consideration and Opportunities for the Whole of the East Sussex System

The following considerations, opportunities and action steps have been co-developed by partners from across the East Sussex system, representing the wide range of organisations, services and sectors described in the Introduction (Part 1). Collectively, they reflect a shared ambition to strengthen climate resilience, improve population and planetary health, reduce inequalities and support sustainable development across the county.

The consideration, opportunities and action steps have been developed through an extensive programme of collaboration, evidence gathering and system-wide engagement, including:

- Individual climate and health conversations with organisations and sector representatives.
- A comprehensive review of policies, strategies and plans relating to environment, climate change and health across the East Sussex system.
- Three multi-agency systemwide workshops with most sectors and services.
- Wider stakeholder engagement and consultation activities.
- Multiple validation and refinement stages, during which considerations, opportunities and action steps were developed, challenged, reviewed, validated and revalidated by partners from across the East Sussex system.

This collaborative process has ensured that the considerations, opportunities and action steps reflect collective expertise, shared ownership and a common commitment to implementation. Rather than developing them solely within individual sectors, partners worked beyond their own organisational responsibilities to identify opportunities for collaboration, remove barriers, challenge assumptions and act as critical friends. This systems-based approach enabled participants to identify shared priorities, maximise co-benefits and developed considerations, opportunities and action steps that deliver value across multiple organisations and sectors.

The process of undertaking an **Environment, Climate and Health – A Systemwide Health Impact Assessment for East Sussex (ECH-HIA)** has encouraged partners to

think beyond individual organisational priorities and consider how the wider East Sussex system can work more effectively as a whole. It has helped identify gaps, barriers, tensions, dependencies and further opportunities that may not have been recognised through a single lens and single-organisation planning. This approach has worked to strengthen understanding of the interconnected relationships between a changing climate, health, inequalities, the environment and sustainable development.

Although the East Sussex County Council Public Health Team facilitated and coordinated the development of this HIA and these opportunities, responsibility for their implementation rests collectively with all partner organisations. Delivery will be taken forward through **Phase 2 (2026–2030)**, with organisations adopting relevant action steps through their own governance arrangements and collectively through the **East Sussex Whole System Climate and Health Partnership**.

The considerations, opportunities and action steps have been intentionally developed to be ambitious whilst remaining grounded in practical implementation. They are designed not only to address current climate and health challenges, but also to articulate what should be made possible through long-term collaboration, innovation and systems leadership.

In developing these considerations, opportunities and action steps, partners sought to:

- Promote a positive, hopeful and solutions-focused narrative around climate and health.
- Balance ambition with realism, recognising financial, organisational and political constraints.
- Reflect emerging national, regional and local policy developments.
- Identify opportunities to influence policy and advocate for wider system change.
- Demonstrate the "art of the possible" by encouraging innovation and collaborative problem-solving.
- Align organisations around shared priorities, reducing duplication and maximising collective impact.
- Provide a confident and collective voice for partners committed to protecting health, reducing inequalities and strengthening resilience in response to climate change.

The considerations, opportunities and action steps presented within this report are intended to provide a strategic framework for action rather than a prescriptive implementation plan. During **Phase 2 (2026–2030)** they will be translated into

organisation-specific delivery plans, including SMART objectives (Specific, Measurable, Achievable, Realistic and Time-bound) objectives, enabling partners to implement actions in ways that reflect their individual responsibilities while contributing to the shared vision for a healthier, fairer, more resilient and climate-ready East Sussex.

2. Introduction

The following section and it sub-sections apply the collaborative framework described above to each of the following **vulnerable settings** identified through the East Sussex Environment, Climate and Health Impact Assessment (ECH-HIA). These are (in alphabetical order):

- Care Homes
- Community Sports Facilities
- Hospices
- Hospitals
- Nurseries and Early Years Settings
- Nursing Homes
- School Buildings

Together, they provide the understanding for how a changing climate is and will affect vulnerable settings and population health today, how these risks are expected to evolve over the coming decades, and where coordinated action across the East Sussex system can have the greatest impact.

This section and its sub-sections follow a consistent structure to support both strategic decision-making and practical implementation. It begins with a **High-Level Strategic Consideration and Opportunity**, supported by a clear rationale explaining why the issue is important for health, wellbeing and climate resilience. This is followed by a set of **Considerations, Opportunities and Action Steps**, which identify practical actions that organisations across the system can adopt individually and collectively. Each chapter then presents the determinant of health, summarising the latest information on how a changing climate is or will influence that determinant of health as a result of environment and climate hazards and the resulting implications for population health. To support implementation, chapters also review relevant **International and National Responses**, describe the **Current East Sussex Response** and highlight opportunities to build on existing strengths, address identified gaps and strengthen partnership working.

Although each of the vulnerable settings are presented separately, they should not be considered in isolation. The determinants of health are highly interconnected, with many sharing common drivers, vulnerable populations, health outcomes and opportunities for intervention. For example, going from nursing homes to hospitals

and hospitals to nursing homes. Recognising these interdependencies is fundamental to a systems-based approach, enabling partners to identify actions that deliver multiple health, environmental, social and economic co-benefits across the county.

Taken together, the chapters that follow provide both the strategic context and practical framework for strengthening climate resilience across East Sussex. They are intended to support informed decision-making, encourage collaboration across organisational boundaries and provide a shared evidence base for the development of coordinated local action throughout Phase 2 (2026–2030).

3. Overview and Wider Context

A changing climate is impacting and will continue to impact vulnerable settings which accommodate individuals who are more susceptible to health risks or rely on continuous access to care, education, recreation, or secure accommodation. Climate-related disruptions can therefore have significant consequences for health, wellbeing, service delivery, and operational resilience. Adaptation measures such as improved building design, emergency planning, cooling strategies, flood resilience, and sustainable infrastructure are increasingly important to protect these settings and their occupants.

For the purposes of this HIA the following settings have been identified as the most vulnerable and 'considerations and opportunities' and actions steps have been identified for them in relation to local climate and health action.

Vulnerable Setting	The Effects of a Changing Climate	Potential Health Impacts
Care Homes	Increased exposure to heatwaves, flooding, power outages, water shortages, and disruption to care services. Buildings may be poorly adapted to extreme temperatures.	Heat-related illness, dehydration, worsening of chronic conditions, increased respiratory and cardiovascular problems, mental distress, and increased mortality among residents.
Nursing Homes	Similar risks to care homes, with additional challenges due to residents requiring complex medical and nursing care. Service disruptions can have significant consequences.	Heat stress, dehydration, infections, exacerbation of long-term conditions, medication management issues, and increased hospital admissions or mortality.

Hospices	Vulnerability to extreme weather events, infrastructure disruption, and increased demand for services during climate-related emergencies.	Reduced comfort and wellbeing for patients, worsening symptoms due to heat and poor air quality, disruption to palliative care services, and increased emotional stress for patients and families.
Hospitals	Risk from heatwaves, flooding, storms, power failures, water shortages, and increased demand for emergency and healthcare services. Critical infrastructure may be affected.	Increased patient admissions, pressure on healthcare systems, heat-related illness, respiratory and cardiovascular conditions, infectious disease outbreaks, and disruption to healthcare delivery.
Schools	Exposure to overheating, flooding, poor air quality, and disruption from extreme weather events. Educational activities may be interrupted.	Heat-related illness, dehydration, reduced concentration and learning performance, respiratory issues, injuries during extreme weather events, and impacts on mental wellbeing.
Nurseries	Young children are particularly sensitive to heat, poor air quality, and infectious diseases associated with changing environmental conditions.	Increased risk of dehydration, heat exhaustion, respiratory problems, infectious diseases, reduced wellbeing, and developmental impacts associated with prolonged environmental stressors.
Community Sports Facilities	Outdoor and indoor facilities may be affected by extreme heat, storms, flooding, poor air quality, and water shortages, reducing usability and safety.	Increased risk of heat exhaustion, heatstroke, dehydration, respiratory problems, injuries during extreme weather, reduced physical activity levels, and negative impacts on community wellbeing.

4. Care Homes

High Level Strategic Opportunity:

Create a climate-resilient care home sector across East Sussex that protects residents, staff and services from climate-related risks while supporting healthy ageing, reducing avoidable illness and mortality, maintaining continuity of care and strengthening resilience across the wider health and care system. Through proactive adaptation, care homes should become safer, healthier, more sustainable and better equipped to respond to the challenges of a changing climate.

Rationale:

Care home residents are among the population groups most vulnerable to the health impacts of a changing climate due to advanced age, frailty, multiple long-term health conditions, cognitive impairment and reliance on continuous care and essential services. Climate-related hazards such as extreme heat, cold, flooding, poor air quality, infectious diseases, power outages and disruptions to supply chains can threaten resident health and wellbeing, compromise the delivery of care, and increase the risk of avoidable illness, hospital admissions and mortality. Care home staff and infrastructure are also vulnerable to workforce shortages, transport disruption and service interruptions during climate-related events. Developing a climate-resilient care home sector through climate-adapted buildings, emergency preparedness, resilient infrastructure, sustainable operations, workforce training and integrated health and care planning will help protect residents and staff, maintain continuity of care, strengthen system resilience, support healthy ageing, reduce pressures on health and care services, and ensure that care homes remain safe, sustainable and responsive in a changing climate.

Considerations, Opportunities and Action Steps

Opportunity 1: Strengthen Heatwave Preparedness and Resident Protection

Heat poses the most immediate climate-related health risk to care home residents. Given the evidence linking higher temperatures to increased mortality in care homes, all providers should implement comprehensive heat resilience measures to protect vulnerable residents.

Action Steps:

- Develop and implement site-specific Heatwave Plans aligned with UKHSA Heat Health Alerts.
- Undertake annual heat vulnerability assessments for all residents.
- Create personalised heat protection plans for residents at highest risk, including those with dementia, cardiovascular disease and respiratory conditions.
- Introduce enhanced hydration monitoring and recording during warm weather.
- Establish "cool rooms" and shaded indoor and outdoor areas.
- Adapt daily routines during heatwaves, including rescheduling activities and meals to cooler parts of the day.
- Review medications that may increase heat sensitivity in partnership with GPs and pharmacists.
- Increase staff observations and welfare checks during periods of extreme heat.
- Monitor indoor temperatures and establish escalation procedures when thresholds are exceeded.

Opportunity 2: Improve Climate Resilience of Care Home Buildings and Infrastructure

Many care homes were not designed to cope with future climate conditions. Building adaptation is essential to reduce overheating, improve comfort, maintain service continuity and protect residents during extreme weather events.

Action Steps:

- Conduct climate adaptation audits of all care home buildings.
- Retrofit buildings to reduce overheating through improved insulation, external shading, reflective roofing and solar-control glazing.
- Improve natural ventilation and install mechanical cooling systems where necessary.
- Undertake flood resilience assessments for all homes, particularly those in identified flood-risk areas.
- Install sustainable drainage measures and property flood protection where appropriate.
- Ensure critical equipment and utilities are protected from flood damage.
- Increase energy efficiency through LED lighting, heat pumps and renewable energy systems.
- Develop business cases to access external adaptation and decarbonisation funding.
- Incorporate climate adaptation requirements into all future care home developments and refurbishments.

Opportunity 3: Enhance Emergency Preparedness and Business Continuity

A changing climate is increasing the likelihood of heatwaves, flooding, storms, water shortages and power outages. Care homes must be prepared to respond effectively while maintaining safe care for residents.

Action Steps:

- Develop or update emergency response and business continuity plans to address climate-related hazards.
- Establish evacuation and relocation procedures for vulnerable residents.
- Maintain up-to-date resident emergency information and next-of-kin contacts.
- Secure backup power supplies and contingency arrangements for utilities and communications.
- Develop emergency water supply arrangements for drought conditions.
- Participate in multi-agency resilience planning with local authorities, NHS Sussex and the Sussex Resilience Forum.
- Conduct annual emergency exercises covering heatwaves, flooding and prolonged power failures.
- Create clear communication protocols for residents, families and staff during incidents.

Opportunity 4: Build Workforce Capacity and Climate Awareness

Staff play a critical role in protecting residents from climate-related health risks. Building climate awareness and preparedness across the workforce will improve resilience and response capability.

Action Steps:

- Deliver mandatory changing climate and health training for all care home staff.
- Provide specialist training on recognising heat-related illness, dehydration and respiratory distress.
- Integrate climate risks into induction programmes and ongoing professional development.
- Appoint a Climate and Sustainability Lead or Champion within each care home.
- Develop practical guidance and checklists for staff responding to climate-related incidents.
- Promote staff wellbeing and resilience during extreme weather events.
- Share learning and good practice across care home providers within East Sussex.

- Include climate adaptation responsibilities within governance and quality assurance processes.

Opportunity 5: Protect Resident Health, Wellbeing and Equality

Changing climate impacts are not experienced equally. Residents with frailty, long-term conditions, dementia or limited mobility may face disproportionate risks and require targeted support.

Action Steps:

- Incorporate climate vulnerability assessments into care planning and routine reviews.
- Develop personalised adaptation plans for high-risk residents.
- Strengthen infection prevention and control measures in response to climate-sensitive disease risks.
- Monitor residents at increased risk from poor air quality, heat and environmental hazards.
- Expand access to shaded outdoor spaces and therapeutic green environments.
- Support mental health and emotional wellbeing following severe weather events.
- Ensure residents and families receive accessible information about climate-related risks and protective actions.
- Regularly review outcomes for vulnerable groups to ensure inequalities are not widened by climate impacts.

Opportunity 6: Embed Climate Adaptation into Strategic Leadership, Partnership Working and Monitoring

Climate adaptation should become a core component of health and social care planning across East Sussex, supported by strong leadership, partnership working and continuous monitoring.

Action Steps:

- Develop an East Sussex Care Homes Climate Adaptation Framework.
- Integrate care homes into local Changing climate Health Impact Assessment and adaptation planning processes.
- Establish a multi-agency care home climate resilience working group involving East Sussex County Council, NHS Sussex, Public Health and care providers.
- Introduce climate resilience indicators within quality assurance and commissioning frameworks.

- Monitor heat-related illness, hospital admissions, mortality and service disruptions associated with extreme weather.
- Share data, lessons learned and best practice across the care sector.
- Seek external funding opportunities to support adaptation and decarbonisation projects.
- Produce annual progress reports on care home climate resilience and adaptation outcomes.

Context and Impacts

A changing climate represents a growing and significant public health challenge for care homes. Residents living in care homes are among the populations most vulnerable to climate-related hazards because they are disproportionately older, frailer, and more likely to be living with multiple long-term health conditions, cognitive impairment, or reduced mobility. These factors limit their ability to adapt to environmental stressors such as extreme heat, flooding, severe weather events, poor air quality, and disruptions to essential services. Unlike the general population, many care home residents are dependent on staff for hydration, medication management, mobility, and personal care, meaning that climate-related disruptions can have immediate consequences for health and wellbeing.

Historically, the UK health and care system has focused primarily on protecting vulnerable populations from cold weather. However, rising temperatures are shifting the balance of risk. The UK Climate Change Committee has identified overheating as one of the most significant future climate risks to health and social care settings. Average temperatures in the South East are projected to continue rising throughout the century, while heatwaves are expected to become more frequent, longer in duration and more intense.

The health impacts of extreme heat are already evident. According to the UK Health Security Agency (UKHSA), there were an estimated 1,311 heat-associated deaths in England during the summer of 2024. Nearly 40% of these deaths (496 deaths) occurred among care home residents. Care homes experienced one of the highest relative increases in mortality during heat episodes, with deaths approximately 13% above expected levels during periods of elevated temperature. These findings demonstrate that heat is no longer a future risk but a current and measurable threat to vulnerable populations living in residential care.

The mechanisms through which a changing climate affects health are complex. High temperatures can increase dehydration, impair cardiovascular function, worsen respiratory disease, reduce kidney function and increase the risk of heat exhaustion and heatstroke. Residents living with dementia are particularly vulnerable because they may not recognise symptoms of overheating, may struggle to communicate discomfort and may be less likely to take protective actions independently. A

changing climate therefore poses both direct risks through environmental exposure and indirect risks through increased strain on care services and infrastructure.

Implications for East Sussex

The implications of a changing climate for care homes are particularly significant in East Sussex because of the county's demographic profile. East Sussex has one of the oldest populations in England, making it inherently more vulnerable to climate-sensitive health impacts. **In 2024, the county's population was estimated at approximately 560,900 people, of whom 149,400 were aged 65 years and over. This means that 26.6% of residents were aged 65 or above, compared with a national average of around 18.7%. The proportion of residents aged 85 years and over is also substantially higher than the national average.**

The ageing population is expected to continue growing over the coming decade. East Sussex Joint Strategic Needs Assessment projections indicate that the population aged 65 and over will increase significantly by 2028, with particularly strong growth among the oldest age groups who are most susceptible to heat-related illness and mortality. This demographic trend means that the number of people requiring residential care is likely to rise at the same time that climate-related risks become more severe.

Heatwaves present the most immediate concern for care homes in East Sussex. Research has shown that older adults are less able to regulate body temperature because of age-related physiological changes. The prevalence of chronic conditions such as cardiovascular disease, respiratory disease, diabetes and kidney disease further increases vulnerability. Many medications commonly prescribed in care settings, including diuretics, beta-blockers, antipsychotics and antidepressants, can impair the body's ability to respond to heat and increase the risk of dehydration and heat stress.

The South East of England is projected to experience some of the highest increases in summer temperatures nationally. For East Sussex, this means that heatwave events previously considered exceptional are likely to become increasingly common. Care home residents are therefore expected to experience a greater burden of heat-related illness, worsening chronic disease, emergency hospital admissions and premature mortality.

Flooding presents another important climate-related risk. East Sussex contains several areas vulnerable to both river and surface water flooding, including communities associated with the Ouse Valley, Pevensey Levels and low-lying coastal areas. Although flooding may appear less directly linked to health than heat, its consequences for care homes can be substantial. Flooding can disrupt transport routes, delay staff attendance, interrupt medication deliveries and compromise access to health services. It can also damage buildings and utilities, creating additional health risks through damp, mould and displacement. For older residents, disruption to routines

and uncertainty during flood events can contribute to increased anxiety, confusion and deterioration in wellbeing.

A changing climate is also expected to affect air quality. Higher temperatures contribute to increased ground-level ozone formation and can worsen respiratory symptoms among individuals with chronic respiratory conditions. Given the high prevalence of chronic obstructive pulmonary disease (COPD), asthma and cardiovascular disease among care home residents, periods of poor air quality may become an increasingly important health concern.

Gaps

Despite growing recognition of climate-related health risks, important evidence gaps remain. Much of the available evidence is derived from national studies, while local information relating specifically to East Sussex care homes remains limited. There is currently little systematic data on overheating within care home buildings, despite increasing evidence that indoor temperatures can exceed safe thresholds during periods of extreme heat.

There is also limited understanding of which care homes in East Sussex may be most vulnerable to future climate hazards. Information regarding building resilience, cooling capacity, flood exposure and infrastructure vulnerability is not routinely collected or analysed at a county-wide level. This makes it difficult to identify where adaptation efforts should be prioritised.

Further gaps exist in understanding the cumulative effects of multiple risks occurring simultaneously. For example, there is limited evidence on how heatwaves interact with workforce shortages, power outages or increased healthcare demand. As a changing climate intensifies, these compound risks are likely to become increasingly important.

Barriers

Several barriers may limit the ability of care homes to adapt effectively to a changing climate. A significant challenge is the age and design of much of the existing care home estate**. Many facilities were constructed before overheating was recognised as a major public health issue and therefore lack features such as passive cooling, adequate shading and effective natural ventilation. Buildings designed to retain heat during winter can become uncomfortably warm during summer heatwaves.**

Financial constraints represent another major barrier. Many care providers operate within tight budgets and face increasing pressures associated with staffing, regulatory requirements and rising operating costs. While climate adaptation measures such as building retrofits, improved ventilation systems, flood protection measures and

emergency power supplies can substantially improve resilience, these interventions often require significant capital investment that may not be readily available.

Workforce pressures also present challenges. Climate-related events increase demands on staff at precisely the time when workforce capacity may be reduced by travel disruption, illness or increased caring responsibilities. During heatwaves, staff may need to devote additional time to monitoring residents, supporting hydration and responding to emerging health concerns. Existing recruitment and retention challenges within the social care sector may therefore reduce overall resilience to climate-related shocks.

Tensions

A number of important tensions arise when considering climate adaptation within care homes. One of the most significant relates to the relationship between climate mitigation and adaptation. Measures designed to reduce carbon emissions, such as improved insulation and airtightness, can sometimes increase overheating risk if they are not accompanied by appropriate ventilation and cooling strategies. Achieving net zero objectives while maintaining safe indoor temperatures therefore requires careful planning and design.

There is also a tension between responding to immediate operational pressures and investing in long-term resilience. Care home providers frequently face difficult decisions regarding the allocation of limited resources. Immediate priorities such as staffing, resident care and regulatory compliance often take precedence over adaptation measures whose benefits may not be realised for several years.

Another tension exists between safety and quality of life. During periods of extreme heat, restrictions on outdoor activity may be necessary to protect residents from heat-related illness. However, such restrictions can reduce opportunities for physical activity, social interaction and independence, all of which are important determinants of wellbeing.

Opportunities

Although a changing climate presents substantial challenges, it also creates opportunities to improve health, wellbeing and resilience within care settings. Adaptation measures that reduce climate risks often generate wider health benefits. Improvements to ventilation, shading and thermal comfort can enhance resident wellbeing while also reducing respiratory problems and improving indoor air quality.

The increasing focus on climate resilience provides an opportunity to modernise care home infrastructure across East Sussex. New care facilities can be designed with climate adaptation principles incorporated from the outset, including passive cooling

measures, green infrastructure, solar shading and energy-efficient design. Such approaches can reduce both climate risks and long-term operating costs.

There are also opportunities to strengthen partnerships between care providers, local authorities, the NHS and emergency planning organisations. Improved coordination can support more effective heatwave planning, emergency response and business continuity arrangements. As climate-related risks become more prominent, integrated planning across the health and care system will become increasingly important.

Enhanced monitoring and early warning systems offer further opportunities. The expansion of heat-health alerts and improved climate risk forecasting can enable care homes to implement protective measures before health impacts occur. Evidence suggests that proactive interventions, including hydration programmes, environmental monitoring and targeted support for high-risk residents, can significantly reduce heat-related illness and mortality.

Conclusion

A changing climate represents a significant and growing challenge for care homes in East Sussex. The county's older-than-average population means that it is likely to experience disproportionate health impacts from rising temperatures, heatwaves, flooding and other climate-related hazards. National evidence already demonstrates that care home residents experience some of the highest levels of heat-related mortality, with almost 500 heat-associated deaths occurring among care home residents in England during the summer of 2024 alone.

As East Sussex's population continues to age, the interaction between a changing climate and increasing care needs is likely to become an increasingly important determinant of health and wellbeing. While substantial challenges exist, there are also significant opportunities to improve resilience through better building design, enhanced preparedness, workforce development and stronger integration across health and social care systems. Investing in adaptation now has the potential to reduce future mortality, improve quality of life for residents and strengthen the sustainability of care services in a changing climate.

5. Community Sports Facilities

High Level Strategic Opportunity:

Create a climate-resilient network of community sports facilities across East Sussex that protects public health, supports physical activity and wellbeing, strengthens community resilience and maintains access to sport and recreation despite increasing climate-related challenges. Through resilient buildings, sustainable grounds

management, nature-based solutions and adaptive infrastructure, sports facilities should contribute to healthier communities, environmental sustainability and long-term climate resilience.

Rationale:

Community sports facilities play a vital role in promoting physical activity, mental wellbeing, social connectedness and community resilience, while supporting the prevention of chronic disease and reducing health inequalities. However, they are increasingly vulnerable to climate-related risks including extreme heat, flooding, drought, severe weather, poor air quality and water scarcity, which can damage infrastructure, disrupt participation, reduce access and increase operational costs. These impacts may disproportionately affect children and young people, older adults, people with disabilities and communities with limited access to alternative recreational spaces. Developing a climate-resilient network of community sports facilities through climate-adapted buildings, sustainable grounds management, nature-based solutions, resilient infrastructure and emergency preparedness will help maintain year-round access to safe and inclusive opportunities for sport and recreation, protect public health, strengthen community cohesion and resilience, support environmental sustainability, and maximise the health co-benefits of climate adaptation across East Sussex.

Considerations, Opportunities and Action Steps

Opportunity 1: Improve Heat Resilience of Sports Facilities and Buildings

Higher temperatures and more frequent heatwaves can lead to overheating in indoor sports facilities, affecting user safety, comfort and participation while placing additional strain on building systems. Older leisure centres and sports halls may be particularly vulnerable.

Action Steps:

- Undertake overheating assessments of sports halls, fitness suites, changing facilities, spectator areas and community spaces.
- Install shading, solar-control glazing, reflective roofing and passive cooling measures to reduce indoor temperatures.
- Upgrade ventilation and cooling systems to maintain safe temperatures during periods of extreme heat.

- Increase provision of shaded outdoor seating, spectator areas and rest zones across sports venues.

Opportunity 2: Strengthen Flood Resilience and Surface Water Management

Many sports facilities are located in low-lying areas or on large expanses of impermeable surfacing that may be vulnerable to flooding and surface water accumulation during intense rainfall events. Flood damage can result in costly repairs and prolonged facility closures.

Action Steps:

- Undertake site-specific flood risk assessments for sports facilities and associated infrastructure.
- Install sustainable drainage systems (SuDS), including permeable paving, swales, attenuation ponds and rain gardens.
- Protect critical assets such as electrical systems, plant equipment and storage facilities from flood damage.
- Enhance maintenance of drainage systems, pitches and hard surfaces to improve water management during heavy rainfall events.

Opportunity 3: Build Climate Resilience into Outdoor Playing Surfaces and Grounds

Changing weather patterns are likely to increase damage to playing surfaces through drought, heat stress, waterlogging and erosion. This can reduce the usability, safety and lifespan of sports grounds.

Action Steps:

- Develop climate-resilient pitch management plans that address both drought and extreme rainfall conditions.
- Upgrade irrigation systems to improve water efficiency and support turf health during prolonged dry periods.
- Use drought-tolerant grass species and resilient landscaping where appropriate.
- Assess and upgrade artificial surfaces to ensure they can safely withstand higher temperatures and more extreme weather conditions.

Opportunity 4: Improve Resilience of Utilities and Critical Infrastructure

Sports facilities depend on reliable access to electricity, water, heating, lighting and digital connectivity. Climate-related disruptions to these services can significantly affect facility operations.

Action Steps:

- Assess climate vulnerabilities affecting power supplies, water infrastructure and building services.
- Develop contingency plans for power outages, water shortages and communications failures.
- Protect electrical equipment, pumps, boilers and plant rooms from flooding and overheating risks.
- Improve water efficiency through leak reduction, rainwater harvesting and water-saving technologies.

Opportunity 5: Expand Nature-Based Solutions and Climate Adaptation Features

Green infrastructure can help reduce local temperatures, improve drainage, enhance biodiversity and increase the resilience of sports facilities to a changing climate.

Action Steps:

- Increase tree planting around sports grounds, pathways and spectator areas to provide shade and cooling.
- Introduce biodiversity-friendly landscaping, wildflower areas and habitat enhancement projects.
- Incorporate natural drainage features that capture and slow surface water runoff.
- Explore the feasibility of green roofs and living walls on leisure centres and pavilion buildings.

Opportunity 6: Embed Climate Adaptation into Asset Management and Capital Investment

Long-term resilience requires climate risks to be systematically considered in the planning, maintenance and investment decisions relating to community sports infrastructure.

Action Steps:

- Integrate climate adaptation objectives into sports facility asset management plans and maintenance programmes.
- Undertake regular climate resilience audits to identify emerging infrastructure risks and investment priorities.
- Require all major refurbishment and new-build projects to demonstrate climate resilience and future-proofing against projected climate conditions.
- Develop a prioritised programme of adaptation investment focusing on facilities at greatest risk from overheating, flooding, drought and severe weather.

Context and Impacts

Community sports facilities are increasingly recognised as important assets within the wider public health system because they support physical activity, mental wellbeing, social connectedness, healthy ageing, rehabilitation and the prevention of long-term conditions. A changing climate presents both a direct threat to the operation of these facilities and an indirect threat to population health through its impact on opportunities for physical activity and recreation.

Unlike healthcare settings, where climate impacts are primarily associated with protecting vulnerable patients, the climate risk to sports facilities centres on maintaining safe access to physical activity and ensuring that facilities remain operational during increasingly frequent extreme weather events. A changing climate therefore affects both infrastructure resilience and the health outcomes that sports facilities help to deliver.

The UK Climate Change Risk Assessment identifies overheating, flooding, water scarcity, infrastructure disruption and biodiversity loss as major risks to sport and recreation. Community sports facilities—including leisure centres, swimming pools, sports halls, gymnasiums, artificial pitches, athletics facilities, outdoor courts, parks and playing fields—are exposed to many of these risks.

The significance of this issue extends beyond the facilities themselves. Physical inactivity is already one of the leading modifiable risk factors for poor health, contributing to cardiovascular disease, obesity, type 2 diabetes, musculoskeletal conditions, poor mental health and some cancers. Climate-related disruption to opportunities for exercise therefore has potentially significant implications for population health and health inequalities.

Health Impacts

The primary climate-health impact associated with sports facilities arises through changes in the safety and accessibility of physical activity.

Increasing temperatures are expected to affect both indoor and outdoor sporting environments. During heatwaves, outdoor exercise can increase the risk of dehydration, heat exhaustion, heat stroke, cardiovascular strain and acute kidney injury. These risks are particularly important for children, older adults, people with long-term conditions and those undertaking vigorous physical activity.

Heat also affects performance and participation. Research shows that physical work and exercise capacity decline as temperatures rise because greater physiological effort is required to regulate body temperature. As a result, participation rates may decline during periods of extreme heat, particularly among more vulnerable groups.

Indoor facilities are not immune to these challenges. Many sports halls, gyms and leisure centres were designed for historical climatic conditions and may experience overheating during prolonged hot weather. Elevated indoor temperatures can reduce comfort, increase health risks and reduce participation, particularly among older adults and individuals with cardiovascular or respiratory conditions.

Air quality is another emerging concern. A changing climate is expected to increase exposure to ground-level ozone, allergens and wildfire-related particulates. Poor air quality can affect respiratory function during exercise, increase asthma exacerbations and reduce participation in outdoor physical activity. Individuals undertaking exercise inhale greater volumes of air, potentially increasing exposure to pollutants.

Flooding presents additional health implications. Damage to sports facilities, playing fields and active travel infrastructure can reduce opportunities for physical activity for prolonged periods. Reduced access to exercise can have consequences for both physical and mental health, particularly in communities where sports facilities are important social and wellbeing assets.

Infrastructure and Operational Impacts

A changing climate poses significant operational challenges for sports facilities.

Heat can increase cooling requirements, energy demand and operational costs. Facilities with large, glazed areas, extensive roof spans or limited ventilation may be particularly vulnerable to overheating. Thermal comfort is becoming an increasingly important consideration in facility management, particularly as higher temperatures affect users, staff and equipment.

Water management is another important issue. Swimming pools, playing fields and sports grounds often require substantial water resources. Increasing drought frequency and water scarcity may create tensions between water conservation objectives and maintaining sports provision.

Flooding poses significant risks to both indoor and outdoor facilities. Playing pitches are particularly vulnerable to waterlogging, erosion and drainage failure. Flood damage can result in prolonged facility closures, costly repairs and loss of community

access. Artificial pitches and associated infrastructure may also be affected by surface water flooding and extreme rainfall events.

A changing climate may also increase maintenance requirements. More frequent temperature extremes, heavy rainfall and storm events can accelerate deterioration of buildings, surfaces, equipment and landscaping.

Implications for Population Health

The health implications extend beyond facility users.

Sports facilities support a wide range of public health objectives, including reducing obesity, preventing long-term conditions, supporting mental wellbeing, promoting social inclusion and reducing loneliness. Climate-related disruption therefore has broader consequences for community health.

The impacts are likely to be greatest among groups already experiencing barriers to physical activity. People on low incomes, children and young people, older adults, disabled people and those with long-term conditions may have fewer alternative opportunities for exercise if community facilities become unavailable.

There is also a risk that a changing climate could widen existing inequalities in physical activity. Communities with fewer green spaces, poorer infrastructure and lower levels of investment may experience greater disruption and reduced access to climate-resilient facilities.

Gaps

Several evidence gaps remain.

There is limited local data linking climate hazards directly to sports participation, physical activity levels and health outcomes. While participation data and facility condition data are often collected separately, they are rarely analysed alongside climate risk information.

There is also limited understanding of overheating risks within sports and leisure facilities. Much of the available evidence focuses on schools, hospitals and residential buildings rather than leisure infrastructure.

Further gaps exist regarding the cumulative effects of a changing climate on facility demand. For example, higher temperatures may simultaneously increase demand for indoor cooling, reduce outdoor participation and increase operating costs.

The health implications of repeated disruption to community sport and recreation are also not well quantified.

Barriers

A major barrier is ageing infrastructure. Many community sports facilities were designed for historical climate conditions and may not be resilient to future heat, flooding or water stress.

Financial constraints present another significant challenge. Leisure centres and community sports facilities often operate under considerable budget pressures. Adaptation measures such as improved ventilation, flood resilience, cooling systems, drainage upgrades and renewable energy infrastructure require investment that may be difficult to secure.

Operational capacity can also be limited. Facility managers are often focused on maintaining service delivery, addressing maintenance backlogs and managing energy costs. Long-term climate adaptation may therefore compete with immediate operational priorities.

The fragmented ownership of sports facilities further complicates adaptation. Responsibility may sit with local authorities, schools, trusts, voluntary organisations or private providers, creating challenges for coordinated planning and investment.

Tensions

One of the most significant tensions relates to climate adaptation and decarbonisation.

Many facilities may require increased cooling to maintain safe operating conditions during hotter summers. However, mechanical cooling can increase energy demand and operating costs if not combined with energy efficiency measures and renewable energy generation.

Water management creates another tension. Maintaining sports pitches, playing surfaces and swimming pools may require significant water resources during periods of drought, potentially conflicting with wider water conservation objectives.

There is also a tension between encouraging physical activity and protecting people from environmental risks. Public health policy promotes active lifestyles, yet extreme heat, poor air quality and severe weather may make outdoor activity unsafe at certain times.

A further tension exists between maintaining access and protecting infrastructure. Continuing to use pitches during extreme weather may support participation but can accelerate damage and increase maintenance costs.

Opportunities

Climate adaptation presents significant opportunities to improve both facility resilience and public health outcomes.

Investment in climate-resilient infrastructure can support year-round participation and reduce disruption. Measures such as passive cooling, improved ventilation, sustainable drainage systems, drought-resistant landscaping, flood-resilient design and renewable energy generation can improve operational resilience while reducing environmental impacts.

There is also an opportunity to integrate sports facilities into wider climate adaptation strategies. Leisure centres and community hubs can act as resilience assets during extreme weather events, providing cool spaces during heatwaves, community support during emergencies and trusted locations for public engagement.

Green infrastructure offers multiple co-benefits. Tree planting, shaded routes, sustainable drainage systems and biodiversity improvements can reduce overheating while enhancing user experience and supporting mental wellbeing.

Climate adaptation can also support more inclusive participation. Facilities designed to remain accessible during extreme weather are likely to benefit groups already at higher risk of inactivity, including older adults, disabled people and those with long-term conditions.

Finally, sports facilities can play a role in demonstrating low-carbon and climate-resilient design, supporting wider behavioural change and community engagement with climate action.

Summary

A changing climate presents a significant challenge to community sports facilities through increasing heat exposure, flooding, water scarcity, infrastructure degradation and operational disruption. These risks extend beyond the facilities themselves because they affect opportunities for physical activity, social connection and disease prevention. The greatest public health concern is not simply damage to infrastructure but the potential reduction in participation, particularly among already disadvantaged groups. However, climate adaptation also presents an opportunity to modernise facilities, improve resilience, support health outcomes and strengthen the role of sports facilities as critical community assets within a changing climate.

6. Hospices

High Level Strategic Opportunity:

Create a climate-resilient hospice sector across East Sussex that safeguards patient comfort, dignity, wellbeing and quality of care while maintaining continuity of specialist palliative and end-of-life services during climate-related events. Through resilient facilities, climate-aware clinical practice, strong partnership working and adaptive leadership, hospices should be equipped to protect patients, families, carers, staff and volunteers from climate-related risks whilst strengthening resilience across the wider health and care system.

Rationale:

Hospices provide essential specialist palliative and end-of-life care for some of the most vulnerable people in society, many of whom have complex health needs, reduced physiological resilience and increased susceptibility to the health impacts of a changing climate. Climate-related hazards such as extreme heat, flooding, poor air quality, infectious disease outbreaks, power outages and disruptions to transport, supply chains and staffing can compromise patient comfort, symptom management, continuity of care and access to vital services for patients and families. As demand for palliative care is expected to grow alongside an ageing population and increasing climate-related health impacts, strengthening the resilience of hospice services is critical. Developing a climate-resilient hospice sector through climate-adapted facilities, resilient infrastructure, sustainable operations, climate-informed clinical practice, emergency preparedness and strong partnership working will help safeguard patient dignity, comfort and quality of care, protect staff and volunteers, maintain continuity of specialist services, and strengthen resilience across the wider health and care system.

Considerations, Opportunities and Action Steps

Opportunity 1: Protect Patients from Heat-Related Illness and Symptom Exacerbation

Patients receiving hospice care are particularly vulnerable to extreme heat because many have advanced disease, reduced mobility, respiratory conditions, cardiovascular disease or impaired ability to regulate body temperature. Hot weather can worsen fatigue, breathlessness, dehydration, pain and distress, reducing quality of life and increasing clinical risks.

Action Steps:

- Develop hospice-specific Heatwave Response Plans aligned with UKHSA Heat Health Alerts.
- Undertake annual patient heat vulnerability assessments.
- Create personalised heat management plans for high-risk patients.
- Establish enhanced hydration monitoring during hot weather.
- Increase the frequency of welfare checks during heat events.
- Adapt visiting, activity and treatment schedules during periods of extreme heat.
- Review medications that may increase susceptibility to dehydration or heat stress.
- Provide access to cool rooms, shaded areas and temperature-controlled environments.
- Monitor indoor temperatures in all patient areas and implement escalation procedures when thresholds are exceeded.
- Provide guidance to family carers supporting patients at home during hot weather.

Opportunity 2: Ensure Climate-Resilient Buildings and Therapeutic Environments

Hospice buildings must remain safe, comfortable and operational during increasingly frequent heatwaves, storms and flooding events. Maintaining a therapeutic environment is particularly important for supporting comfort, dignity and wellbeing at the end of life.

Action Steps:

- Undertake climate adaptation and overheating assessments for all hospice facilities.
- Retrofit buildings with shading, solar-control glazing, insulation and passive cooling measures.
- Improve ventilation and indoor air quality management.
- Identify and protect vulnerable clinical areas from overheating.
- Assess risks from flooding, storms and water ingress.
- Install flood resilience measures where required.
- Develop climate-resilient gardens and shaded outdoor spaces for patients and families.
- Increase biodiversity and tree planting to reduce local heat exposure.
- Incorporate climate adaptation requirements into all future refurbishments and developments.
- Reduce operational carbon emissions through low-carbon heating and renewable energy systems.

Opportunity 3: Strengthen Emergency Preparedness and Continuity of Palliative Care Services

Climate-related emergencies can disrupt essential hospice services, clinical care, medication supplies and utilities. Hospices must be able to continue delivering high-quality end-of-life care during extreme weather events and emergencies.

Action Steps:

- Update business continuity plans to address climate-related hazards.
- Develop specific emergency response procedures for heatwaves, floods, storms, drought and prolonged power outages.
- Establish relocation and evacuation procedures for inpatient units.
- Identify clinically vulnerable patients requiring priority support during emergencies.
- Maintain emergency communication systems and contact databases.
- Ensure backup power generation for critical clinical services.
- Develop contingency plans for water shortages and supply disruptions.
- Conduct regular emergency preparedness exercises.
- Strengthen coordination with ambulance services, NHS Sussex, community teams and local resilience partners.
- Develop plans to maintain hospice-at-home services during severe weather events.

Opportunity 4: Build Workforce Capacity and Climate Awareness

Hospice staff require the knowledge and skills to identify climate-related health risks and respond effectively to changing environmental conditions while maintaining compassionate care.

Action Steps:

- Deliver climate and health awareness training for all hospice staff and volunteers.
- Provide specialist education on heat-related illness, dehydration, air pollution and climate-sensitive health risks.
- Train staff to recognise worsening symptoms associated with extreme weather.
- Appoint Climate and Sustainability Champions within hospice services.
- Incorporate climate resilience into workforce development programmes.
- Develop staff guidance and decision-support tools for extreme weather responses.
- Support staff wellbeing during periods of prolonged heat or emergency response activity.
- Share best practice between hospices and wider health and care providers.

- Embed climate adaptation responsibilities within governance arrangements and operational planning.

Opportunity 5: Protect Patient Wellbeing, Equality and Community Support

A changing climate can affect not only physical health but also emotional wellbeing, dignity and quality of life. Patients receiving palliative and end-of-life care, and their families, may be particularly vulnerable to anxiety, isolation and disruption caused by extreme weather events.

Action Steps:

- Incorporate climate risk assessments into holistic palliative care planning.
- Identify patients most vulnerable to climate-related health impacts and social isolation.
- Maintain outreach and welfare support for patients receiving care at home during extreme weather.
- Provide climate-related information and advice for patients, families and carers.
- Develop targeted support for vulnerable groups, including people living alone and those with limited support networks.
- Ensure continued access to psychological and bereavement support services during emergencies.
- Use gardens and green spaces to support wellbeing, symptom management and therapeutic activities.
- Monitor the impacts of climate-related events on patient experience, dignity and quality of care.
- Engage patients and families in discussions about climate resilience and emergency planning.

Opportunity 6: Embed Climate Adaptation into Hospice Leadership, Partnerships and Clinical Governance

Climate adaptation should be integrated into hospice leadership, service planning and quality improvement processes to ensure long-term organisational resilience and high-quality patient care.

Action Steps:

- Develop a Hospice Climate Adaptation and Resilience Strategy.
- Include climate-related risks within organisational risk registers and governance structures.

- Appoint senior leadership responsibility for climate resilience.
- Establish climate resilience indicators and performance measures.
- Monitor impacts such as heat-related incidents, service disruptions and emergency activations.
- Integrate climate adaptation into quality improvement programmes.
- Collaborate with East Sussex County Council, NHS Sussex, public health teams and emergency planners.
- Participate in local Environment, Climate and Health Impact Assessment processes.
- Seek external funding for adaptation and sustainability projects.
- Publish annual progress reports on climate resilience, adaptation actions and outcomes.

Context and Impacts

Hospices are affected by a changing climate in a different way from care homes and nursing homes because their core purpose is not long-term accommodation or routine nursing dependency, but **specialist palliative and end-of-life care**. The climate-health issue for hospices is therefore about maintaining comfort, dignity, symptom control, family presence and continuity of care for people whose health is already fragile and whose time may be limited.

A changing climate can increase the burden of symptoms for people approaching the end of life. Heat can worsen breathlessness, fatigue, dehydration, confusion, pain and restlessness. Poor air quality can aggravate respiratory disease, heart failure and cancer-related breathlessness. Flooding, storms and power outages can disrupt access to medicines, oxygen, syringe drivers, cooling, transport, family visits and out-of-hours support. For hospice patients, even a short disruption can have a major effect because care often depends on timely symptom relief and careful coordination between hospice teams, GPs, hospitals, community nurses, carers and families.

National hospice and palliative care evidence suggests that a changing climate is likely to increase demand for hospice services. A 2024 review found that extreme weather is expected to increase the need for palliative care through more respiratory illness, heat-related illness, waterborne disease and worsening chronic conditions. Hospice UK also notes that heatwaves can cause overheating and dehydration, air pollution can worsen lung problems, and flooding can damage people's homes, all of which can affect patient care.

This is particularly relevant for East Sussex because end-of-life need is already high. The East Sussex JSNA states that there are **over 6,600 deaths per year** in the county, with numbers projected to increase because of the growing and ageing population. East Sussex also has an older demographic profile than England overall, meaning more

residents are likely to live with advanced frailty, dementia, cancer, respiratory disease, heart failure and other conditions requiring palliative care.

Local hospice provision is therefore a critical part of system resilience. St Wilfrid's Hospice, serving Eastbourne, Uckfield, Seaford and surrounding areas, reported **1,015 referrals** in its 2025 annual review, an **average caseload of 341 patients**, and **725 patients supported to remain at home**. This is important because climate impacts do not only affect hospice buildings; they also affect people dying at home, where heat, poor housing, fuel poverty, flood risk and carer capacity can determine whether someone can remain in their preferred place of care.

For East Sussex, flooding and coastal risk are also significant. East Sussex County Council identifies the **Ouse Valley and Pevensey Levels** as especially vulnerable to flooding, while the Environment Agency has highlighted protection work for **10,000 properties** around Pevensey and Eastbourne, noting that sea levels are expected to rise by **more than one metre over the next 80 years**. For hospices, this has implications for inpatient units, community visits, medicine supply, ambulance access, staff travel and the ability of families to visit people at the end of life.

The hospice sector also has a specific financial vulnerability. Unlike most NHS services, hospices rely heavily on charitable income. Hospice UK evidence states that statutory funding covers only around **40% of the cost of hospice care**, while a 2025 Hospice UK financial benchmarking report found average statutory funding for adult hospices was around **25% of total expenditure**. St Wilfrid's Hospice announced in March 2025 that it was reducing its workforce because of inflation, cost-of-living pressures and increased national insurance contributions. This matters for climate resilience because adaptation requires investment in buildings, energy systems, cooling, transport, digital infrastructure and workforce capacity at a time when many hospices are already financially stretched.

Gaps

The main gaps are practical and local. There is limited East Sussex-specific evidence on how heat, flooding and poor air quality affect hospice patients, particularly those receiving hospice-at-home care. Local data is also limited on whether hospice buildings, community routes, medicine storage, oxygen supply and digital systems are resilient to prolonged heat or severe weather. Another gap is the lack of routine visibility of patients dying at home in poor housing conditions, where overheating, damp, isolation or carer exhaustion may increase the likelihood of crisis admissions.

Barriers

Barriers are shaped by the hospice model itself. Hospices provide highly personalised care, often across inpatient, outpatient and community settings, so climate

adaptation is not simply a matter of cooling one building. It requires resilient home visiting, reliable transport, staff availability, medicine access, equipment delivery and coordination with carers. Charitable funding pressures make it harder to invest in long-term adaptation, while workforce shortages reduce the spare capacity needed during heatwaves or flood events.

Tensions

There are also important tensions. Hospices aim to support choice, comfort and dignity, but climate events can reduce choice. A person may wish to die at home, but overheating, flooding, carer strain or lack of equipment may make this unsafe. Hospices may need mechanical cooling to protect patients, but this can conflict with carbon reduction unless powered through efficient or renewable systems. There is also a tension between infection control, privacy and ventilation: opening windows or moving patients to cooler shared spaces may not always be clinically or emotionally appropriate.

Opportunities

The opportunities are substantial. East Sussex could treat hospices as anchor organisations in climate-resilient end-of-life care. This would mean assessing not only hospice buildings, but also hospice-at-home pathways, high-risk travel routes, medicine supply chains, oxygen access, emergency prescribing, digital continuity and family/carer support during heatwaves or floods. Climate risk could be integrated into advance care planning, so that patients and families are supported to consider practical issues such as cooling, hydration, power cuts, transport disruption and emergency contacts.

There is also an opportunity to improve equity. A changing climate is likely to affect people at the end of life unequally, especially those living alone, in poor housing, in rural areas, on low incomes or in flood-prone coastal communities. Better targeting of hospice support during heat-health alerts could reduce avoidable distress, emergency admissions and deaths in hospital when people would have preferred to remain at home.

Call to Action

Overall, the key issue for hospices in East Sussex is that a changing climate threatens the conditions needed for a good death: comfort, symptom control, family presence, continuity of care and choice. With more than **6,600 deaths each year** locally, an ageing population, flood-exposed communities and financially pressured hospice services, climate adaptation should be seen as part of palliative care quality, not only emergency planning.

7. Hospitals

High Level Strategic Opportunity:

Create a climate-resilient acute care system across East Sussex that protects vulnerable patients, supports staff, maintains critical services, strengthens hospital infrastructure and reduces climate-related disruption to care. Hospitals should be equipped to anticipate, absorb, respond to and recover from climate-related events while continuing to deliver safe, high-quality and sustainable healthcare.

Rationale:

Acute hospitals provide critical, time-sensitive healthcare and are essential to the resilience of the wider health and care system. However, they are increasingly vulnerable to the impacts of a changing climate, including extreme heat, flooding, severe weather, poor air quality, infectious disease outbreaks, power outages and disruptions to water, energy, transport, supply chains and workforce availability. At the same time, a changing climate is expected to increase demand for emergency and acute healthcare through rising rates of heat-related illness, respiratory and cardiovascular disease, injuries, infectious diseases and mental health conditions. Strengthening the climate resilience of acute care services through climate-adapted infrastructure, resilient utilities, sustainable healthcare operations, emergency preparedness, workforce resilience and integrated system planning will help maintain continuity of essential services, protect vulnerable patients and staff, reduce avoidable disruption, improve patient safety and healthcare quality, and ensure hospitals can anticipate, withstand, respond to and recover from climate-related events while supporting a sustainable and resilient health and care system.

Considerations, Opportunities and Action Steps

Opportunity 1: Strengthen Heatwave Preparedness and Protect Vulnerable Patients

Rising temperatures and more frequent heatwaves increase the risk of heat-related illness, dehydration, cardiovascular events and respiratory complications, particularly among older adults, young children, and patients with complex health conditions. Hospitals must be prepared to manage both direct health impacts and increased service demand during periods of extreme heat.

Action Steps:

- Develop and regularly review hospital Heatwave Response Plans aligned with UKHSA Heat Health Alert arrangements
- Identify and maintain a register of clinically vulnerable patients and wards at greatest risk from overheating, including intensive care, elderly care and maternity services.
- Implement routine monitoring of temperatures within wards, clinical areas and waiting spaces, with escalation procedures where safe temperature thresholds are exceeded.
- Introduce enhanced hydration, cooling and clinical monitoring protocols during heatwave periods, particularly for high-risk patients.

Opportunity 2: Improve Climate Resilience of Hospital Estates and Infrastructure

Many healthcare buildings were not designed for future climate conditions. Hospitals require resilient infrastructure capable of operating safely during heatwaves, flooding, storms and utility disruptions while maintaining a safe environment for patients and staff.

Action Steps:

- Undertake climate adaptation and resilience assessments across all hospital sites to identify vulnerabilities to overheating, flooding and severe weather.
- Retrofit existing buildings with shading, improved insulation, passive cooling measures and enhanced ventilation systems to reduce overheating risks
- Assess and strengthen flood resilience for critical infrastructure, including emergency departments, plant rooms, data centres and access routes.
- Incorporate climate resilience, low-carbon design and sustainable drainage systems into all future capital developments and refurbishments.

Opportunity 3: Enhance Emergency Preparedness and Business Continuity

A changing climate is increasing the likelihood of events that can disrupt healthcare delivery, including floods, heatwaves, storms, power failures and water shortages. Hospitals must have robust plans to maintain critical services during these events.

Action Steps:

- Review and update emergency preparedness and business continuity arrangements to address climate-related risks and extreme weather scenarios.

- Ensure backup power, water supplies and communications systems are sufficient to maintain essential clinical services during prolonged disruptions.
- Conduct regular multi-agency emergency exercises involving NHS partners, local authorities, ambulance services and emergency planners.
- Develop contingency plans to manage surges in patient demand associated with heatwaves, poor air quality episodes and infectious disease outbreaks.

Opportunity 4: Protect and Support the Healthcare Workforce

Healthcare workers are increasingly exposed to climate-related pressures, including working in overheated environments, responding to emergency incidents and managing increased clinical demand. Supporting workforce resilience is critical to maintaining safe and effective care.

Action Steps:

- Deliver climate and health training for clinical and non-clinical staff, including awareness of climate-sensitive health conditions.
- Develop workplace measures to protect staff wellbeing during heatwaves and extreme weather, including access to cooling areas and hydration facilities.
- Incorporate climate risks into workforce planning, staffing models and emergency response arrangements.
- Establish Climate and Sustainability Champions within hospital departments to support implementation of resilience measures and share good practice.

Opportunity 5: Strengthen Climate-Related Public Health and Patient Care Responses

A changing climate is expected to increase the burden of respiratory disease, cardiovascular illness, heat-related illness, infectious diseases and mental health impacts. Hospitals have an important role in identifying, responding to and preventing these health risks.

Action Steps:

- Integrate climate-related health risks into clinical pathways, patient risk assessments and discharge planning processes.
- Enhance surveillance and monitoring of heat-related illnesses, respiratory conditions and other climate-sensitive health outcomes.
- Improve air quality management within hospital settings, including monitoring and protecting vulnerable patients during poor air quality events.

- Strengthen infection prevention and control measures to address emerging climate-related infectious disease risks and outbreaks.

Opportunity 6: Embed Climate Adaptation into Hospital Leadership, Governance and System Planning

Long-term resilience will require climate adaptation to be integrated into hospital leadership, risk management and strategic planning. A changing climate should be recognised as both a health risk and an operational risk across the healthcare system.

Action Steps:

- Develop and implement a hospital-wide Climate Adaptation and Resilience Strategy aligned with local and national priorities.
- Include climate-related risks within organisational risk registers, governance frameworks and board-level reporting processes.
- Establish measurable indicators to monitor resilience, including impacts on patient safety, operational performance and service continuity during extreme weather events.
- Collaborate with NHS Sussex, East Sussex County Council, Public Health, emergency planning partners and the Sussex Resilience Forum to coordinate adaptation actions across the health system.

Context and Impacts

Hospitals are vulnerable to a changing climate because they are both **places of treatment** and **critical infrastructure**. Unlike residential settings, their climate risk is not only about protecting people already inside the building. It is also about whether emergency departments, theatres, diagnostics, wards, maternity services, pharmacies, laboratories, IT systems, transport routes, energy systems and staff can continue functioning during extreme weather.

In East Sussex, this is especially important because acute hospital services are concentrated around key sites, particularly **Eastbourne District General Hospital** and **Conquest Hospital in Hastings**, both run by East Sussex Healthcare NHS Trust. Eastbourne District General Hospital provides a 24-hour emergency department, acute stroke services, day surgery, urology, and a midwifery-led maternity unit. Conquest Hospital provides acute and emergency services for Hastings, Rother and surrounding areas. If either site is disrupted by heat, flooding, power failure or access problems, the impact is felt across the wider urgent and emergency care system.

A changing climate affects hospitals in two main ways. First, it increases demand. Heatwaves increase presentations for dehydration, heat exhaustion, cardiovascular

disease, kidney injury, respiratory illness and worsening long-term conditions. UKHSA estimated **1,311 heat-associated deaths in England in summer 2024**, even though that summer was not as extreme as 2022. NHS England's climate adaptation report projects that, without adaptation and decarbonisation, heat-related deaths could rise from a baseline of **1,602 per year** to **10,889 per year by the 2050s**. This implies more emergency attendances, more ambulance demand and greater pressure on hospital beds.

Second, a changing climate threatens hospital operations. Hospitals are energy- and water-intensive sites that rely on uninterrupted power, cooling, water, medical gases, medicines, digital systems, sterile services, catering, cleaning, waste management and staff travel. A heatwave can make wards, waiting areas and staff spaces uncomfortable or unsafe. Flooding can affect roads, car parks, basements, plant rooms, electrical infrastructure and supply routes. Severe weather can delay staff, patients, ambulances and deliveries.

East Sussex has local exposure to these risks. The County Council identifies **flooding, heat, drought and water stress** as key climate impacts. It highlights the **Ouse Valley and Pevensey Levels** as especially vulnerable to flooding, and notes that South East England is already a **water-stressed region**. Heavy rainfall and flooding are therefore not only community risks; they are risks to hospital access, discharge pathways, home oxygen delivery, community nursing and the ability to move patients safely through the system.

The pressure on hospitals is already high. NHS Sussex reported **765,000 A&E attendances in 2024/25**, an increase of **2%**, alongside **939,000 diagnostic scans and tests** and **617,000 hospital treatments**. Climate events add stress to a system that is already managing rising demand. East Sussex Healthcare NHS Trust also described the 2024/25 winter as one of its busiest ever, with high emergency department demand and substantial impact from flu. This matters because climate resilience is not built in isolation; it has to be delivered in a system already under operational pressure.

Local hospital estates also present both vulnerabilities and opportunities. Eastbourne District General Hospital is a 1970s hospital, and older hospital buildings can be difficult to cool, ventilate and retrofit. However, it has also become a major local example of decarbonisation. The Eastbourne District General Hospital upgrade moved heating and hot water away from gas, installed solar generation and is expected to save around **4,100 tonnes of carbon dioxide equivalent each year**, with solar panels generating about **1 million kWh** annually. This is a major strength, but it also illustrates a wider tension: hospitals must reduce emissions while also adapting to hotter summers, more intense rainfall and greater service disruption risk.

The implications for East Sussex are therefore significant. The county has an older population than England as a whole, and older people are more likely to require hospital treatment during heatwaves, poor air quality events and severe weather.

Coastal and flood-prone communities may face disrupted access to urgent care. Rural areas may experience longer travel times if roads are affected by flooding, fallen trees or extreme weather. During heat episodes, hospitals may see increased admissions at the same time as delayed discharges, because care homes, domiciliary care, hospices or families may also be under pressure.

Gaps

There are important gaps in local evidence. East Sussex does not appear to have a fully public, site-by-site assessment showing the climate vulnerability of each hospital building, including overheating risk, flood exposure, drainage capacity, backup power resilience, water dependency and vulnerability of access routes. There is also limited published local data linking heatwave periods to emergency department attendances, admissions, delayed discharges, ambulance handover delays or staff sickness. Without this, climate risk can remain too general and may not translate into targeted operational planning.

Barriers

The barriers are substantial. Hospital estates are complex and expensive to adapt. Retrofitting wards, theatres, diagnostic areas and plant rooms is difficult while services must continue operating. Capital funding is limited, and emergency pressures often take priority over long-term adaptation. Workforce resilience is another barrier: staff are also exposed to heat, transport disruption and caring responsibilities during extreme weather. A hospital can have resilient infrastructure but still struggle if staff cannot safely travel to work or if community services cannot support discharge.

Tensions

There are also tensions. Air conditioning may be necessary in some clinical areas, but it increases electricity demand unless paired with low-carbon energy and passive cooling. Natural ventilation can reduce overheating but may conflict with infection prevention, noise, security or privacy. Flood protection may require investment in estates and surrounding infrastructure beyond the control of the NHS alone. Hospitals also need to balance elective recovery with emergency resilience; during extreme weather, planned care may be disrupted, worsening waiting lists and health inequalities.

Opportunities

The opportunities are clear. East Sussex can build on the Eastbourne District General Hospital decarbonisation programme by ensuring that net zero investment also improves adaptation. Future estate upgrades should consider overheating, flood

resilience, backup power, water resilience, shaded outdoor areas, staff welfare, climate-safe waiting areas and resilient digital infrastructure. Climate risk should also be integrated into hospital surge planning, emergency preparedness, ambulance planning and discharge pathways.

There is also an opportunity to use local hospital data better. Emergency department attendances, admissions, mortality, ambulance handovers, delayed discharges and staff sickness could be reviewed alongside heat-health alerts, air pollution episodes and flood events. This would allow East Sussex to identify which services and populations are most affected and where prevention would have the greatest impact.

Conclusion

Overall, the issue for hospitals in East Sussex is system continuity. A changing climate is likely to increase demand for urgent and emergency care while also threatening the infrastructure and workforce needed to provide that care. Eastbourne District General Hospital and Conquest Hospital are therefore not only healthcare sites; they are essential resilience assets for the county. Protecting them from heat, flooding, water stress and power disruption is central to protecting population health in a changing climate.

8. Nurseries and Early Years Settings

High Level Strategic Opportunity:

Create a network of climate-resilient early years settings across East Sussex that protects young children from climate-related health risks, maintains safe and nurturing environments, supports healthy child development and ensures continuity of childcare provision during extreme weather events. Through resilient buildings, climate-adapted outdoor spaces, secure infrastructure and long-term investment, nurseries and early years settings should contribute to improved health, wellbeing, resilience and life chances for current and future generations.

Rationale:

Early years settings play a critical role in supporting children's health, development, learning and wellbeing during the most formative stages of life. Young children are particularly vulnerable to the health impacts of a changing climate because of their developing physiological systems, greater sensitivity to extreme heat, poor air quality, infectious diseases and environmental hazards, and their dependence on safe, supportive care environments. Climate-related events such as heatwaves, flooding,

severe weather and infrastructure disruption can affect children's health, development, nutrition, emotional wellbeing and access to early education and childcare, while placing additional pressures on families and the workforce. Developing a network of climate-resilient early years settings through climate-adapted buildings, resilient infrastructure, safe and nature-rich outdoor environments, emergency preparedness and sustainable operations will help protect children, maintain continuity of high-quality childcare and early education, support healthy development and school readiness, reduce inequalities, and strengthen community resilience and life chances for current and future generations.

Considerations, Opportunities and Action Steps

Nursery and early years buildings face many of the same climate risks as schools but often accommodate younger children who are more vulnerable to overheating and rely heavily on safe and accessible indoor and outdoor environments. Infrastructure resilience is therefore particularly important.

Opportunity 1: Reduce Overheating Within Nursery Buildings

Young children are especially susceptible to high temperatures, making indoor environmental conditions a key infrastructure priority.

Action Steps:

- Assess all nursery rooms for overheating risks.
- Install external shading and solar-control measures on south-facing windows.
- Improve ventilation systems and air circulation throughout occupied areas.
- Prioritise passive cooling measures during refurbishment and maintenance works.

Opportunity 2: Improve Climate Resilience of Outdoor Play Areas

Outdoor nursery environments are highly exposed to climate hazards including heatwaves, storms and heavy rainfall.

Action Steps:

- Increase shaded play spaces through tree planting, canopies and shelters.
- Upgrade surfacing materials to reduce heat absorption.
- Improve drainage infrastructure to prevent standing water and flooding.
- Design outdoor spaces to remain usable under a wide range of weather conditions.

Opportunity 3: Strengthen Flood and Water Management Infrastructure

Flooding and extreme rainfall can lead to building damage, access issues and disruption to nursery operations.

Action Steps:

- Conduct flood risk and drainage assessments for all nursery sites.
- Install sustainable drainage measures appropriate to site conditions.
- Protect building entrances and vulnerable infrastructure from floodwater.
- Establish routine inspection and maintenance programmes for drainage systems.

Opportunity 4: Enhance Building Fabric Resilience to Extreme Weather

More frequent storms, high winds and temperature extremes can accelerate deterioration of buildings and outdoor structures.

Action Steps:

- Assess roofs, windows, fences and outdoor structures for climate-related vulnerabilities.
- Upgrade building materials and fixtures to withstand future weather conditions.
- Improve weatherproofing and insulation standards during refurbishment works.
- Ensure regular preventative maintenance of climate-sensitive assets.

Opportunity 5: Improve Utility and Infrastructure Security

Early years settings rely on consistent access to water, heating, communications and electricity to provide safe environments.

Action Steps:

- Assess risks to utility supplies from climate-related hazards.
- Protect electrical systems and critical equipment from overheating and flooding.
- Develop contingency arrangements for utility failures.
- Improve water efficiency measures to support resilience during drought periods.

Opportunity 6: Embed Climate Adaptation within Estate Planning and Investment

Climate resilience should become a routine consideration within nursery estate management and investment decisions.

Action Steps:

- Include climate resilience within asset management and maintenance plans.
- Conduct periodic climate adaptation reviews of all facilities.
- Consider future climate projections when planning refurbishment or expansion projects.
- Prioritise adaptation investment in settings identified as facing the greatest infrastructure risks.

Context and Impacts

Nurseries and early years settings occupy a unique position within the life course because they support children during a period of rapid physical, cognitive, emotional and social development. A changing climate poses particular risks to these settings not simply because young children are vulnerable to environmental hazards, but because early years environments play a critical role in shaping long-term health, development and school readiness.

Unlike schools, which focus primarily on education, early years settings provide a combination of childcare, developmental support, nutrition, safeguarding, play, physical activity and early identification of health and developmental needs. Climate-related disruption can therefore affect multiple aspects of a child's development simultaneously.

Children under five years of age are particularly vulnerable to environmental change. Their thermoregulatory systems are still developing, they have higher metabolic rates than adults, spend more time engaged in active play, and rely entirely on adults to recognise and respond to environmental risks. Young children may not be able to communicate symptoms of overheating, dehydration or distress effectively, meaning risks can escalate quickly if not identified.

A changing climate is expected to increase exposure to heatwaves, poor air quality, flooding, water scarcity and extreme weather events. While these hazards affect all settings, the implications for nurseries and early years services are distinctive because they influence not only immediate health but also developmental outcomes that can affect lifelong health and wellbeing.

Health and Developmental Impacts

Heat presents one of the most significant climate-related risks within early years settings. Infants and young children are less efficient at regulating body temperature than older children and adults, making them more susceptible to dehydration, heat exhaustion and heat-related illness. Even moderate increases in indoor and outdoor temperatures can affect hydration, appetite, sleep quality, mood and behaviour.

Sleep is particularly important during early childhood because it supports brain development, emotional regulation, learning and physical growth. Higher temperatures, especially during overnight periods and naps, can reduce sleep quality and duration. Repeated disruption to sleep may affect children's concentration, behaviour and developmental progress.

A changing climate may also affect nutrition and hydration. Young children require regular access to fluids and balanced nutrition to support healthy development. During periods of extreme heat, dehydration can occur rapidly and may increase risks of illness, fatigue and reduced engagement in learning and play activities. Changes to food systems and rising food costs may also indirectly affect dietary quality for some families, increasing pressure on early years providers supporting vulnerable children.

Air quality represents another important concern. Young children breathe more rapidly than adults and are more vulnerable to environmental pollutants because their lungs and immune systems are still developing. Exposure to poor air quality can contribute to respiratory infections, wheezing, asthma symptoms and reduced lung development. Longer pollen seasons and changing allergen patterns may also increase the prevalence and severity of allergic conditions among young children.

A changing climate may also influence infectious disease patterns. Warmer temperatures and changing environmental conditions can alter the distribution and seasonality of some infectious diseases. Early years settings are environments where close contact is common, making infection prevention and control particularly important.

Implications for Children and Families

The impacts of a changing climate on nurseries and early years settings extend beyond the child. Early years services play an important role in supporting parents and carers, particularly those who are working, studying or accessing training. Climate-related disruption to childcare provision can therefore have wider implications for family wellbeing, employment and financial stability.

Extreme weather events may affect the ability of families to access childcare, particularly in rural areas or locations vulnerable to flooding. Disruption to nursery provision can affect parental employment, increase stress and place additional caring responsibilities on families. These impacts are often felt most strongly by lower-income households, lone-parent families and those with limited support networks.

Climate-related events may also affect safeguarding and family resilience. Financial pressures associated with rising food, energy and housing costs can increase stress within households. Early years providers are often among the first services to identify concerns relating to child development, family wellbeing or safeguarding. Disruption to services may therefore reduce opportunities for early intervention and support.

Workforce Impacts

The early years workforce also faces climate-related challenges. Staff are responsible for managing environmental risks while maintaining high standards of care, learning and safeguarding. During heatwaves, for example, staff may need to increase monitoring of hydration, adapt play activities, manage indoor temperatures and support children experiencing discomfort or distress.

Climate-related disruption may also affect workforce wellbeing. Travel difficulties, extreme temperatures and increased operational pressures can affect staff attendance, wellbeing and retention. Given existing recruitment and retention challenges within the early years sector, a changing climate may create additional pressures on workforce resilience.

Gaps

A significant gap exists in understanding the specific climate risks faced by nurseries and early years settings. Much of the available evidence focuses on schools, healthcare settings or residential environments, with comparatively less attention given to early years provision.

There is limited local data on overheating, ventilation, flood exposure and climate resilience within nursery buildings. Similarly, there is relatively little evidence regarding the developmental impacts of repeated exposure to heat, poor air quality or climate-related disruption during the early years.

Climate adaptation planning often focuses on physical infrastructure rather than the developmental and safeguarding functions that early-years settings provide.

Barriers

Many early years providers operate within constrained financial environments and may have limited capacity to invest in adaptation measures. Smaller providers may face particular challenges in upgrading buildings, improving ventilation or implementing resilience measures.

The diversity of the sector also presents challenges. Provision includes private nurseries, voluntary organisations, childminders, school-based nurseries and maintained settings, each with different resources and infrastructure.

Workforce capacity is another barrier. Staff are already managing increasing demands associated with childcare, early education, SEND support and safeguarding. Climate adaptation may add further responsibilities without additional resources.

Tensions

There is a tension between maintaining children's access to outdoor play and protecting them from environmental hazards such as extreme heat, poor air quality or severe weather. Outdoor play is fundamental to healthy child development, physical activity and wellbeing, yet a changing climate may require more careful management of when and how children access outdoor environments.

Another tension exists between creating energy-efficient buildings and ensuring adequate ventilation and thermal comfort. Measures designed to improve energy performance may inadvertently increase overheating risks if climate adaptation is not considered alongside carbon reduction.

There is also a tension between short-term operational pressures and long-term resilience. Providers may prioritise immediate service delivery challenges over investments that address future climate risks.

Opportunities

Climate adaptation offers an opportunity to create healthier and more resilient early years environments. Many adaptation measures provide broader developmental and health benefits. Increased access to nature, shaded outdoor spaces, natural play environments and improved indoor air quality can support both climate resilience and child development.

Early years settings are also well placed to support lifelong environmental awareness. Age-appropriate activities involving nature, gardening, biodiversity and outdoor learning can help children develop positive relationships with the natural environment while supporting physical and emotional wellbeing.

There is an opportunity to integrate climate resilience into wider early years priorities, including healthy child development, school readiness, physical activity, nutrition and mental wellbeing. Adaptation measures that improve thermal comfort, air quality and access to green space can contribute directly to these outcomes.

Early years settings can also act as important community assets during climate-related events by providing trusted sources of information and support for families.

Summary

A changing climate presents distinctive challenges for nurseries and early years settings because it affects children during a critical period of development. Heat, poor air quality, infectious disease risks, flooding and service disruption can influence health, development, sleep, nutrition, behaviour and family wellbeing. The impacts extend beyond individual children to affect families, staff and the wider community. While significant gaps remain in understanding local risks, climate adaptation provides

an opportunity to create healthier, more resilient environments that support child development, family wellbeing and long-term health outcomes.

9. Nursing Homes

High Level Strategic Opportunity:

Create a climate-resilient nursing home sector that proactively identifies and manages climate-related health risks, protects clinically vulnerable residents, maintains continuity of healthcare delivery and strengthens resilience across the wider health and care system. Through climate-informed clinical practice, resilient infrastructure, strong governance and integrated partnership working, nursing homes should be equipped to prevent avoidable illness, reduce hospital admissions and maintain safe, effective and person-centred care during climate-related events.

Rationale:

Nursing home residents are among the most clinically vulnerable to climate-related health risks due to frailty, complex care needs, long-term conditions, cognitive impairment and reliance on continuous nursing support. Extreme heat, flooding, poor air quality, infectious disease outbreaks, power failures, workforce disruption and interruptions to medicines, equipment and utilities can rapidly compromise resident safety, care quality and continuity of healthcare. Building climate resilience through climate-informed clinical practice, robust governance, emergency preparedness, resilient infrastructure and integrated partnership working will help nursing homes prevent avoidable illness, reduce hospital admissions, maintain person-centred care during climate-related events, protect staff and residents, and strengthen resilience across the wider health and care system.

Considerations, Opportunities and Action Steps

Opportunity 1: Strengthen Clinical Management of Climate-Related Health Risks in Nursing Homes

Given the greater complexity of residents' health needs, nursing homes should adopt a more clinically focused approach to climate adaptation and preparedness.

Action Steps:

Clinical Risk Stratification

- Develop a climate vulnerability register identifying residents most at risk during heatwaves and other climate-related events.
- Prioritise residents with:

    Cardiovascular disease
    Respiratory disease
    Kidney disease
    Dementia
    Diabetes
    Severe frailty
    Reduced mobility
    Previous heat-related illness

- Review residents' climate risk status at least annually and before each summer period.

Medication Management

- Establish pre-summer medication reviews with pharmacists and GPs.
- Pay particular attention to medicines that can increase susceptibility to dehydration or heat illness (including Diuretics, Antihypertensives, Anticholinergics, Antipsychotics, Sedatives)
- Incorporate medication considerations into heatwave response plans.

Enhanced Clinical Monitoring During Heat Alerts

- Implement increased monitoring of:

    Hydration status
    Fluid intake
    Blood pressure
    Body temperature
    Oxygen saturation where clinically indicated
    Early signs of delirium or confusion

- Develop escalation pathways for deteriorating residents.

Dementia-Focused Heatwave Planning

Residents with dementia may not recognise thirst, seek cooler environments, or communicate symptoms of heat stress effectively.

Actions should include:

- Increased staff observation during hot weather.

- Scheduled hydration support.
- Accessible cooling areas.
- Visual prompts and reminders to drink fluids.
- Training staff to recognise behavioural signs of heat stress in people with dementia.

Opportunity 2: Ensure Climate-Resilient Clinical Equipment and Healthcare Delivery

Nursing homes depend on a wider range of clinical equipment and healthcare services than residential care homes.

Action Steps:

- Assess climate risks to critical clinical equipment such as:

    Oxygen concentrators
    Medication refrigeration
    Pressure-relief systems
    Feeding pumps
    Medical monitoring equipment

- Ensure backup power arrangements are sufficient to maintain essential clinical care during outages.
- Develop contingency plans for interruptions to:

    Pharmacy services
    Community nursing provision
    GP access
    Medical supply chains

- Monitor storage temperatures for medicines during hot weather.

Opportunity 3: Integrate Climate Risks into Nursing Governance and Quality Improvement

The Age and Ageing study found a gradient of increasing heat-related mortality risk associated with poorer CQC ratings, suggesting that organisational quality and preparedness may influence outcomes.

Action Steps:

- Include climate resilience within clinical governance frameworks.
- Review climate-related incidents through existing patient safety processes.

- Audit compliance with heatwave and emergency response plans.
- Incorporate climate and health risks into risk registers.
- Monitor:

    Heat-related illness incidents
    Dehydration events
    Falls during extreme weather
    Emergency hospital transfers

- Report findings to management and governing boards.

Opportunity 4: Develop Nursing Homes as Priority Settings Within Local Health Protection Planning

Because nursing home residents experience some of the highest climate-related health risks, nursing homes should be recognised as priority settings within East Sussex climate adaptation and health resilience planning.

Action Steps:

- Include nursing homes as priority sites in Heat Health Alert response arrangements.
- Strengthen links between nursing homes, NHS Sussex, East Sussex Public Health and emergency planning teams.
- Develop local surveillance systems to identify heat-related illness and mortality trends in nursing home populations.
- Target adaptation funding towards nursing homes housing the most clinically vulnerable residents.
- Support participation in regional resilience exercises focused on heatwaves, flooding and prolonged power outages.

Context and Impacts

Nursing homes face a distinct climate-health risk because they support residents who require **24-hour nursing oversight**, not only personal care. This means a changing climate can affect residents through direct exposure to heat, flooding or poor air quality, but also through disruption to clinical care, medicines, hydration, wound care, infection control, oxygen use, continence care, nutrition and end-of-life support.

The strongest current evidence relates to heat. In England, UKHSA estimated **1,311 heat-associated deaths in summer 2024**, including **496 deaths among care home residents**. More specifically, research on social care settings found that during the July 2022 heatwave, **nursing home deaths increased by 34.1%**, compared with

13.0% in residential care homes. This suggests nursing homes may be especially exposed because their residents are generally more clinically frail and medically complex.

For East Sussex, the implications are significant because the county has an unusually old population. In 2024, **26.6% of residents were aged 65 or over**, compared with **18.7% in England**, and **4.0% were aged 85 or over**, compared with **2.5% nationally**. Rother is particularly exposed, with **32.5% of residents aged 65+** and **4.9% aged 85+**, among the highest proportions in England.

This matters for nursing homes because the residents most likely to need nursing care are often those aged 85+, people with dementia, advanced frailty, complex medication regimes, pressure ulcers, diabetes, respiratory disease, cardiovascular disease or palliative needs. Heat can worsen all of these. It can increase dehydration, delirium, falls, kidney injury, pressure sore risk, infection risk, cardiac strain and respiratory distress. It can also interfere with medicines such as diuretics, antihypertensives, antipsychotics and antidepressants, which can reduce the body's ability to regulate temperature.

East Sussex's wider climate profile adds to the risk. The county identifies **flooding, drought and heatwaves** as key climate impacts, with communities in the **Ouse Valley and Pevensey Levels** particularly vulnerable to flooding. Surface water flooding is also a concern in **Eastbourne, Hastings and Bexhill**, and heavy rainfall is projected to become **20–25% more intense under 2°C warming** and **40–45% more intense under 4°C warming**.

For nursing homes, flooding is not only a building-risk issue. It can prevent nurses and care staff from reaching shifts, delay GP visits, interrupt oxygen supplies, disrupt pharmacy deliveries and make evacuation extremely difficult. Moving residents who are bedbound, catheterised, oxygen-dependent, confused or receiving end-of-life care is clinically risky and resource intensive.

There are also implications for system demand. East Sussex's Market Position Statement reports that the admission rate of people aged 65+ to residential and nursing homes was **558.8 per 100,000 population in 2024/25**, compared with **592.5 for England**. Even if East Sussex is below the national rate, the county's older age structure means climate events could still create substantial local pressure on nursing beds, community nursing, urgent care, ambulance services and hospitals.

Gaps

The main gaps are local and practical. East Sussex does not appear to have a comprehensive public dataset showing which nursing homes are most exposed to overheating, flood risk, power failure, water disruption or poor ventilation. There is also limited local evidence linking heat episodes to nursing home deaths, ambulance

call-outs, hospital admissions, falls, pressure damage or medication incidents. Without this, it is difficult to prioritise investment toward the highest-risk buildings and residents.

Barriers

The barriers are substantial. Nursing homes often operate with tight staffing and financial margins, while climate adaptation can require capital works such as shading, ventilation, cooling, flood protection, backup power, water resilience and building redesign. Clinical dependency makes adaptation harder: residents cannot simply be moved to cooler rooms, asked to drink more, or evacuated quickly without nursing assessment. Workforce shortages also reduce resilience because heatwaves increase the amount of observation, hydration support and clinical judgement required.

There are important tensions. Mechanical cooling may be necessary to protect life, but it increases energy demand unless paired with low-carbon systems. Infection control requirements may conflict with natural ventilation. Keeping residents safe indoors during heat or poor air quality may reduce mobility, social contact and quality of life. Emergency evacuation may protect residents from flooding but can itself cause distress, delirium and clinical deterioration.

Opportunities

The opportunities are therefore highly practical. East Sussex could develop a nursing-home climate risk register, combining flood maps, building age, overheating risk, resident acuity and service continuity risks. Nursing homes could be prioritised for indoor temperature monitoring, heat-health action plans, cool-room provision, hydration protocols, medicine review during heat alerts, backup power planning and pharmacy continuity arrangements. The strongest opportunity is to treat climate adaptation as a patient-safety issue, not only an estates or environmental issue.

Overall, nursing homes in East Sussex are a high-priority setting because they combine **high resident frailty**, **clinical dependency**, **an ageing local population**, and **increasing exposure to heat, flooding and service disruption**. The evidence suggests nursing home residents may experience greater heat-related mortality than residents in non-nursing care, making targeted adaptation both a climate resilience measure and a preventable harm intervention.

10. Schools Buildings

High Level Strategic Opportunity:

Create a climate-resilient, healthy and sustainable school estate across East Sussex that protects pupils, staff and educational infrastructure from climate-related risks while maintaining safe, comfortable and effective learning environments. School buildings and grounds should be capable of adapting to future climate conditions, supporting biodiversity, reducing environmental impacts and contributing to wider community resilience.

Rationale:

Schools play a fundamental role in supporting children's education, health, development and wellbeing, while also serving as important community assets. However, school buildings, grounds and infrastructure are increasingly vulnerable to climate-related risks including extreme heat, flooding, severe weather, poor air quality, water scarcity and biodiversity loss, all of which can disrupt learning, affect attendance, damage infrastructure and adversely impact the health and wellbeing of pupils and staff. Children are particularly susceptible to the effects of environmental hazards, making safe, healthy and climate-adapted learning environments essential for protecting current and future generations. Developing a climate-resilient, healthy and sustainable school estate through climate-adapted buildings, resilient infrastructure, nature-based solutions, improved indoor environmental quality, sustainable operations and biodiversity enhancement will help maintain continuity of education, improve health and learning outcomes, reduce environmental impacts, strengthen community resilience and support the transition to a more sustainable and climate-ready East Sussex.

Considerations, Opportunities and Action Steps

Opportunity 1: Reduce Overheating Risks in School Buildings

Many school buildings were designed to retain heat and may become increasingly uncomfortable or unsafe during hotter summers. Overheated classrooms can affect health, wellbeing and building usability.

Action Steps:

- Undertake overheating assessments across all school buildings to identify high-risk classrooms and communal spaces.
- Install external shading, solar-control glazing, blinds and reflective roofing materials where appropriate.
- Improve natural and mechanical ventilation systems to maintain safe indoor temperatures.
- Include passive cooling measures within all future refurbishment and new-build projects.

Opportunity 2: Improve Flood and Surface Water Resilience

Flooding poses a significant risk to educational infrastructure, particularly from intense rainfall events, surface water flooding and local drainage exceedance. Some parts of East Sussex are already vulnerable to flooding, and these risks are expected to increase

Action Steps:

- Undertake site-specific flood risk assessments for all schools.
- Install sustainable drainage systems (SuDS), including permeable paving, rain gardens and detention areas.
- Protect critical infrastructure such as electrical systems, IT servers and plant equipment from flood damage.
- Review site drainage capacity and maintenance programmes to manage increasing rainfall intensity.

Opportunity 3: Future-Proof School Estates for a Changing Climate

School estates should be designed and managed to remain operational under future climate conditions rather than historic weather patterns.

Action Steps:

- Incorporate climate adaptation standards into all school estate strategies and asset management plans.
- Assess the vulnerability of roofs, windows, building fabric and external structures to severe weather.
- Prioritise investment in climate-resilient materials during maintenance and refurbishment programmes.
- Require climate resilience assessments as part of all new school developments and major capital projects.

Opportunity 4: Increase Green and Blue Infrastructure Across School Sites

Nature-based solutions can help reduce overheating, improve drainage and increase the overall resilience of educational settings.

Action Steps:

- Increase tree planting to provide shade and reduce localised heat exposure.
- Introduce green walls, green roofs and biodiversity-rich planting areas where feasible.
- Create rain gardens and natural drainage features to manage surface water runoff.
- Develop school grounds as multifunctional spaces that support both climate adaptation and biodiversity objectives.

Opportunity 5: Strengthen Utilities and Critical Infrastructure Resilience

Schools depend on electricity, water, digital connectivity and building management systems that may be disrupted by extreme weather events.

Action Steps:

- Assess vulnerabilities in power, communications, heating and water infrastructure.
- Develop contingency arrangements for utility disruptions and service failures.
- Install backup systems where critical infrastructure is at risk.
- Ensure ICT and communications equipment are protected from heat, flood and storm damage.

Opportunity 6: Develop Climate-Resilient Estate Management and Governance

Long-term resilience requires climate risks to be embedded within estate management and investment decisions.

Action Steps:

- Integrate climate adaptation into school asset management and maintenance planning.
- Establish regular climate resilience audits for educational estates.
- Monitor climate-related building incidents such as overheating, flooding and storm damage.

- Work with East Sussex County Council and property teams to prioritise adaptation investment based on risk.

Context and Impacts

School buildings are critical pieces of social infrastructure that support not only education but also the health, wellbeing, development and future life chances of children and young people. A changing climate presents a growing challenge to the suitability, safety and resilience of school estates. Whilst schools have traditionally been designed around historical weather patterns, future climate conditions are expected to be characterised by hotter summers, more frequent heatwaves, more intense rainfall events, increased flooding, prolonged periods of drought, stronger storms and increasing pressure on utilities and infrastructure. These changes have important implications for both educational outcomes and population health.

Many school buildings across England were constructed during periods when retaining heat was prioritised over cooling. As a result, a significant proportion of educational buildings are vulnerable to overheating. The UK Climate Change Committee has repeatedly identified schools as one of the public sector building types most at risk from rising temperatures. Classrooms can become uncomfortably hot during warm weather, particularly in older buildings, temporary classrooms, south-facing rooms and buildings with poor ventilation. Research has shown that indoor temperatures in classrooms can exceed recommended comfort thresholds during heatwaves, affecting both pupils and staff.

Overheating is not simply a comfort issue; it is a health and educational issue. High indoor temperatures are associated with dehydration, headaches, fatigue, reduced concentration, poorer cognitive performance, sleep disruption and increased irritability. Evidence suggests that even modest increases in classroom temperatures can negatively affect learning, memory, attention and educational attainment. Children and young people may be particularly vulnerable because their bodies are less effective at regulating heat than adults and because they spend extended periods within school environments. Rising temperatures may therefore directly affect educational performance and widen existing inequalities where schools have differing capacities to adapt.

A changing climate is also expected to increase flood risk to educational settings. Surface water flooding, intense rainfall events and drainage exceedance are likely to become more frequent. Flooding can damage school buildings, disrupt educational provision, compromise electrical systems, damage ICT infrastructure and create health risks associated with damp, mould and poor indoor environmental quality. School closures resulting from flooding can affect attendance, educational continuity and family wellbeing. In East Sussex, schools located within coastal areas, river

catchments and locations susceptible to surface water flooding may face increasing exposure to these risks over coming decades.

The health implications of flooding extend beyond immediate physical damage. Damp and mould following flood events can contribute to respiratory conditions such as asthma and other respiratory illnesses. Flooding is also associated with significant mental health impacts, including anxiety, stress and reduced feelings of safety and security among pupils, families and staff. Educational disruption can compound these effects, particularly for vulnerable pupils and those already experiencing disadvantage.

Poor air quality represents another important climate-health consideration for school buildings. Rising temperatures can worsen the formation of ground-level ozone and increase exposure to airborne pollutants. Schools located near major roads may be particularly vulnerable. Air pollution is associated with poorer respiratory health, asthma exacerbations, reduced lung development and increased school absenteeism. Indoor air quality can also deteriorate when buildings are poorly ventilated or when overheating mitigation measures inadvertently reduce airflow.

School buildings are additionally vulnerable to infrastructure disruption arising from climate-related events. Electricity, water supplies, digital connectivity, heating systems and building management systems can all be affected by severe weather. Increasing dependence on digital learning technologies means that disruption to power and communications infrastructure may have greater consequences than in the past. Extreme weather events can also affect access routes to schools, staff availability and wider operational continuity.

Many school estates also contain significant areas of hard surfacing with relatively limited green infrastructure. This can contribute to localised heat island effects, increase surface water runoff and reduce opportunities for natural cooling. A lack of trees, shade and biodiversity can exacerbate overheating risks whilst also limiting opportunities for outdoor learning, physical activity and mental wellbeing benefits associated with access to nature.

In East Sussex, these vulnerabilities are particularly relevant given the county's coastal location, ageing educational estate in some areas, increasing exposure to heatwave conditions and localised flood risks. Climate projections suggest that by the middle of the century, hot summers that are currently considered exceptional could become commonplace. School buildings that are not adapted may increasingly struggle to provide safe, comfortable and effective learning environments.

However, school estates also represent a significant opportunity for climate adaptation and health improvement. Investments in shading, ventilation, cooling, sustainable drainage systems, biodiversity enhancement, tree planting, green infrastructure and resilient building design can simultaneously reduce climate risks, improve educational environments and support pupil health and wellbeing. Climate-

resilient schools can deliver multiple co-benefits, including improved concentration, reduced absenteeism, enhanced mental wellbeing, better air quality, greater biodiversity and stronger community resilience.

As a result, climate adaptation within school buildings should not be viewed solely as an estate management issue. It is fundamentally an investment in children's health, educational attainment, wellbeing, safeguarding and future opportunities. Ensuring that school buildings remain safe, comfortable and operational under future climate conditions will be critical to supporting the health and development of current and future generations across East Sussex.

Gaps

A significant gap is the limited understanding of the climate vulnerability of the East Sussex school estate as a whole. Whilst condition surveys, maintenance plans and asset management processes exist, there is often insufficient information on overheating risk, indoor temperature performance, flood resilience, air quality exposure, biodiversity value and climate adaptation readiness at individual school level. Many schools have not undertaken formal climate adaptation or overheating assessments, making it difficult to prioritise investment according to risk.

There is also a gap between climate mitigation and climate adaptation planning. Much of the focus within the education estate has centred on decarbonisation, energy efficiency and carbon reduction. Whilst essential, these measures do not necessarily address risks associated with overheating, flooding, severe weather or future climate resilience. In some cases, energy efficiency measures may inadvertently increase overheating risks if adaptation is not considered alongside decarbonisation.

Another important gap concerns monitoring and evidence. There is relatively limited routine monitoring of indoor temperatures, indoor air quality, climate-related building incidents, weather-related school closures and the impact of climate conditions on attendance, attainment and wellbeing. This limits the ability to quantify climate-health impacts and evaluate adaptation interventions.

Climate resilience is also not yet consistently embedded within school improvement planning, educational strategies, safeguarding frameworks or public health planning. As a result, adaptation may still be viewed primarily as an estates issue rather than a wider health, wellbeing and educational issue.

Barriers

Financial constraints represent one of the most significant barriers. Many schools face substantial maintenance backlogs and limited capital funding. Climate adaptation measures such as shading systems, ventilation upgrades, sustainable drainage

systems, green roofs and major retrofit projects can require significant investment, often beyond the resources available to individual schools.

The age and condition of many school buildings present another challenge. Much of the school estate was designed for historic climate conditions and may require extensive adaptation to cope with future heat and rainfall patterns. Older buildings can be difficult and costly to retrofit, particularly where heritage considerations apply.

Knowledge and capacity barriers also exist. School leaders, governors and estate managers may have limited expertise in climate adaptation and climate-health risks. Access to technical advice, specialist support and adaptation guidance can vary considerably between schools.

Fragmented ownership and governance arrangements can create additional complexity. Responsibilities for school buildings are spread across local authorities, academy trusts, diocesan bodies and governing boards. This can make strategic, system-wide adaptation planning more challenging.

There are also barriers associated with uncertainty. Climate projections can be difficult to translate into practical estate management decisions, and adaptation needs may not always align with traditional funding cycles or asset management approaches.

Tensions

One of the key tensions relates to balancing short-term financial pressures with long-term resilience investment. Schools are operating within constrained budgets and often face competing priorities, including staffing, educational attainment, SEND provision, building maintenance and safeguarding requirements. Investment in climate adaptation may therefore compete with other immediate pressures despite the long-term benefits.

There is also a tension between energy efficiency and overheating prevention. Improving insulation and airtightness can reduce energy consumption and support net-zero objectives, but if not designed appropriately these measures may increase internal temperatures during summer months. Achieving buildings that are both low carbon and climate resilient requires careful planning and investment.

A further tension exists between educational delivery and adaptation works. Retrofitting school buildings, improving drainage systems or undertaking major refurbishment projects can cause disruption to teaching and learning. Schools must therefore balance operational continuity with the need to future-proof their estates.

There can also be competing demands for outdoor space. School grounds are often expected to support recreation, sports, biodiversity, safeguarding, outdoor learning and drainage functions. Identifying how school sites can simultaneously support

climate adaptation, educational outcomes and wider health benefits requires integrated planning.

Opportunities

Climate adaptation presents a significant opportunity to improve both educational outcomes and population health. Investments in cooler, better ventilated and healthier learning environments can improve concentration, cognitive performance, attendance, wellbeing and educational attainment whilst reducing climate-related health risks.

The school estate offers a major opportunity to deliver multiple co-benefits through nature-based solutions. Tree planting, green infrastructure, rain gardens, biodiversity enhancements and sustainable drainage systems can simultaneously reduce overheating, improve flood resilience, enhance biodiversity, support mental wellbeing, improve air quality and create richer learning environments.

Schools can also act as community resilience assets. During extreme weather events, school buildings and grounds may provide opportunities to support local resilience planning, emergency response arrangements and community engagement activities.

Climate adaptation provides opportunities to align education, public health and environmental objectives. School estates can become demonstrators for sustainable design, climate resilience and environmental stewardship whilst supporting climate education and climate literacy among children and young people.

There is also an opportunity to align adaptation investment with wider programmes, including decarbonisation initiatives, School Rebuilding Programmes, biodiversity net gain, active travel infrastructure, healthy schools initiatives and NHS prevention agendas. By integrating these agendas, East Sussex can maximise value for money and avoid duplication of effort.

Perhaps most importantly, climate adaptation in schools represents an investment in future generations. Creating resilient educational environments today will help ensure that children and young people can continue to learn, develop and thrive despite the changing climate conditions they will increasingly experience throughout their lives. School buildings are therefore not simply educational assets; they are long-term public health, community resilience and climate adaptation assets that will play a critical role in shaping the future health and wellbeing of East Sussex.

11.3E Section Conclusion

Part 3E demonstrates that vulnerable settings are fundamental to protecting population health in a changing climate. While each setting—including hospitals, hospices, care homes, nursing homes, schools, nurseries and community sports

facilities—faces distinct climate-related risks, the evidence consistently shows that they share common dependencies on resilient buildings, reliable infrastructure, skilled workforces, effective governance and strong partnership working. Climate change therefore presents not only an environmental challenge but also a strategic systems challenge that threatens the continuity, accessibility and quality of essential services across East Sussex.

The assessment shows that climate-related hazards such as extreme heat, flooding, drought, poor air quality, severe weather, infrastructure failure and utility disruption have the potential to affect both the people using these settings and the services they provide. Importantly, many of these settings support individuals who are already among the most vulnerable members of society—including older people, young children, those receiving healthcare or end-of-life care, and people living with complex physical or mental health needs. Consequently, disruption to these settings can have disproportionate impacts on health outcomes, widen existing inequalities and place additional pressures on the wider health and care system.

A key conclusion from Part 3E is that adaptation cannot be considered solely as an estate or infrastructure issue. Protecting health requires a whole-system approach that integrates climate resilience into leadership, governance, workforce development, emergency preparedness, clinical practice, business continuity, capital investment and service planning. Buildings, infrastructure and utilities must be designed and maintained to withstand future climate conditions, but equal emphasis must be placed on developing resilient organisations, resilient staff and resilient partnerships capable of maintaining continuity of care and support during climate-related events.

The assessment also highlights that many adaptation measures generate wider co-benefits. Improving thermal comfort, ventilation, green infrastructure, sustainable drainage, energy efficiency and nature-based solutions can simultaneously protect health, reduce carbon emissions, enhance biodiversity, improve wellbeing and reduce long-term operational costs. Climate adaptation should therefore be viewed as an investment that strengthens both environmental sustainability and the resilience of public services.

Across all vulnerable settings, several consistent priorities emerge. These include strengthening preparedness for heatwaves and extreme weather; improving resilience to flooding, water scarcity and infrastructure disruption; embedding climate adaptation within asset management and future capital investment; enhancing emergency planning and business continuity; developing climate-aware workforces; improving monitoring and local intelligence; and strengthening collaboration between organisations through shared planning, governance and learning. These priorities provide a common framework for coordinated action across East Sussex while allowing individual sectors to tailor implementation to their specific operational needs.

Importantly, the opportunities identified throughout Part 3E are intended to support long-term transformation rather than create additional organisational burdens. During the Mobilisation Phase (2026–2030), these strategic opportunities will be translated into setting-specific SMART objectives, delivery plans and partnership arrangements that reflect local responsibilities while contributing to a shared county-wide vision of climate resilience.

The overarching conclusion from Part 3E is that resilient settings are essential to resilient communities. Protecting hospitals, care homes, hospices, schools, nurseries, sports facilities and other vulnerable environments from the impacts of a changing climate is fundamental to safeguarding health, reducing inequalities and maintaining essential services. By embedding climate adaptation within every aspect of planning, investment and service delivery, East Sussex has the opportunity to create a network of climate-resilient settings that not only withstand future climate risks but also improve health, wellbeing, sustainability and quality of life for current and future generations.