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Deadline 30 October 2026

27 October 2026

RE: National Heat Risk Commission - call for evidence

We welcome the call for evidence, which is badly needed.

1. How is extreme heat, and its companion hazards of drought or wildfire, affecting your organisation, sector and the people you work with or serve? Please tell us about impacts on your workforce, customers, service users, communities, operations, services, assets, supply chains, productivity or costs.

The Centre for Sustainable Energy (CSE) is a charity supporting people and organisations across the UK to tackle the climate emergency and end the suffering caused by cold homes.

We support communities and local government to take effective action on energy in their homes and communities. Through our advice line, home visits and one to one support, our home energy team supports around 20,000 people a year in fuel poverty to reduce their bills and make their homes more energy efficient. We deliver fuel poverty services locally, regionally and nationally for electricity network operators, energy suppliers and local authorities. Our communities' team has supported 871 community organisations to take action on climate change or to tackle fuel poverty.

Fuel poverty has traditionally been framed as a winter problem: it's officially defined as the inability to afford enough energy to heat the home to a reasonable standard. But this concept is becoming increasingly outdated. As summers are getting hotter, households also need energy to keep their homes safe during extreme heat. This means the definition of fuel poverty risks overlooking a new form of energy hardship that's just as dangerous to health: the inability to afford to stay cool. Clients calling our energy advice line for support are now raising this issue with us, please see the case study in Appendix 1.

Government definitions of fuel poverty, support packages and publicly funded retrofit schemes need to be updated to reflect the new reality we're entering.

Fuel poverty definition needs review to recognise energy needs of cooling

In England, fuel poverty is currently measured using the Low-Income Low Energy Efficiency (LILEE) definition. A household is considered fuel poor if it lives in a property with a fuel poverty energy efficiency rating of band D or below, and if its residual income falls below the poverty line after required energy costs are modelled. Prior to this, a household was defined to be in fuel poverty if it needed to spend 10% or more of its income on fuel costs to keep adequately warm.

Both these definitions use a methodology that models heating requirement based on the need to heat the main living space to 21°C, with the remaining occupied rooms reaching 18°C. They make no allowance for cooling an overheated home.

The impact on bills and fuel poverty of summer overheating

At CSE, we've modelled the extra energy needed to keep a home cool in summer and the impact on fuel bills¹. If the fuel poverty definitions were to account for this extra energy needed for cooling, then the number of people in fuel poverty would rise, and the fuel poverty gap (the additional income needed for a household to not be in fuel poverty) would increase.

Our headline estimates are:

- Annual bills and the price cap could rise by up to £140.
- The fuel poverty rate¹ is likely to rise to 14-17% (LILEE) or 36-38% (10% definition) of English households.
- The fuel poverty gap² could increase by 13-37%.
In a more extreme summer climate, the estimates increase:
- Annual bills and the price cap could rise by up to £740.
- The fuel poverty rate is likely to rise to 25-29% (LILEE) or 44-52% (10% definition).
- The fuel poverty gap could increase by 100-195%.

Publicly funded home energy retrofit schemes need review

A well-insulated home will typically stay cooler in summer as well as warmer in winter – which is a win-win in terms of tackling increasing heat risks. Yet the current government funded grant programmes (Warm Homes Local and Warm Home Social) have moved away from supporting complex insulation work due to recent market failures.

Furthermore, these grant programmes and the Warm Home Fund (low interest loan scheme) due to be launched shortly are not focused on funding cooling measures such as air conditioning, with most of the heat pumps being funded or eligible for grant or loan support unable to provide cooling.

¹ <https://www.cse.org.uk/news/summer-fuel-poverty-new-price-cap/>

Impacts on the energy system

A further impact of extreme heat is increased pressure on the energy system. Rising temperatures and more frequent heatwaves are likely to increase peak summer electricity demand as households and businesses adopt air conditioning.

From a baseline of 3% of homes in 2025 (around 0.3 TWh of demand), the National Energy System Operator (NESO) projects that 10–40% of households could have air conditioning by 2050, increasing electricity demand for cooling by 600–1,300%.

	2035		2050			
Modelling assumptions	Ten Year Forecast	Holistic Transition	Holistic Transition	Electric Engagement	Hydrogen Evolution	Falling Behind
➡ Homes with air conditioning	8%	5%	10%	20%	20%	40%
↔ Air conditioning demand	0.8 TWh	0.5 TWh	1.1 TWh	2.1 TWh	2.1 TWh	4.3 TWh

Figure 1: take-up of air conditioning and modelled air conditioning demand - Future Energy Scenarios: Pathways to Net Zero - www.neso.energy/document/364541

This growth in demand will place further pressure on electricity distribution networks, many of which are already constrained, and potentially add to the estimated £25 billion investment required between 2028 and 2033. Under an active adaptation strategy, extensive air conditioning use could require additional network investment and generation capacity. National and regional energy planning must therefore account for rising cooling demand and identify cost-effective solutions for consumers. High temperatures also increase stress on electricity infrastructure and the risk of component failure.

In areas with constrained networks, Distribution Network Operators (DNOs) could help reduce peak cooling demand and avoid or defer costly reinforcement by supporting nature-based cooling, community resilience measures and cool spaces. These interventions may offer better value than expanding network capacity to meet air conditioning demand, while also protecting vulnerable customers. DNOs should therefore be key stakeholders in place-based adaptation strategies to reduce peak summer temperatures and protect communities from extreme heat.

2. Are some people or communities more affected by extreme heat, drought or wildfire than others? Please tell us about any groups who may be particularly exposed or vulnerable, or who face greater barriers to preparing for and coping with extreme heat. This could include people affected because of their health, age, sex, disability, income, housing, location, occupation, access to services or other circumstances. We are also interested in whether existing responses to heat risk could create or worsen inequalities, or whether they could help reduce them.

Heat vulnerability is best understood as the interaction between a person's exposure to high temperatures, their sensitivity to heat, and their capacity to adapt. Extreme heat therefore falls disproportionately on disadvantaged households: income, housing conditions, tenure, access to green space, social isolation and neighbourhood characteristics all affect people's ability to remain safe and healthy. A household in a large, well-insulated home has more options to escape or mitigate heat than one in a single-aspect, south-facing flat without through-ventilation. Similarly, tenure of occupation can affect a household's ability to carry out permanent adaptations to their home.

The characteristics of a household's neighbourhood also influences heat exposure.

People in different homes or neighbourhoods within the same town or city can experience the same heatwave very differently. As heatwaves become more frequent, prolonged and intense, heat-related health impacts are likely to concentrate in areas with poorer housing, stronger urban heat-island effects and greater socioeconomic vulnerability.

At the community scale, the presence of strong networks and community cohesion also shapes how well (or not) the households within that community can cope with the extreme heat events. Informal networks can often be the first source of help during a crisis, particularly for vulnerable people. The presence of trusted leaders and organisations, who are able to quickly mobilise people and coordinate support and may have prepared climate risk action plans which can be put into action, is also important. Additionally, whether or not a neighbourhood has a well-adapted community space that can provide frontline services, support and act as a cool space will also shape how well vulnerable households fare.

3. What is your organisation doing to understand, prepare for and respond to extreme heat, and/or its companion hazards of drought or wildfire? This could include plans, policies, investment, changes to working practices, infrastructure, nature-based solutions, data or climate information, and consideration of both current and future risk.

CSE already has advice pages helping people to manage their energy use and stay warm in winter. In collaboration with Heatwave Toolkit, we have published further [advice pages](#) for our audience on keeping your home cool in hot weather, concentrating on low-cost measures and behavioural changes people can adopt.

We are also working with anchor organisations in local communities to help them understand their community's exposure to different climate risks and plan for extreme weather events. Together we have published [Climate Resilience Guides](#) bringing together local heat and flood risk statistics with practical resources for households and communities to prepare and adapt to extreme weather events such as heatwaves, flooding, drought and wildfires.

CSE also runs programmes focused on supporting upgrades to [community buildings](#) with community buildings often providing hubs for information, advice and support on home energy matters to local residents and with some acting as warm spaces in winter and cool spaces in summer.

As a charity, our historic focus has been on climate mitigation and fuel poverty, but we recognise an increasing need to support vulnerable people in preparing for and adapting to extreme heat and advocating on their behalf to government. Analysis from the Climate Change Committee suggests there is a risk that in the future excess deaths from overheating may eclipse those from fuel poverty. CSE plans to increase our focus on supporting households and communities in adapting to climate change including preparing and coping with extreme heat.

4. What has worked well, and what have you learnt? We are interested in successful approaches, lessons from implementation, and actions that have not worked as expected.

CSE carries project work supporting communities and engaging the public to act on climate. The lessons we have learned include:

- Use trusted local messengers. In our work with communities, we seek wherever possible to work with local anchor organisations already embedded in the community.

- Use language and messaging which will be resonant with that community. The Britain Talks Climate toolkit² contains useful segmentation of the British public and how best to communicate with each segment.
- Stress the co-benefits of taking action, and how measures to tackle climate change can improve life.
- Work with local and trusted community organisations who already have the networks and trust of their communities
- Use community buildings as hubs for local climate action – demonstrating low carbon technology, being hubs for information and advice, and providing cool spaces in summer (as well as warm spaces in summer)

A key challenge for community groups is that for most climate engagement is not their core activity, and they are under resourced in terms of time, funding and expertise.

It is also clear that even if groups can successfully engage with communities on climate actions, the funding of implementing measures is not easily available.

A national level public conversation and government support is needed to enable community groups to be most effective in delivering the actions needed at a local community level, particularly for vulnerable and harder to reach households.

5. What tools, information, evidence or guidance do you use, and what is missing or needs to improve? This could include weather or climate data, risk assessment tools, standards, guidance, advice, good practice or decision-support tools.

There is a range of datasets available to understand heat risk and its impacts on households, most notably the DEFRA overheating maps:

<https://environment.data.gov.uk/over-heating/>

However, there are several important evidence and policy gaps.

Evidence of which households are most at risk from extreme heat (due to the intersection of household vulnerability and housing type/condition)

CSE uses a number of datasets to understand the UK building stock and the vulnerability of the UK population. We built the National Household Model for government to provide a tool for policy makers to understand the impacts of housing energy policy on the UK housing stock. We have also built various social indicator maps for energy network companies to help them understand the vulnerabilities of the local communities and residents they serve. However, more work is needed to model, understand and evidence which households are living in the homes that are most likely

² <https://climateoutreach.org/reports/britain-talks-climate/>

to overheat and the intersection between household vulnerability to extreme heat and the tenure, housing type and energy standards of their homes.

Limited understanding of the interaction between overheating and fuel poverty

As discussed above, current fuel poverty metrics and policy frameworks are largely focused on the affordability of heating. While there is growing evidence that overheating is becoming a significant challenge for many households, particularly those on low incomes and those with health vulnerabilities, there are currently few tools or datasets that quantify the extent of "summer fuel poverty" or the costs households face in keeping their homes safe during extreme heat. We would welcome further research and monitoring to better understand these impacts and how they are distributed across different population groups.

Limited evidence on lived experience and behavioural responses

There is a growing need for evidence on how households are currently coping with overheating, including changes in energy use, cooling practices, health impacts and decisions about adaptation measures. Understanding the lived experience of vulnerable households will be critical for designing effective policy responses.

Lack of consistent guidance for existing homes

Progress has been made in understanding overheating risks in new-build housing, but there remains a gap in practical, widely adopted guidance for addressing overheating in existing homes. Households, local authorities, landlords and retrofit practitioners would benefit from clearer guidance on the most effective and affordable adaptation measures, including passive cooling interventions, ventilation improvements, shading, and the role of cooling technologies.

Decision-making tools that account for both heat and cold

Existing policy and retrofit tools often focus either on reducing winter heating demand or on managing overheating. More integrated assessment tools are needed to support decisions that improve resilience to both cold and heat, avoiding maladaptation and ensuring that interventions deliver benefits throughout the year.

Overall, we believe there is a need for improved evidence, monitoring and decision-support tools that recognise overheating as an increasingly important housing, health and inequality issue. In particular, future research should focus on the distributional impacts of extreme heat, the relationship between overheating, housing (type, tenure and energy standards) and fuel poverty, and the effectiveness of different adaptation measures for vulnerable households.

Heat Adaptation in new development

Recent changes to the National Planning Policy Framework³ (central government policy) place greater prominence on heat adaptation, requiring development proposals to use design approaches which minimise overheating risks and include green infrastructure and suitable tree planting.

However, the data to support the application of this strengthened national policy is scattered. Defra already maps overheating vulnerability, [Natural England](#) maps climate vulnerability and highlights areas of green space deprivation.

Furthermore, it is completely optional whether LPAs make use of these data sources to support them in requesting more robust heat adaptation approaches in new development. There is no single nationally prescribed system that converts heat vulnerability into a consistent hierarchy of public-space design requirements.

Likewise, the National Design Guide⁴ sets out useful principles about designing public and open spaces with planting, structures and water to provide shade and comfort, but lacks operational guidance on what measures are appropriate at different levels of heat exposure, and how authorities should evidence and apply them.

6. What barriers are preventing your organisation or sector from taking further action or delivering planned measures? For example, finance, skills, capacity, unclear responsibilities, regulation, competing priorities, organisational decision-making, uncertainty, technical constraints or difficulties moving from plans to delivery.

We agree that at present the UK is very poorly set up to support heat adaptation. In contrast to flooding, there is no responsible body in place to coordinate action and planning; the levers to act are split between numerous different regulatory regimes and there are no requirements for local authorities to proactively plan for heat adaptation.

As already explained, Government understanding of fuel poverty does not factor in the impact of cooling poverty. Similarly, fuel poverty alleviation and public retrofit programmes are primarily set up to alleviate winter fuel poverty not cooling poverty.

³National Planning Policy Framework -

https://assets.publishing.service.gov.uk/media/697b71c52ff8d10a830d5d4a/Draft_NPPF_December_2025.pdf

⁴National Design Guide – consultation document www.gov.uk/government/consultations/design-and-placemaking-planning-practice-guidance/design-and-placemaking-planning-practice-guidance

Many programmes and regulatory systems which could increase the resilience of individual buildings to extreme heat are not set up to do this. Detailed recommendations for policy change are set out in response to question 8 below.

Whilst we are aware of voluntary schemes where residents can ask for street trees to be planted in their street to provide shade such as [Trees for Streets](#) and [councils](#) which have partnered to enact these requests where possible, we are aware of no defined national entitlement or standard process in England whereby a resident can request a street tree from their council.

7. What do you need from other organisations or institutions to become more resilient to extreme heat? This could include action from local, regional, national or UK governments, regulators, funders, infrastructure providers, professional bodies, suppliers or other partners.

We agree with your call for a National Heat Resilience Strategy, a dedicated minister and a statutory duty to address and integrate climate resilience (spanning mitigation and adaptation) in accordance with our national commitments across all council activities and responsibilities

Whilst local planning authorities have such duties within the context of the statutory planning system, there is no wider duty, and uncertainty around funding climate posts and activities, as well as increased reliance on short-term competitive funding.

8. What wider changes would help your sector, communities and the UK become more resilient to increasing heat? We welcome both new ideas and perspectives on existing recommendations. Are there any policies, standards, regulations, investment priorities or other actions that you think should be considered?

We have collated detailed policy recommendations from across the policy work we have carried out to date, see Appendix 2.

We have provided comments on your existing recommendations in Appendix 3

9. In ten years' time, what would 'good' heat resilience look like? This could relate to your organisation, sector, communities or society. We welcome views on both the outcomes that would be desirable and those that are realistically achievable over this timeframe.

The public will better understand the low and no cost behavioural approaches they can adopt in the short term and the longer-term investments they might make to combat overheating in their homes.

Design approaches which mitigate overheating and surface water flooding through the design of buildings and external landscaping will be mature and included in new developments as standard and enforced by robust planning policy.

Public energy efficiency retrofit programmes will have been adapted to deliver year-round comfort rather than winter warmth.

10. Is there anything else the Commission should understand or investigate?

Appendix 1 – case study from our household energy advice line

Case Study

A low-income family contacted us after struggling to cope in their home during recent heatwaves. Both adults have health conditions that are worsened by high temperatures, including COPD, emphysema and heart disease, and they were increasingly concerned about how they would manage as summers become hotter.

During periods of extreme heat, their south-facing living room reached 31°C. A ceiling fan provided little relief, simply circulating hot air. The family also reported higher energy bills, likely driven by increased electricity use from appliances such as their fridge and freezer during hot weather.

They wanted advice on whether air conditioning or an air-to-air heat pump could help, and whether any financial support was available. However, with the exception of air-to-air heat pumps, home energy grants don't fund cooling measures like air conditioning. Air to air heat pumps can provide cooling functionality, however, are being installed in only a minority of homes.

Their gas boiler was only four years old and functioning well, making a whole-system heating replacement inappropriate, while the upfront cost and disruption of retrofit work were significant concerns. They were also reluctant to take on additional debt through the Warm Homes Fund (public loan fund for retrofit) and were concerned about being able to afford repayments and interest rates.

We explored the option of installing a single air-to-air heat pump in the room most affected by overheating. While this would be more affordable than a whole-home system, it would still require borrowing and would not address overheating throughout the property. We also discussed passive cooling measures, such as external shading, although these are not practical or available for all homes.

Appendix 2 – commentary on your recommendations

2. Publish a National Heat Resilience Strategy with Clear Accountability

We agree. In contrast to flood risk, there is no responsible body or minister with this portfolio and heat adaptation has links into (but is not central to) a wide body of legislative duties and organisations. A minister, a strategy and responsible body are needed to co-ordinate the policy and practice changes needed to address extreme heat with sufficient authority to push through these changes across government departments and layers of government as needed.

3. Empower local action to adapt

As discussed in response to question 2 whilst extreme heat is often very widespread, both exposure and vulnerability vary hugely by place and socioeconomic profile. Put simply, some places (typically dense, poor city suburbs with few trees) are likely to be hotter and have more vulnerable people living in them than leafier, wealthier areas.

We therefore welcome the creation of the Trees for Climate programme which will enable communities to access funding for urban tree planting.

This nature-based approach will deliver multiple benefits including localised cooling, flood alleviation, urban realm improvements, habitat provision.

We strongly agree that local authorities should be empowered and funded to act and should have statutory climate adaptation duties embedded across their functions.

6. Protect the most vulnerable

We agree with this commentary but note that existing and planned home energy-efficiency retrofit programmes could incorporate measures to adapt homes for extreme heat. The Warm Homes Plan and Warm Homes Fund should be reviewed in light of the Climate Change Committee's *Well Adapted UK* report and the Commission's findings, to ensure they improve climate resilience and provide year-round comfort, rather than focus only on winter warmth and heating bills.

We do not share your confidence that Awaab's law will fully protect social housing tenants against extreme heat. Whilst it does include provisions for excess heat, its main purpose is to safeguard against and require rapid repair of hazardous building defects.

The phase 2 guidance⁵ specifically states:

⁵ Awaab's Law Phase 2: Guidance to support triaging of hazards – MHCLG - www.gov.uk/government/publications/awaabs-law-phase-2-hazards-guidance-for-social-landlords/awaabs-law-phase-2-guidance-to-support-triaging-of-hazards

Awaab's Law does not apply to overheating which is due solely to outside temperatures being particularly high. As such, wider climate adaptation work such as installing new insulation or fitting shutters across a whole building or block of flats would not be in scope of Awaab's Law, but landlords should consider these measures as part of their strategies on climate adaptation, and to meet the Decent Homes Standard, which requires homes to be free from excess heat hazards at the most dangerous 'category 1' level.

However, if there is also a defect in the home that exacerbates the effects of the particularly high outside temperatures (for example, a broken window preventing the home from being ventilated) Awaab's Law may be applicable and the considerations above apply.

Furthermore, our understanding is that Awaab's law is largely reactive and will rely on landlords identifying significant heat hazards that arise from building defects. We have yet to see guidance defining within the law what constitutes a significant heat hazard, making interpretation and implementation uncertain, and at present it only covers socially rented homes.

Overall Awaab's Law will create a reactive legal backstop, which can trigger preventative work and drive adaptation of homes to reduce recurring overheating risk, however, it is not currently a comprehensive heat-adaptation duty. It does not appear to establish a general obligation on landlords to proactively assess all properties for future heatwave risk and retrofit them before a hazardous event occurs.

The Decent Homes Standard and Minimum Energy Efficiency Standards for private rented homes have equal relevance and could act as vehicles to ensure rented homes are safe in heat with reform, see Appendix 3 below.

7. Harness the power of green and blue infrastructure

As above, we strongly support nature-based adaptation approaches which seek to maximise the co-benefits and which target multiple climate risks, not just overheating.

8. Develop and enforce standards

We agree the need to develop standards, reform funding programmes and the regulatory environment to ensure that new and existing homes are safe in the heat.

Appendix 3: detailed policy recommendations: public retrofit programmes, regulation of homes and private rented sector, and Statutory Planning system

Policy ask / recommendation	Legislation, policy or programme	Rationale / issue addressed
Retrofit programmes - Warm Homes Loan Fund		
Widen what can be funded through the warm homes fund to explicitly include overheating adaptation measures—such as external shading, reflective materials, ventilation upgrades and nature-based cooling (including shade planting, green roofs and walls) where these improve thermal comfort and reduce future cooling demand. We suggest internal blinds are excluded as they have limited effectiveness.	Warm Homes Fund (finance scheme for self-funding clients)	Many long-term adaptation measures (e.g. tree planting, permanent external shading) involve significant upfront investment but are absent from WHF funding.
Warm Homes Plan		
Confirm that the warm homes plan will fund heat adaptation and funding allocation or approach	Warm Homes Plan	Government has not yet committed to a defined package of heat-adaptation measures within specified funding allocations.
Include overheating advice within Warm Homes Agency support.	Warm Homes Plan	Public awareness of passive cooling and heat-risk reduction measures and free approaches actions to manage heat is low.
Private rented sector - Decent Homes Standard + Minimum Energy Efficiency Standards		
Extend MEES so tenants can request climate adaptation measures, such as shading, shutters or external blinds, alongside energy-efficiency improvements.	Minimum Energy Efficiency	Tenants need a route to request practical heat-adaptation improvements, particularly in homes at greater overheating risk. Currently under MEES they can only request energy efficiency improvements.

	Standards / rented housing	
Provide clear quantitative standards covering overheating, plus better guidance for landlords and tenants on measures to reduce overheating.	Decent Homes Standard / rented housing	The proposed DHS and MEES contain no meaningful provisions to prevent overheating, despite rising heatwave risk and no quantitative overheating standard (e.g. maximum indoor temperature, number of overheating hours). The main overheating protection comes indirectly through the Housing Health and Safety Rating System.
Energy Performance Certificates		
Improve EPCs' ability to measure and predict overheating risk + separate EPC outputs so households can understand impacts relating to cold homes and overheating.	EPCs / consumer information/ Home Energy Model	Households should be able to distinguish winter warmth issues from summer overheating risk. The current approach does not adequately represent overheating as a mainstream housing and climate resilience issue.
Building Regulations		
Revise Part O of Building Regulations to ensure new homes are resilient to the climate conditions expected over their likely lifetime.	Building Regulations – Part O	Current Part O compliance in England does incorporate a future climate scenario, however, it is relatively limited: the mandatory methodology currently represents the 2020s (2011–2040). It does not currently require buildings to be demonstrated as resilient to the substantially hotter climate expected in the 2050s or 2080s. Government has promised to review Part O, but has not set out a timetable.
Community climate adaptation		
a. Promotion of community adaptation and upskilling of civic society – e.g. CAF climate resilience guides	New programme	There is considerable scope to support affected local communities in improving their understanding of their

b. Support local authorities in targeting this support at the most vulnerable communities.		vulnerability to likely climate impacts and possible adaptive measures.
Introduce a nation-wide mechanism through which residents can request that street trees be planted.		Formalising existing voluntary programmes and making them available everywhere
Statutory Planning System		
Reform planning rules so that Local Authorities can set locally appropriate overheating policies.	Para PM13 of National Planning Policy Framework	PM13 of NPPF restricts local authorities setting quantitative standards which address overheating risk, where these would duplicate or exceed Part O of Building Regulations, though qualitative policies are allowed.
Update the national design guide to reflect the increased importance of shade planting in climate adaptation	National Design Guide	National Planning Policy Framework has new text on preventing overheating, but there is little robust guidance which would support a refusal of planning permission on the basis of inadequate shade planting.
Reform commercial to residential permitted development rights to ensure all new homes (including pd conversions) are adapted for future climate conditions and heatwaves.	Class M of General permitted development Order	Class M of the GPDO permits the conversion of commercial uses to residential without the need for full planning permission and with no meaningful assessment of overheating. Furthermore, Part of Building Regulations (which sets technical standards for overheating) does not apply to the change use of buildings. This introduces the risk of creating homes with severe heat-risk exposure and a significant likelihood of dangerous overheating.

Introduction of permitted development rights for adaptation measures (for homes, shops and businesses): external shutters, louvres and canopies, green walls and roofs	New right within General Permitted Development Order	Many permanent adaptation measures (for example external shutters or blinds) would currently require planning permission, deterring homeowners from making reasonable changes. In the early 20 th century, many shops and hotels would have had sun canopies or louvres.
Revise the NPPF, National Design Guide and planning guidance to link nationally consistent mapping of heat risk and vulnerability to place-specific requirements for adapting streets and public spaces.	NPPF National Design Guide	Existing policy supports measures such as tree planting, shade and green infrastructure, and Defra already maps overheating vulnerability. However, there is no consistent framework linking mapped risk to differentiated design requirements. A national approach, modelled the approach to flood-risk mapping and adaptation, would help local authorities require appropriate adaptation measures in the most vulnerable places.

