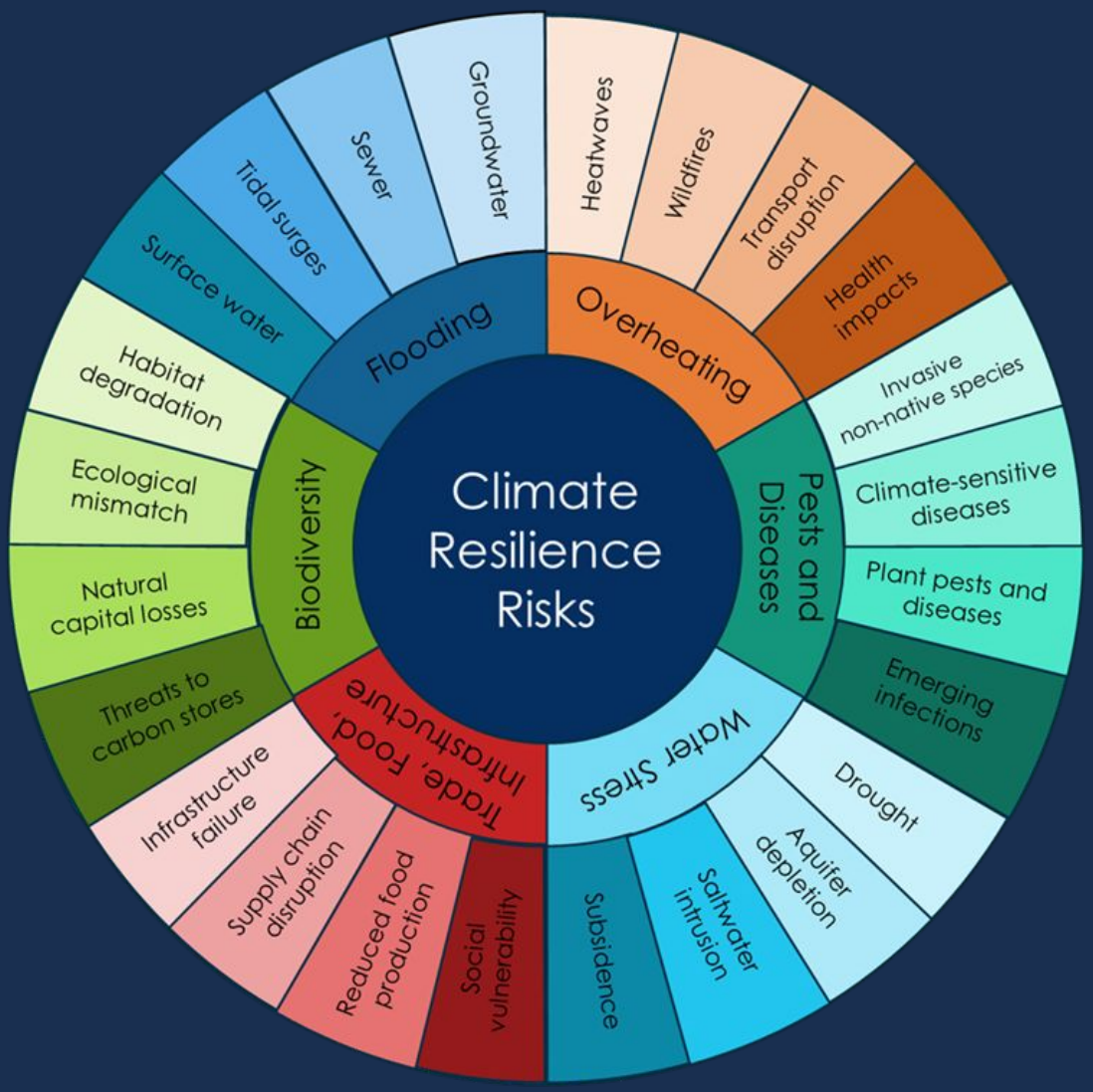
Overheating and health

Health and Wellbeing Board

15th November 2024

Climate, overheating and health: an understanding



Climate change poses a **significant public health** threat, overheating is one of the most critical impacts. Systems in the UK are already facing **unacceptable impacts**, costing an estimated **£6.8 billion per year**.

The **impacts of overheating** are wide ranging and **disproportionately affect** certain individuals, communities and groups. Addressing overheating presents unique public health opportunities but can introduce risks to the **social determinants of health**.

To effectively prioritise action, it is essential to consider the identified overheating impacts and their effects on health, as well as the broader social determinants such as **housing**, **education**, and **health**, among others.

Collaborative action in these areas is essential for targeting interventions that **reduce overheating** risks and **health inequalities**.

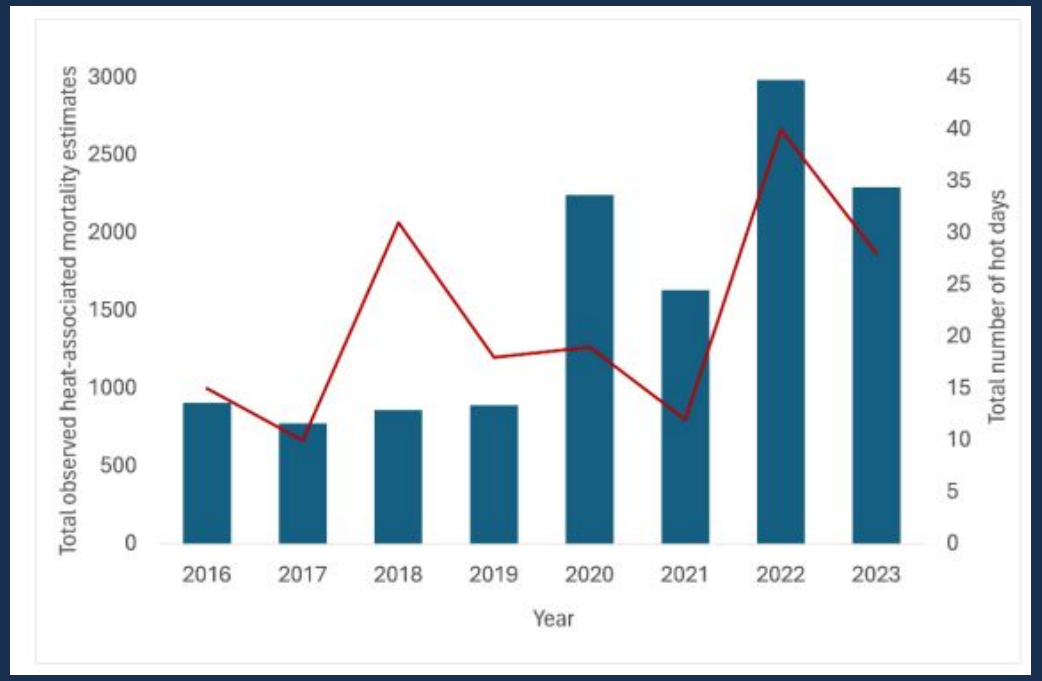
Overheating trends and impact in England

Overheating trends in England

- Increasing trend in terms of **extreme heat days** and **heat-associated deaths** between 2016 and 2023.
- Number of heat-related deaths per year may **triple by 2050**.

2023 heat-health impacts

- Estimated **2,295 deaths associated** with the 5 periods of heat during **summer 2023**.
- Highest heat-associated deaths per one million population observed in the **Southeast region**.
- Heat-associated deaths were significant in all **age groups above 65**.



UKHSA Heat mortality monitoring report: 2023

Overheating direct and indirect impacts to health

Direct impacts

- Worsening pre-existing conditions
  Heat-related hospitalizations & deaths
  Increased mental health issues (e.g., suicide, bipolar disorder)

Indirect impacts

- Disruptions in health care (staff shortages, resistant organisms)
  Spread of zoonotic & vector-borne diseases
  Declining air & water quality
  Reduced social connection

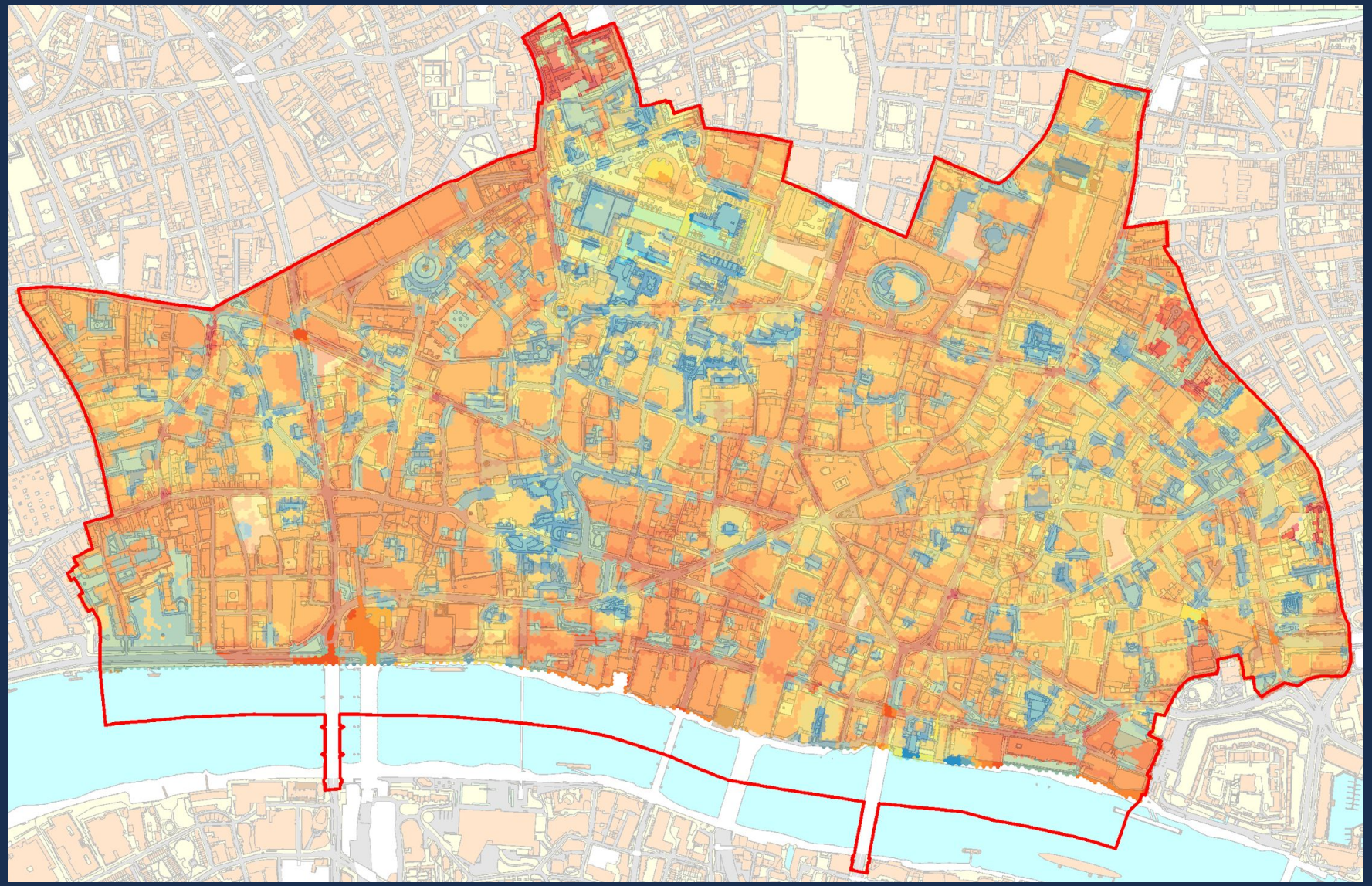
Wider impacts

- Infrastructure disruptions (housing, transport, supply chains)
  1 in 5 UK homes may overheat, worsening health

Environmental risks

- Poor air quality, drought, wildfires
  Thunderstorms, flash flooding—leading to death and disease outbreaks

Overheating Risk and Vulnerability in the City



This map has been created using a **City specific heat index**.

The index combines both **exposure factors** (land temperature, shading, etc) and **vulnerability factors** (age, work type, etc).

Redder = more vulnerable
Bluer = less vulnerable

Further refinement of the heat could provide evidence as part of future **Joint Strategic Needs Assessment.**

Climate-Health: Overheating – Just Transition

In London **inequity is exaggerated** compared to national averages, with a higher proportion of households at the bottom and top of the wealth distribution and **a greater gap between** these groups.

Complex interactions govern the relationship between health, climate change and the way we live, learn, work and play exacerbate existing health inequities, but also present opportunities for co-benefits.

Key risk factors for overheating vulnerability:

- **Personal:** age, health conditions (inc. mental health), ethnicity, etc.
- **Environmental:** housing, green spaces, occupational exposure etc.
- **Socioeconomic:** income, deprivation, social isolation.

In the City of London particularly **vulnerable groups** include:

- **Elderly**
- **Young people**
- **Construction workers** (working externally)
- **Kitchen workers** (working in hot conditions)

These groups are **at increased risk** of harm from climate change/overheating and **less resilient** to/able to recover from these harms. A **just transition** demands a fair approach, reducing the impacts on **those most vulnerable and worst affected**. However, care needs to be taken to ensure that these actions don't have **unintended health 'disbenefits'** or widen health inequalities.

Action to address climate change through mitigation and adaptation

National:

- **The National Adaptation Programme (NAP):** sets out actions that the UK will take to adapt to climate change.
- **UKHSA Adverse Weather and Health Plan (AWHP)**: outlines guidance on planning and response to adverse weather.
- **UKHSA Met-Office Health Alert System:** provides early warnings, to communicate risk and aid preparation and response to adverse weather.

Pan-London:

- London Climate Resilience Review
- Zero Carbon London 2030
- Climate Adaptation
- Green New Deal Fund
- London Business Climate Leaders
- NEL ICS Green Plan

City of London (Corporation):

- **City of London Corporation Climate Action Strategy (2020-27):** aims for net zero by 2040, investing £68 million to achieve this goal, with dedicated focus on the Square Mile including:
  - Resilient buildings and retrofitting
  - Cool streets and greening
  - Active travel and car use reduction
  - Carbon removal and land management
- **London Resilience Forum:** holds remit to warn and coordinate response action.
- **Communication, Warning, Informing and Alerting**: through the Emergency Planning team, ensuring that those supporting those at-risk can respond appropriately to the adverse weather health alert in place.
- **City of London Air Quality Strategy**

Climate-Health Actions: Overheating

General idea	Case study	Health component	Climate component	Board options and considerations
Place- based partnerships	Newham Climate Partnerships – 50 Steps commitments and alignment	Co-ordination to improve patient and staff environment surrounding heath care facilities.	Prioritisation of street improvement works and green corridors. Improvement to building stock.	Setting up a climate based partnership in the Square Mile. Guidance for local occupiers.
Roofs designed to cool/ planning and retrofit support	Aldgate Solar Power – installing solar panels onto roofs at Middlesex Street Estate	Solar panels reflect sunlight and reduce heat from vulnerable top floor flats.	Local renewable power generation and mitigation of Urban Heat Island. Resilient new development and retrofit	Consider combining with white roofs. Roll out to identified key sites (schools, housing).
Heat Plan exercise	Operation Helios – exercising a London wide incident.	Brings in health elements to test response.	Exercise wider climate responses to assess.	Working together to run a similar exercise to test local extreme weather plans.
Cool spaces network/ support for vulnerable settings	GLA –Cool Spaces project Registered spaces which enable people to take respite	Provides sites for vulnerable people to cool at early stages of heat stress.	Provides climate resilience to wider population and aides with response.	Expand network in City. Work to develop more tailored venues (homelessness, businesses). Work to identify and prioritise for funding key sites.
Community Champions	Havering Climate Change Community Champions	Network of community members to support vulnerable.	Enhanced communication and behaviour modelling.	Explore opportunities including through the existing City & Hackney Community Health Champions programme

Appendix A:

Target Areas and Climate-Health Risks

Target area: Healthcare settings and their surroundings

Healthcare settings become unusable	Health settings fire damaged or unavailable	Reduce availability emergency services	Staff unable to get to work in health and other settings	Patients unable to reach treatment	Disruption to usual supply chains/ unavailability		

Target area: Healthcare provision and services

Increased demand for services	Increased respiratory issues from smoke drift	Increased presentation of burns	Increased cardiovascular risk	Increased dehydration and associated risk	Mental health impacts	Heat stress incidents	Sun stroke and sun exposure associated risk

Target area: Education and libraries

Impacts to education facilities	Increased isolation	Staff unable to get to work in other settings	Disruption to usual supply chains/ unavailability				

Key: Direct Health Impacts Facilities Patients Staff Supply chains Social determinants

Heatwaves Transport Wildfires Direct Health

Target area: Housing

Homes unsuitable for care	Increased isolation	Cold related illness					

Target area: Homelessness and rough sleeping

Increased demand for services	Increased homelessness	Staff unable to get to work in health and other settings	Increased dehydration and associated risk	Mental health impacts	Heat stress incidents	Sun stroke and sun exposure associated risk	

Target area: Ports and markets

Outside working unviable	Increased food wastage	Staff unable to get to work in other settings	Disruption to usual supply chains/ unavailability	Reduced food availability			

Key: Direct Health Impacts Facilities Patients Staff Supply chains Social determinants Heatwaves Transport Wildfires Direct Health

Climate-Health Actions: Overheating (2)

1. Homeowner and Business Guidance

- Develop guidance on domestic improvements to reduce overheating risk.

2. Planning and Retrofitting Support

- Educate colleagues on reducing overheating in planning, regeneration, and retrofitting projects.
- Seek to ensure that designs for any new accommodation or rebuilds factor in greater climate resilience than older buildings.

3. Support for Vulnerable Settings, Areas and Population Groups

- Provide proactive advice and action cards for vulnerable settings (care homes, community centres, etc.).
- Identify building stock at increased risk (e.g., care homes, social housing) and prioritise retrofit plans.
- Refine heat-risk mapping to target vulnerable populations (e.g., elderly, kitchen workers, physical laborers, young children).
- Lobby for, partner with and/or bid for further funding (using available data and evidence) from central government to deliver small-to-large scale adaptations, rebuilds and retrofit projects for priority settings that are known to be at higher heat-risk.

4. Vector-Borne Disease Monitoring

- Monitor changes in vector-borne diseases and ensure clear guidance in case of an outbreak.