16 November 2026

Overheating: why schools need to adapt

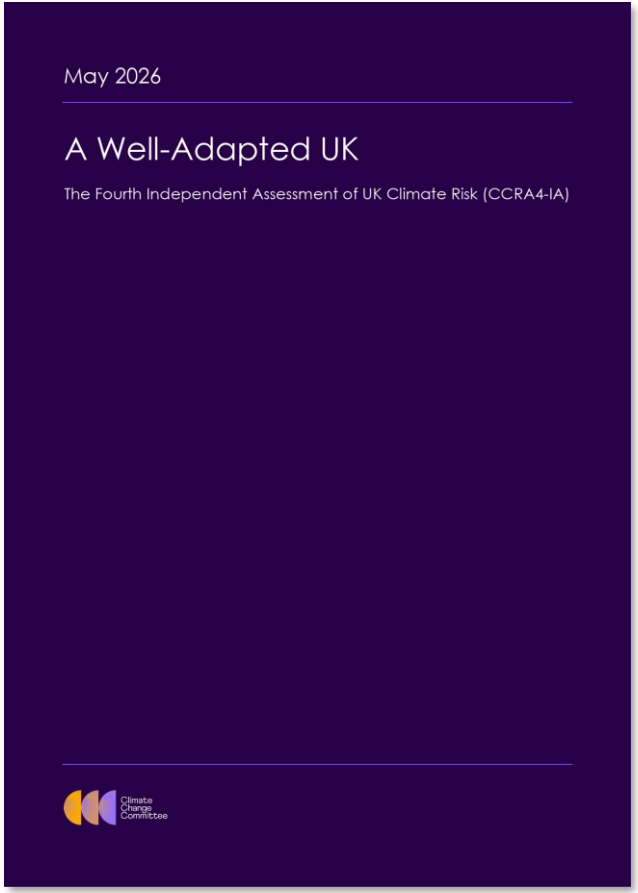
Flo Bates, Head of Climate Change Risk Assessment, Islington parent (1 year old)

Overheating: why schools need to adapt

Agenda

1. **The changing climate**
   The UK will experience more intense, more frequent and longer heatwaves.

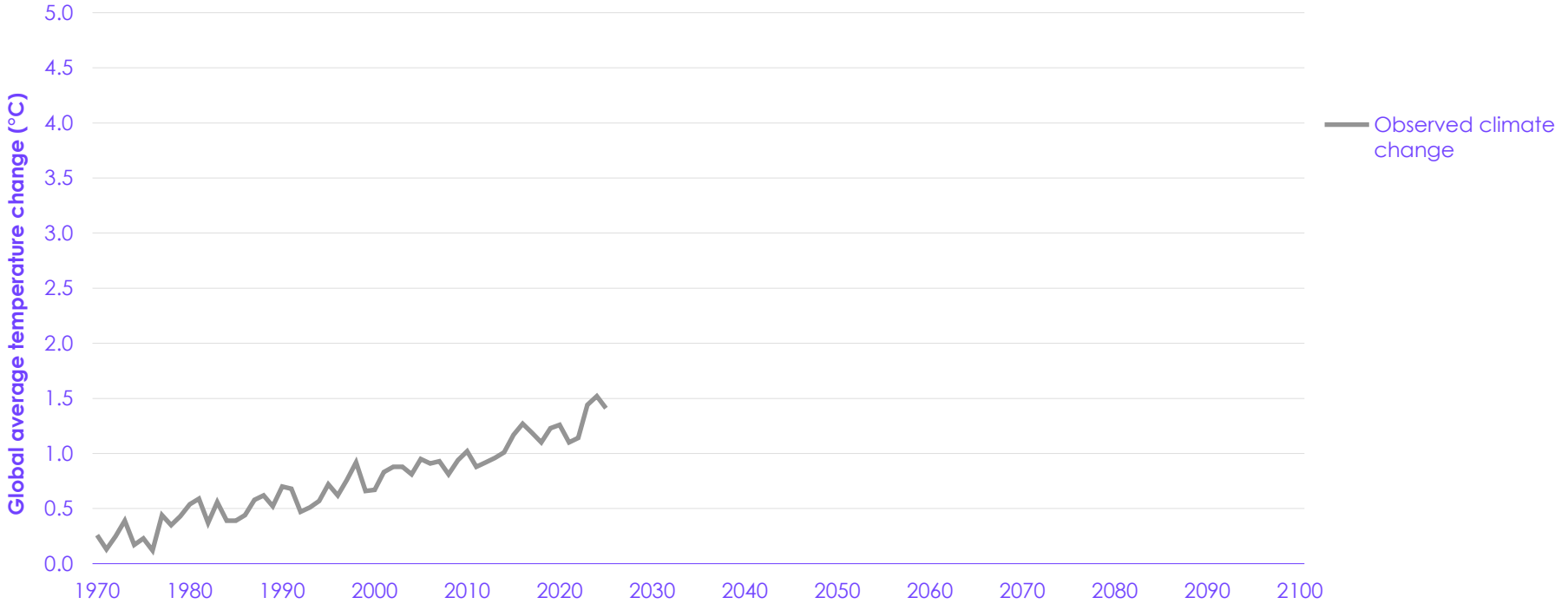
2. **A Well-Adapted UK**
   The Climate Change Committee has advised government to take ambitious action on maintaining safe temperatures in public buildings such as schools.



The changing climate

Global average temperatures are continuing to warm at record pace

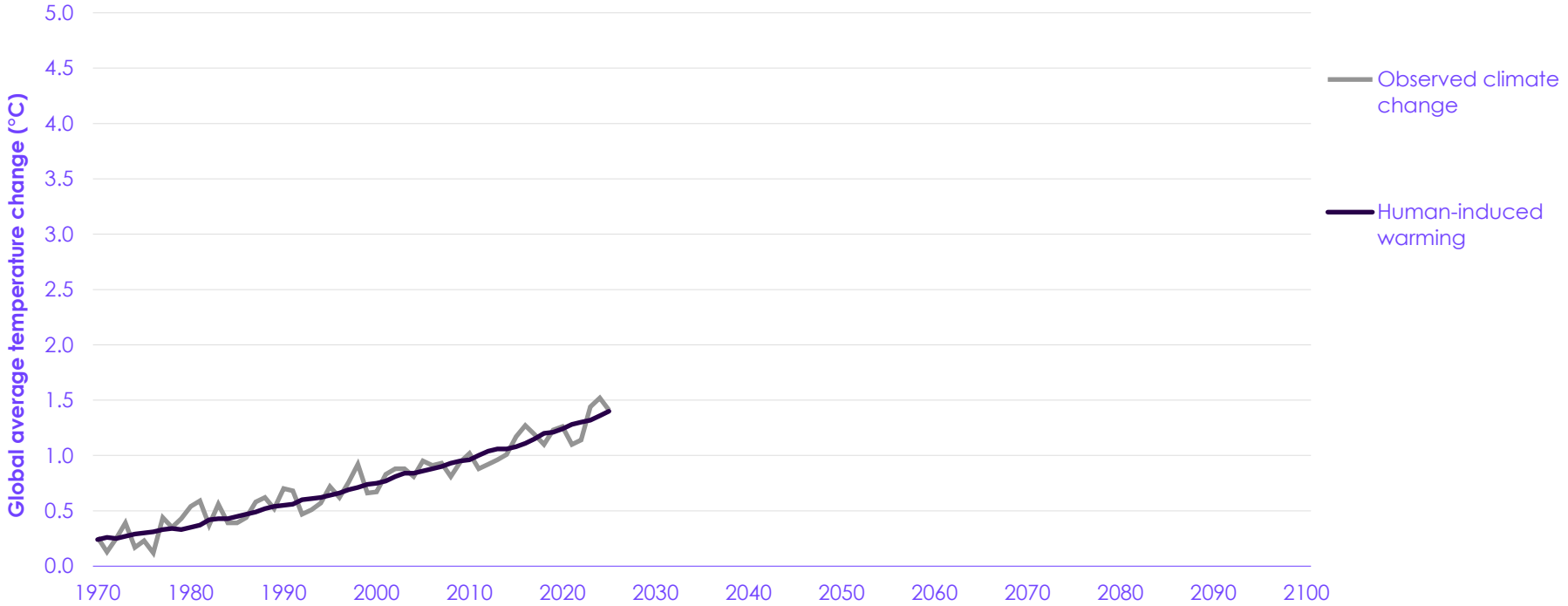
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Source: Met Office (2025) *Climate Dashboard – Tracking the Changing Climate with Earth Observations*; Forster, P. et al (2025) *Indicators of Global Climate Change 2024: annual update of key indicators of the state of the climate system and human influence*; Rogelj, J. et al (2023) *Credibility gap in net-zero climate targets leaves world at high risk*; United Nations Environment Programme (2025) *Emissions Gap Report 2025: Off Target – Continued collective inaction puts global temperature goal at risk.*

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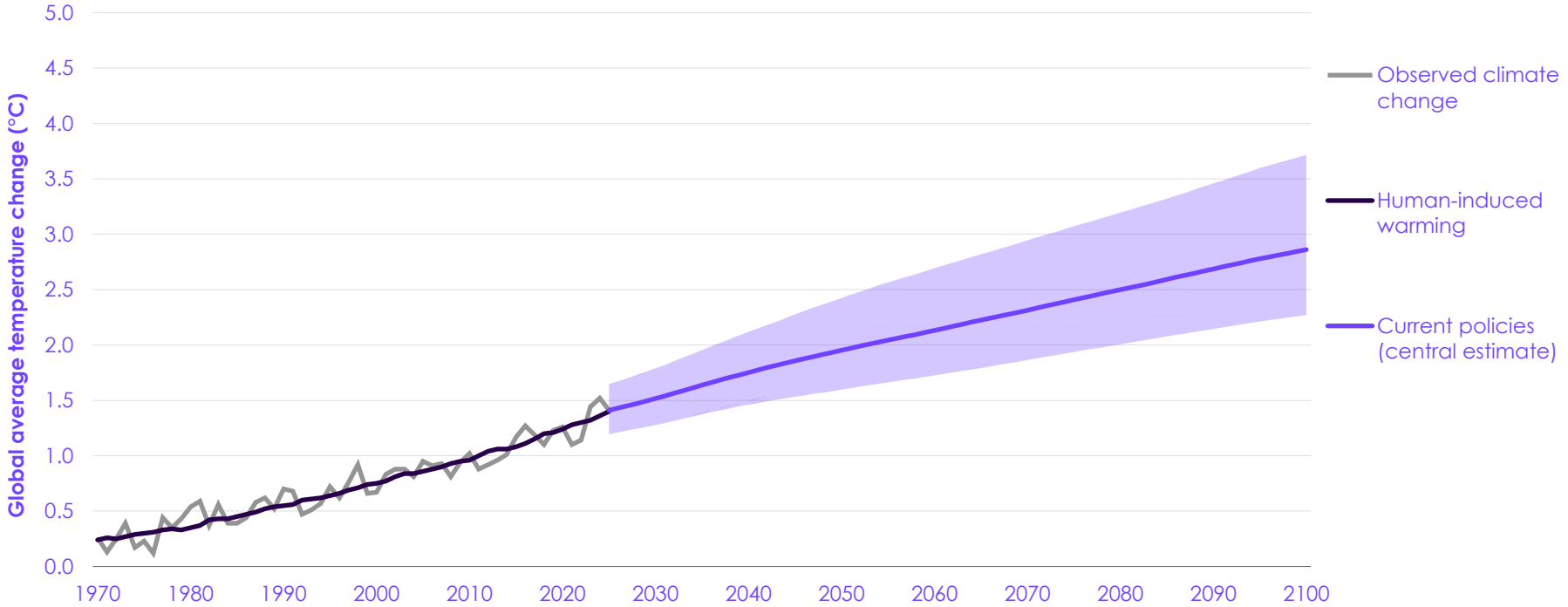
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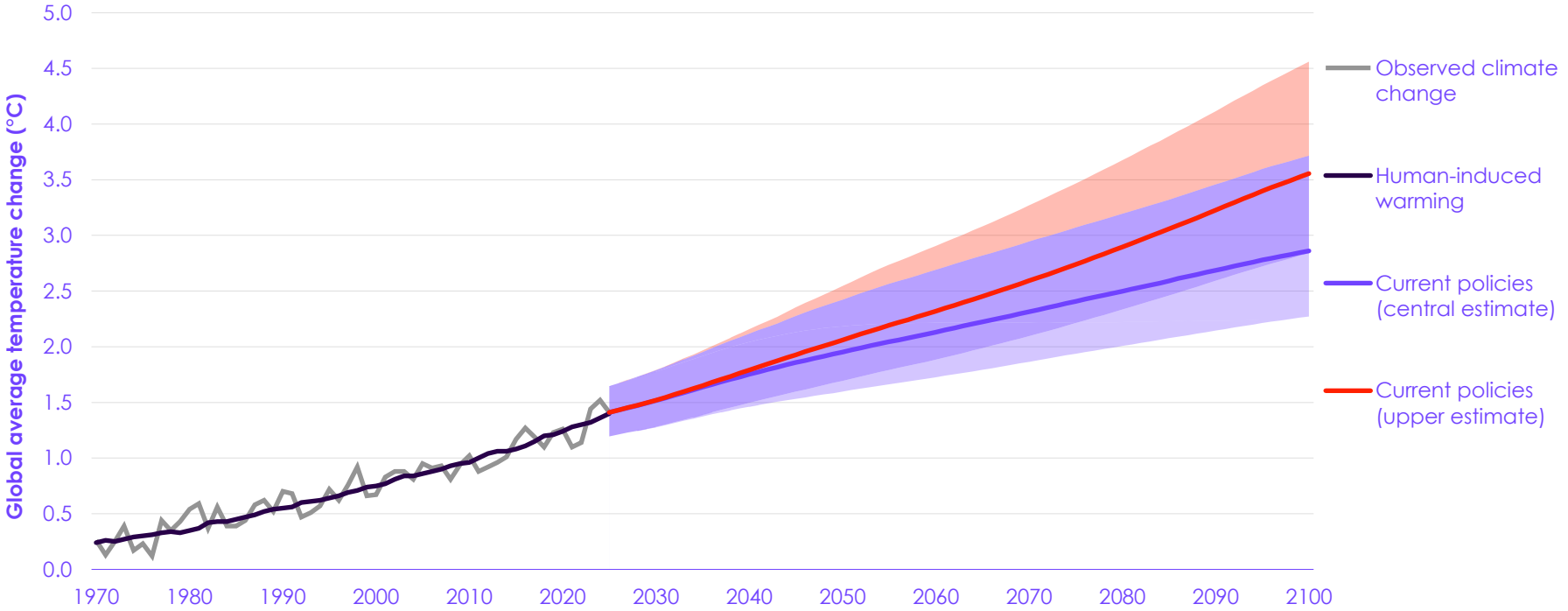
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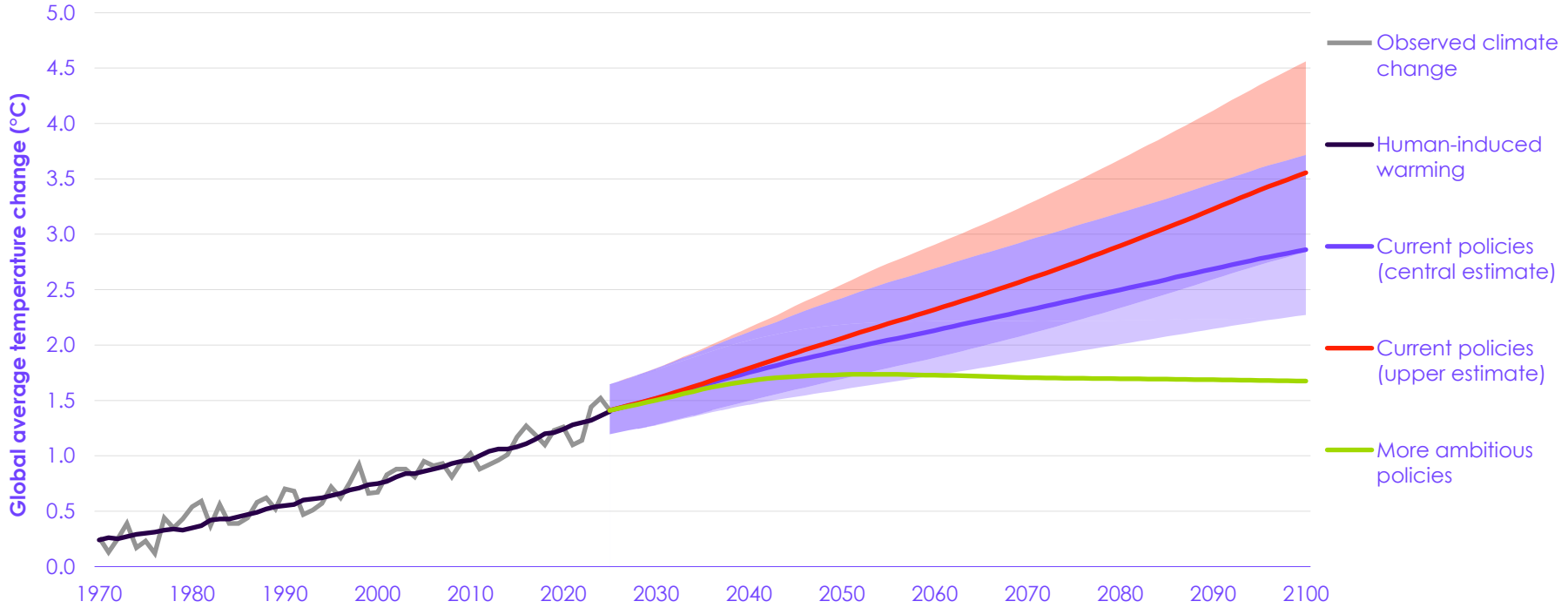
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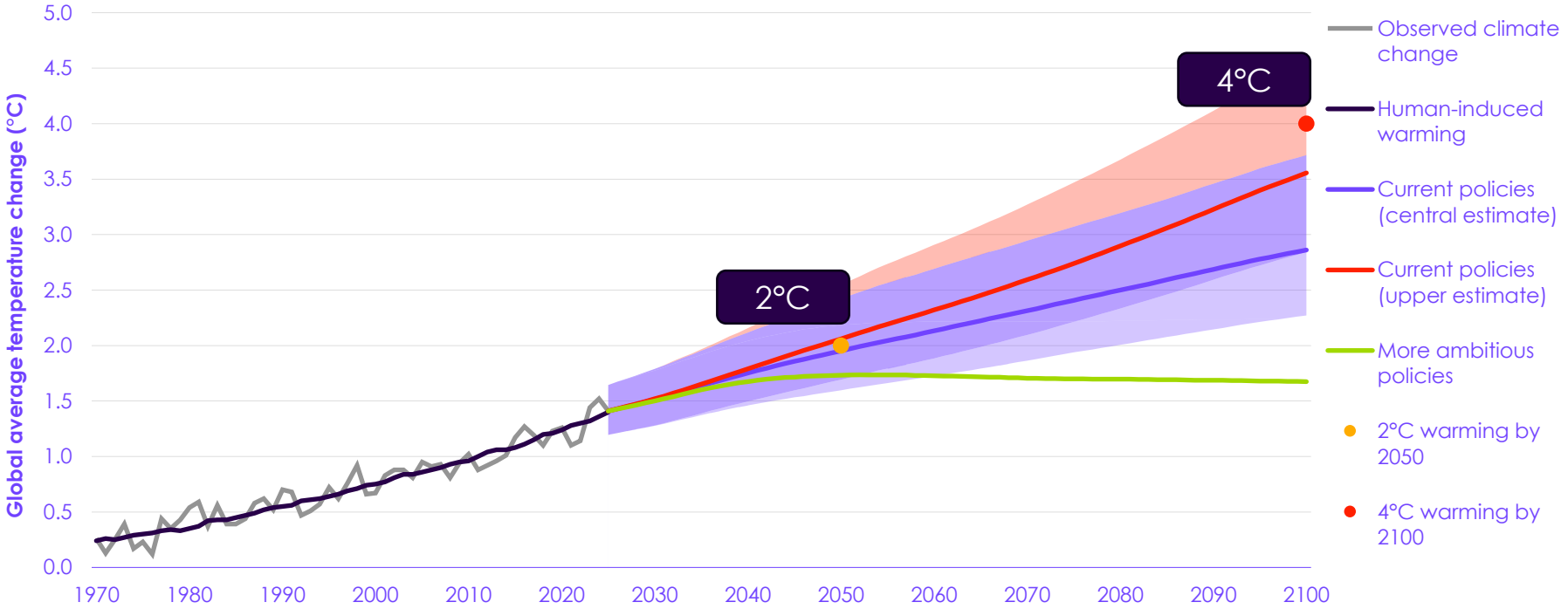
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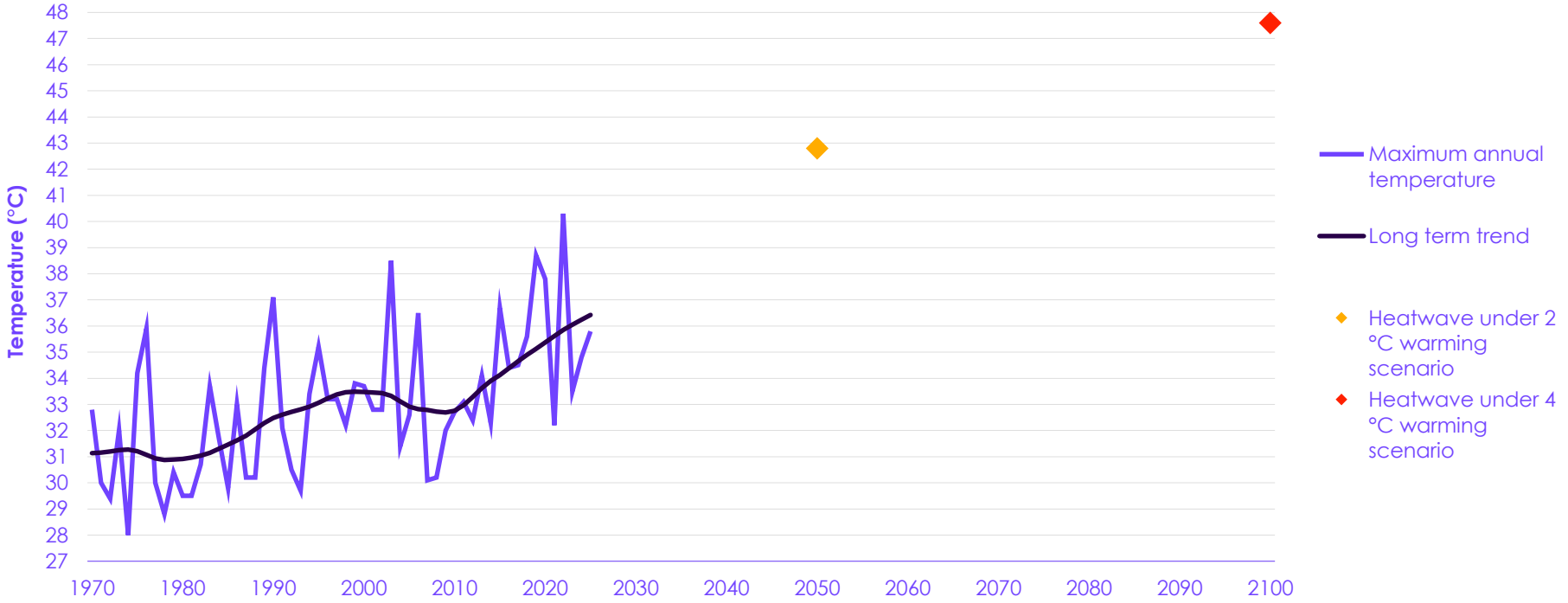
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The impacts of climate change are increasingly visible in the UK

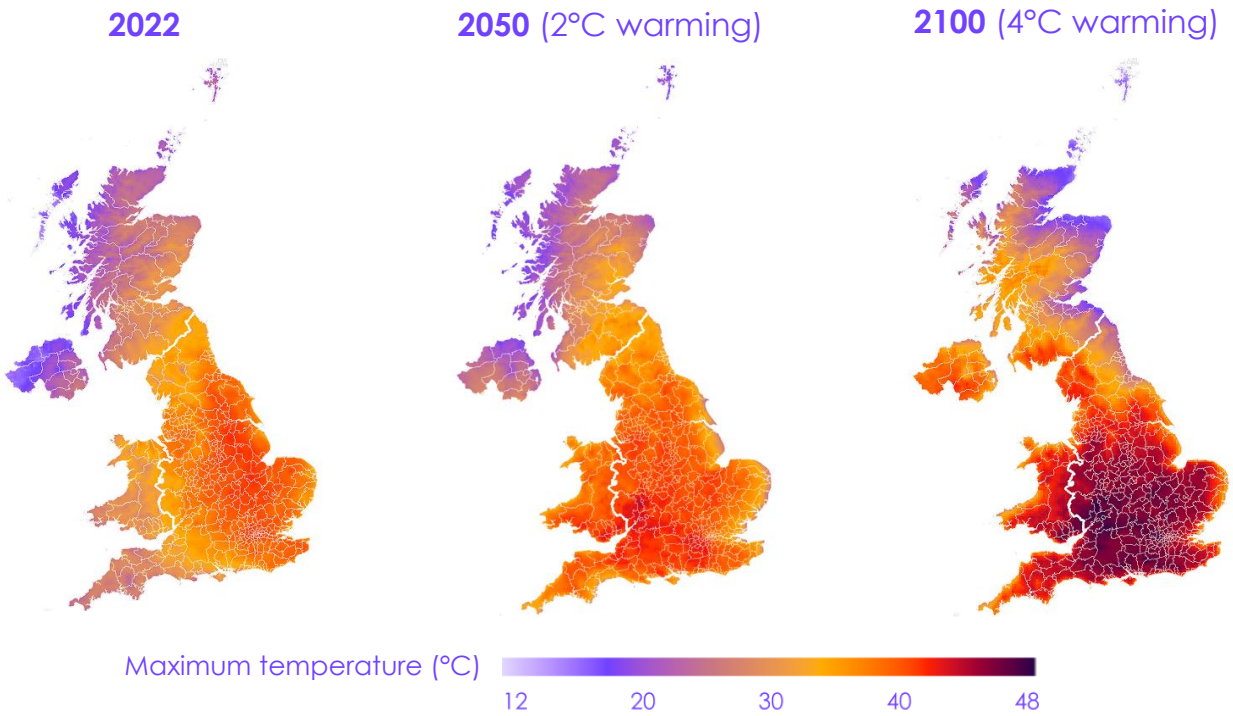
Changes in UK maximum annual temperatures



Source: Met Office (2025) *Met Office Integrated Data Archive System (MIDAS) Land and Marine Surface Stations Database*; Met Office (2025) *UKCP Local Projections on a 5km grid, bias corrected using scaled distribution mapping, over the UK.*

Heatwaves in the UK will be more frequent, longer, and more intense than they are today

Recent and projected maximum temperatures



Source: Hollis, D. et al (2025) *HadUK-Grid Gridded Climate Observations on a 5km grid over the UK, v1.3.1.ceda (1836–2024)*; Met Office (2025) *UKCP Local Projections on a 5km grid, bias corrected using scaled distribution mapping, over the UK.*

The UK is already experiencing climate change

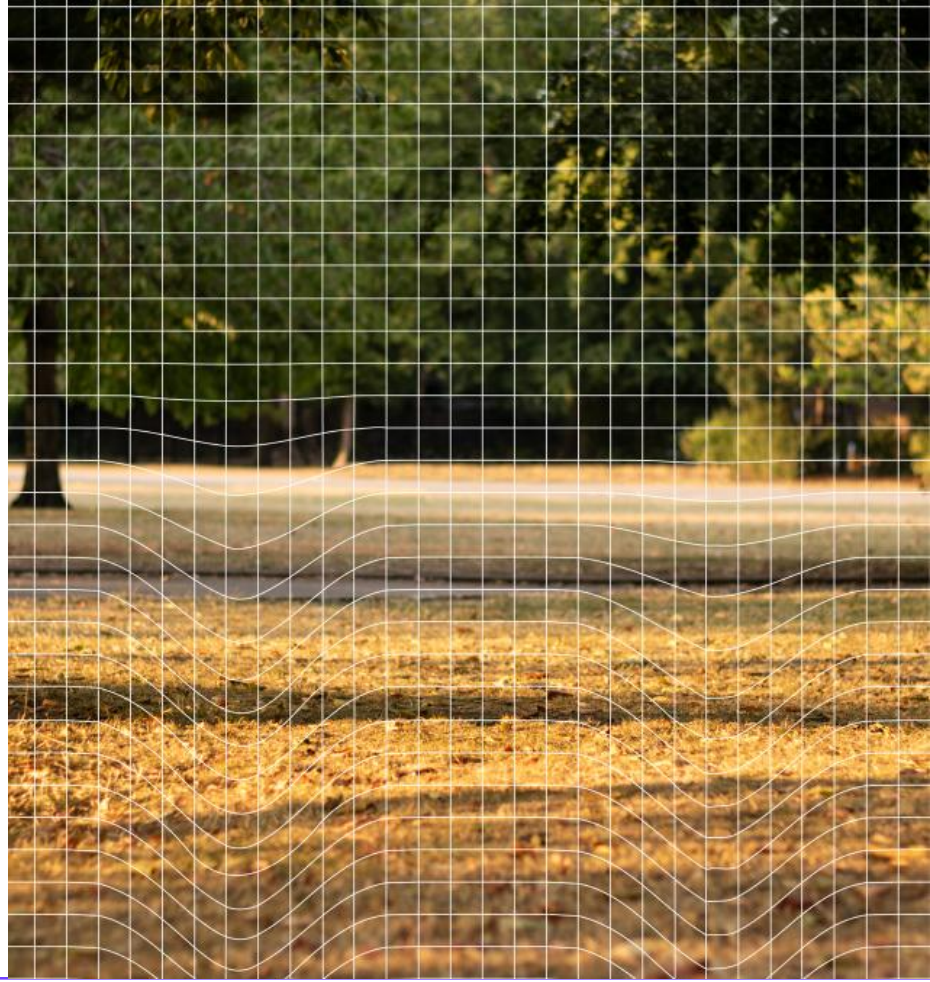
Extreme heat is intensifying in the UK, impacting schools

Heatwaves are already impacting the UK	Under 2°C of global warming by 2050	Under 4°C of global warming by 2100
• 40°C was exceeded for the first time in July 2022. • The chance of exceeding 40°C somewhere in the UK in today is 4% annually - 20 times higher than in the 1960s. • Pupils across England lose the equivalent of 6.7 days per year of learning.	• The hottest summers will be several degrees hotter than any summer to date. • Heatwaves could exceed 45°C – and feature 'tropical nights' for over a week. • In 2050, an average of 8.2 days per year of learning could be lost per pupil in England.	• Temperatures above 40°C will occur every two to three years. • Heatwaves will be hotter and longer. • Cumulative lost learning timefor pupils in England could reach 14 days annually. • School children in southern England could experience 'severe' cognitive performance loss for over 80% of the spring and summer months.

Overheating in schools is a multifaceted issue

Risks raised in A Well-Adapted UK

- High temperatures pose health risks to students and staff.
- High temperatures cause discomfort and reduce concentration.
  - A day of absence for students in Years 10 and 11 is associated with 0.8% lower yearly earnings at age 28.
  - Taking an exam on a 32°C day leads to around a 10% lower likelihood of passing compared to a 22°C day.
- School closure affects working parents and increases risks to vulnerable children.



A Well-Adapted UK

Advice for a well-adapted UK
Key messages

- Future UK climate will be drastically different from the past.
- Impacts are severe and rising, but not inevitable.
- Known solutions can solve a lot of this – including passive and active cooling to manage overheating.
- The investment to put key adaptations in place is manageable.
- Improved ambition, backed with resources, is key to make this happen right now.


Credit: Mike Hewitt / Getty Images

Ambition for a well-adapted education system

Schools are able to maintain safe and good quality provision

Objective

Services operate safely during extreme weather at levels at least as good, if not better, than today under the current and future climate.

Proposed targets

- By 2050, internal temperatures of learning environments should remain between 16°C–25°C.

Actions

- Buildings and estates: outdoor shading, passive and active cooling and ventilation.
- Operations: rostering and timetabling, flexible capacity with back-up facilities, behaviour change, staff training.

Policies

- Planning policy and building regulations: that ensure public buildings and estates are suitable for future climate conditions and that indoor conditions are safe.
- Public funding: for infrastructure upgrades, new public estates.
- Reporting requirements: for services to conduct risk assessments and develop adaptation plans.
- UK-wide resilience frameworks and accessible climate information: for robust guidelines and targets on resilience.