

British Red Cross submission to the Environmental Audit Committee
Heat Resilience and Sustainable Cooling

I. About the British Red Cross

1. The British Red Cross exists to support those in crisis. Increasingly, communities are facing crises that are climate-related, with extreme weather events such as floods, heatwaves, and wildfires becoming more frequent and intense. We are already seeing the impact this is having on people and communities, which is resulting in higher demands for our services. We need to be prepared as we strive for people to be safe and able to recover whenever disaster strikes, putting those in the most vulnerable situations at the heart of our response, with a focus on taking early action and adapting for what the future holds.

We have published a report in [2021](#) and a follow up briefing in [2023](#), based on public polling we conducted to understand public perceptions of heatwaves. The results of this polling noted an increase in concern about heatwaves from 2021 to 2023. However, despite this increased awareness of heatwaves, a clear gap emerged between awareness and taking resilient action. Further themes emerged that highlighted gaps in national heat resilience, including:

- Data suggests older people do not recognise their vulnerability to extreme heat.
- There appears to be confusion over best practice to keeping a cool home.
- Cost is the most significant barrier to people making home adaptations to their homes.
- Many people are unable to access public spaces.
- Our polling indicates that many people think that the governments across the UK are unprepared for heatwaves. There is a strong agreement that national and local governments have a vital role to play in ensuring people are as prepared as possible against heatwaves.

Further details of these gaps are laid-out in the evidence below.

The contents of this submission are based on British Red Cross research exploring people's perceptions and preparedness for extreme heat as well as insights from our partners.

II. Relationship between heat, human health and communities that are worst affected.

2. Research conducted by the British Red Cross in [2021](#) discussed the following groups of people who are particularly vulnerable to extreme heat:
 - a. Older age groups: particularly those 75+ are more likely to die due to the increase in health risks posed by chronic disease as well as a reduced ability to regulate the body's temperature.¹ Most concerning, many members of this group do not consider themselves to be vulnerable to extreme heat.²
 - b. Babies and young children: those under 4 are particularly sensitive due to several reasons including producing less sweat than adults, being unable to

¹ Williams, L., Erens, B., Ettelt, S., Hajat, S., Manacorda, T., & Mays, N. (2019). Evaluation of the Heatwave Plan for England: Final Report. Accessed: Policy Innovation and Evaluation Research Unit.

² British Red Cross (2023) *Policy brief: public perceptions of heatwaves in the UK*. London. Available at: [Heatwaves policy brief 2023 \(1\).pdf](#)

communicate when feeling the effects of heat and relying on others to help them cool down.^{3 4}

- c. People who are pregnant: heat can contribute to swelling in the legs, inhibiting mobility, and making it more difficult to cool down. There is evidence showing people who are pregnant are more likely to go into early labour in the week following a heat wave.⁵
- d. People with chronic and underlying health conditions: heart, lung and kidney conditions and diabetes are more likely to be exacerbated by extreme heat.^{6 7}
- e. People with substance dependency: substances such as alcohol and recreational drugs can affect the body's ability to respond to extreme heat.⁸
- f. People with mental health conditions: experiencing extreme heat can lead to severe distress and an increase in risk of suicide.^{9 10 11}
- g. People who have a severe physical or learning disability, or Alzheimer's and Parkinson's disease: individuals in this group can find it more difficult to adapt behaviour to keep cool in extreme heat.^{12 13 14}
- h. People who live alone or are socially isolated: are less able to access assistance quickly.¹⁵
- i. People experiencing homelessness: more exposed to the impacts of outdoor extreme heat.¹⁶
- j. People living in care homes: approximately 1 in 4 heat related deaths in the 2003 heatwaves occurred in care homes. Significant mortality rates were also seen in the 2020 heatwaves.¹⁷
- k. People living in top floor flats, south facing buildings, dense urban areas, or poor-quality housing.¹⁸ 1 in 5 homes in the UK are prone to overheating.¹⁹
- l. Outdoor workers: those who work in outdoor environments, as well as jobs that require physical exertion or restrictive uniforms have an increased risk to heat related illness.²⁰

³ Public Health England. (2020). Heatwave Plan for England.

⁴ Red Cross Red Crescent Climate Centre. (2019). *Heatwave Guide for Cities*. Available at: [ENG-RCCC-Heatwave-Guide2019.pdf \(preparecenter.org\)](#)

⁵ Red Cross Red Crescent Climate Centre. (2019). *Heatwave Guide for Cities*. Available at: [ENG-RCCC-Heatwave-Guide2019.pdf \(preparecenter.org\)](#)

⁶ Public Health England. (2021). Heat-health risks and Covid-19: Actions to Prevent Harm. Heatwave and Summer Preparedness 2021.

⁷ Red Cross Red Crescent Climate Centre. (2019). *Heatwave Guide for Cities*. Available at: [ENG-RCCC-Heatwave-Guide2019.pdf \(preparecenter.org\)](#)

⁸ Public Health England. (2020). Heatwave mortality monitoring report.

⁹ Public Health England. (2020). Heatwave Plan for England.

¹⁰ Lawrence, E., Thompson, R., Fontana, G., & Jennings, N. (2021). The impact of climate change on mental health and emotional wellbeing: current evidence and implications for policy and practice. Accessed: Grantham Institute.

¹¹ Thompson, R., Hornigold, R., Page, L. & Waite, T. (2018). Associations between high ambient temperatures and heat waves with mental health outcomes: a systematic review. *Public Health*, 161, 171-191.

¹² Public Health England. (2020). Heatwave Plan for England.

¹³ Public Health England. (2021). Heat-health risks and Covid-19: Actions to Prevent Harm. Heatwave and Summer Preparedness 2021.

¹⁴ Red Cross Red Crescent Climate Centre. (2019). *Heatwave Guide for Cities*. Available at: [ENG-RCCC-Heatwave-Guide2019.pdf \(preparecenter.org\)](#)

¹⁵ Public Health England. (2020). Heatwave Plan for England.

¹⁶ Public Health England. (2021). Heat-health risks and Covid-19: Actions to Prevent Harm. Heatwave and Summer Preparedness 2021

¹⁷ Public Health England. (2020). Heatwave Plan for England.

¹⁸ Public Health England. (2020). Heatwave Plan for England.

¹⁹ Public Health England. (2021). Heat-health risks and Covid-19: Actions to Prevent Harm. Heatwave and Summer Preparedness 2021

²⁰ Public Health England. (2020). Heatwave Plan for England.

- m. Economically and socially marginalised groups: may struggle to access timely healthcare, transport and to pay utility bills.²¹
 - n. Refugees and migrants: may not have access to current heat advice and health risks and may experience conditions that differ from their country of origin.²²
 3. The following statistics as a result of our polling also evidence the relationship between heat and human health:
 - a. 84% of those expecting a child were more likely to report adverse health effects as a result of extreme heat.²³
 - b. 75% of those with a health-related condition that makes them more vulnerable to the heat were likely to report adverse health effects as a result of extreme heat.²⁴
 - c. 84% of those with a mental health condition were likely to report adverse health effects as a result of extreme heat.²⁵
 4. Additional research is needed to assess how higher risk groups perceive their own vulnerability, as well as their access to information and services to support them in preparing for and adapting to heatwaves.²⁶

III. **Actions to protect those most at risk.**

5. **Action on awareness, preparedness and adaptation to heatwaves must prioritise those most at risk.** ²⁷

As evidenced in response to the first prompt, we know there are specific groups who are most likely to disproportionately experience negative health effects as a result of heatwaves. There is a need to assess how these groups (particularly older age groups) perceive their vulnerability as well as their access to information and support in preparation and adaptation to heatwaves. Although acknowledged by governments across the UK, there is yet to be sufficient coordinated action to address the need.²⁸

6. **A ‘whole of society’ approach to building awareness to heat risk and supporting preparedness is required.**

The ‘whole of society’ vision for public engagement in national resilience articulated in the Government Resilience Framework signals the need to enhance awareness and enable greater ownership and action from people who are likely to be most vulnerable to emergencies. However, assessments of progress so far highlight a gap in translating these ambitions into action. Action must include developing appropriate

²¹ Khare, S., Hajat, S., Kovats, S., Lefevre, C. E., Bruine de Bruin, W., Dessai, S., & Bone, A. (2015). Heat protection behaviour in the UK: results of an online survey after the 2013 heatwave. *BMC Public Health* 15:878.

²² Red Cross Red Crescent Climate Centre. (2019). *Heatwave Guide for Cities*. Available at: [ENG-RCCC-Heatwave-Guide2019.pdf \(preparecenter.org\)](#)

²³ British Red Cross (2023) *Policy brief: public perceptions of heatwaves in the UK*. London. Available at: [Heatwaves policy brief 2023 \(1\).pdf](#)

²⁴ British Red Cross (2023) *Policy brief: public perceptions of heatwaves in the UK*. London. Available at: [Heatwaves policy brief 2023 \(1\).pdf](#)

²⁵ British Red Cross (2023) *Policy brief: public perceptions of heatwaves in the UK*. London. Available at: [Heatwaves policy brief 2023 \(1\).pdf](#)

²⁶ British Red Cross (2023) *Policy brief: public perceptions of heatwaves in the UK*. London. Available at: [Heatwaves policy brief 2023 \(1\).pdf](#)

²⁷ British Red Cross (2023) *Policy brief: public perceptions of heatwaves in the UK*. London. Available at: [Heatwaves policy brief 2023 \(1\).pdf](#)

²⁸ British Red Cross (2023) *Policy brief: public perceptions of heatwaves in the UK*. London. Available at: [Heatwaves policy brief 2023 \(1\).pdf](#)

communications for disproportionately affected populations that are informed by and developed with lived experience. A well-resourced, co-ordinated, and cross-government communication approach to improve understanding of risk and to support preparedness across a range of weather-related emergencies, including heatwaves, is required. This must include a central role for local Voluntary and Community Sector (VCS) organisations, who are well placed to work alongside national and local government to ensure that information and support reaches those most in need.²⁹

7. Direct policy intervention is required to enable those most at risk to adapt to heatwaves.

Adapting buildings and urban planning is essential to tackling extreme heat, both indoors and out. British Red Cross research on heatwaves has shown that financial constraints is a significant limiting factor for people taking steps to adapt their homes. Targeted support for both adapting homes and improving access to cool spaces for those most at risk is critical in order to address the escalating effects of heatwaves on the health and wellbeing of groups most vulnerable to the effects of heatwaves.³⁰

IV. Sufficiency of the 3rd National Adaptation Programme.

8. Overall, NAP3 has identified several key areas of priority regarding heatwaves. However, it consistently falls short of detailing how to address these priorities in practice. This includes details how DESNZ will retrofit existing buildings for heat adaptation and what UKHSA's new role in working with DHSC to adapt social care infrastructure actually entails.
9. The British Red Cross welcomes the identification of public health risks from extreme temperatures as a key government priority, particularly due to the high mortality rates and economic impacts of heatwaves.
10. NAP3 also acknowledges the disproportionate effects heatwaves are likely to have on vulnerable groups and promotes early and inclusive action in response. However, it falls short of identifying what 'early and inclusive action' looks like and how it will be practically implemented.
11. [British Red Cross research](#) has identified a significant gap between public awareness of risks posed by heatwaves and actions taken to mitigate impacts. However, no commitments are made in NAP3 to improve public awareness of risk or understanding of preparedness. This is a missed opportunity to act on the Government Resilience Framework's ambition of a 'whole of society' approach to resilience.
12. The prioritisation of research addressing overheating in buildings is welcome, however dividing it across DLUHC, DESNZ, DHSC and UKHSA creates confusion about where exactly this will sit, how the research will be implemented and what resources are available to act on the findings.

²⁹ British Red Cross (2023) *Policy brief: public perceptions of heatwaves in the UK*. London. Available at: [Heatwaves policy brief 2023 \(1\).pdf](#)

³⁰ British Red Cross (2023) *Policy brief: public perceptions of heatwaves in the UK*. London. Available at: [Heatwaves policy brief 2023 \(1\).pdf](#)

V. Protecting private and public sector housing stock from extreme heat.

13. Research has shown that home adaptation can be highly effective in reducing impacts of extreme heat while ensuring sufficient warmth in winter months.³¹ While home adaptation is a useful measure to strengthen resilience, the feasibility of doing so varies greatly across the housing sector.³² [Our research](#) indicates that there is a lack of sufficient understanding of available home adaptation options. There is a need for more advice on sustainable options that reduce risks to life and health while also not contributing further to climate change.
14. One in three people have considered installing air conditioning to protect themselves from the heat. While it is essential to protect the most vulnerable against heat risks, increased use of air conditioning can put additional pressure on the grid and contribute to climate change.^{33 34}

VI. Effectiveness of government work across departments and with local authorities to ensure a coordinated approach to heat resilience.

15. Comprehensive and coordinated risk management for heatwaves should be further prioritised by the UK and devolved governments.

Despite growing concern about the impact of heat risk, generally people are not confident that the UK is well prepared and expect national governments to play a leading role in driving action.³⁵ It is vital that building resilience to extreme weather events, including heat, is prioritised across government at all levels. The current approaches to address the impacts of heatwaves are not keeping pace with the level of risk, are often poorly coordinated across government and do not sufficiently focus on people, particularly those who are likely to be most vulnerable. Coordinated action across government, sectors, policies, frameworks, and timescales is needed to build resilience against heat risk and other extreme weather events.³⁶

16. The Government Resilience Framework (GRF) sets out details for cross-government co-ordination, including information on regular ministerial level resilience meetings across all four nations. However, the timelines provided are vague and it doesn't provide a roadmap for achieving the recommendations within the GRF by 2030.

17. Additionally, the GRF recognises the needs of people in vulnerable situations and how to address them. It details an understanding that those in vulnerable situations are disproportionately at risk during an emergency. It commits to working to identify and support people who are vulnerable in times of emergency, and to developing a measurement of how risks impact those in vulnerable situations. There is also a

³¹ Climate Change Committee (2022). *Risks to health, wellbeing and productivity from overheating in buildings*. Available at: [Risks to health, wellbeing and productivity from overheating in buildings July 2022 \(theccc.org.uk\)](https://www.theccc.org.uk/reports/2022/risks-to-health-wellbeing-and-productivity-from-overheating-in-buildings-july-2022/)

³² Resolution Foundation (2023). *Its getting hot in here*. Available at: [Its-getting-hot-in-here.pdf \(resolutionfoundation.org\)](https://www.resolutionfoundation.org/publications/its-getting-hot-in-here/)

³³ Beulant, A.L, et. al. (2020) Early adaptation to heatwaves and future reduction of air-conditioning energy use in Paris. *Environmental Research Letter*. Available at: [Early adaptation to heat waves and future reduction of air-conditioning energy use in Paris \(iop.org\)](https://www.iop.org/publications/early-adaptation-to-heat-waves-and-future-reduction-of-air-conditioning-energy-use-in-paris/)

³⁴ British Red Cross (2023) *Policy brief: public perceptions of heatwaves in the UK*. London. Available at: [Heatwaves policy brief 2023 \(1\).pdf](https://www.britishredcross.org.uk/publications/policy-brief-public-perceptions-of-heatwaves-in-the-uk/)

³⁵ British Red Cross (2023) *Policy brief: public perceptions of heatwaves in the UK*. London. Available at: [Heatwaves policy brief 2023 \(1\).pdf](https://www.britishredcross.org.uk/publications/policy-brief-public-perceptions-of-heatwaves-in-the-uk/)

³⁶ Grantham Research Institute on Climate Change and the Environment (2023) The 2022 heatwaves: England's response and future preparedness for heat risk. London: LSE. Available at: [The-2022-heatwaves-Englands-response-and-future-preparedness-for-heat-risk-June-2023.pdf \(lse.ac.uk\)](https://www.lse.ac.uk/GranthamResearchInstitute/publications/the-2022-heatwaves-englands-response-and-future-preparedness-for-heat-risk-june-2023.pdf)

commitment to updating guidance for Local Resilience Forums (LRFs) to coordinate resilience strategies. However, there are several key recommendations that are necessary to ensure effective coordination of resilience approaches between the Government and its guidance of LRFs. We know that it is vital for people in vulnerable situations to be at the centre of emergency response and this includes local responses to heatwaves. Implementing the following recommendations focussed on people in vulnerable situations will improve the resilience of local communities to heatwaves by protecting those who are disproportionately at risk.

- a. The British Red Cross recommend that, by putting the Resilience Standards on a statutory footing as outlined in the GRF, the government strengthens the requirements on LRFs to develop a 'detailed understanding of risk exposure and particular vulnerabilities within the local area that may affect the severity of impacts caused by a particular risk, such as extreme heat'.³⁷
- b. The British Red Cross recommend that the guidance for LRFs encourages and supports local areas to use population level data (including the proposed socio-economic measure when available) to map vulnerabilities and develop plans accordingly.³⁸

VII. Dedicated heat resilience strategy.

18. The Red Cross and Red Crescent Climate Centre recommend that a dedicated heat resilience strategy, held locally is vital to combatting rising temperatures. A strategy devised and implemented locally will be most effective as it allows for a flexible approach based on the geographical location.³⁹ This approach should be included as part of a joint heat resilience strategy between the UK government and local authorities.

If you have any questions about any of the information contained in this document, or our further research, please contact Adeline Siffert, Senior Climate Change Policy Advisor,

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³⁷ Cabinet Office (2020). 'National Resilience Standards for Local Resilience Forums (LRFs)'. Available at: assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/913502/NRS_for_LRFs_V3.0_Aug2020.pdf

³⁸ British Red Cross (2023) *Identifying Vulnerabilities and People at Risk in an Emergency*. London. Available at: [Identifying vulnerabilities and people at risk in an emergency \(redcross.org.uk\)](https://www.redcross.org.uk/identifying-vulnerabilities-and-people-at-risk-in-an-emergency)

³⁹ Red Cross Red Crescent Climate Centre. (2019). *Heatwave Guide for Cities*. Available at: [ENG-RCCC-Heatwave-Guide2019.pdf \(preparecenter.org\)](https://www.preparecenter.org/eng-rccc-heatwave-guide2019.pdf)