Practical Hope:
Inspiration for community action

Community guide to overheating

What communities can do to address the urban heat island effect, prevent overheating and make homes cooler

tcpa

Practical Hope

Inspiration for Community Action

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Introduction

Britain's summers are getting hotter due to climate change. Yet, a lack of clear government action on overheating means communities are increasingly working together to address the issue themselves.

As summer heatwaves get hotter, longer and more frequent, millions of our homes[1] and many of our public spaces are poorly equipped for new higher temperatures. Poorly designed, badly insulated and unventilated properties trap heat, which can make them dangerous during heat waves, particularly for older people. This guide shows how communities can work together to support the most vulnerable, including those most at risk living in top floor and south facing flats. There is also an urgent need to make our public spaces more shaded and green to combat the urban heat island effect. Community groups are well placed to come together and through hands on action transform existing and new places to make them more resilient to future heat waves.

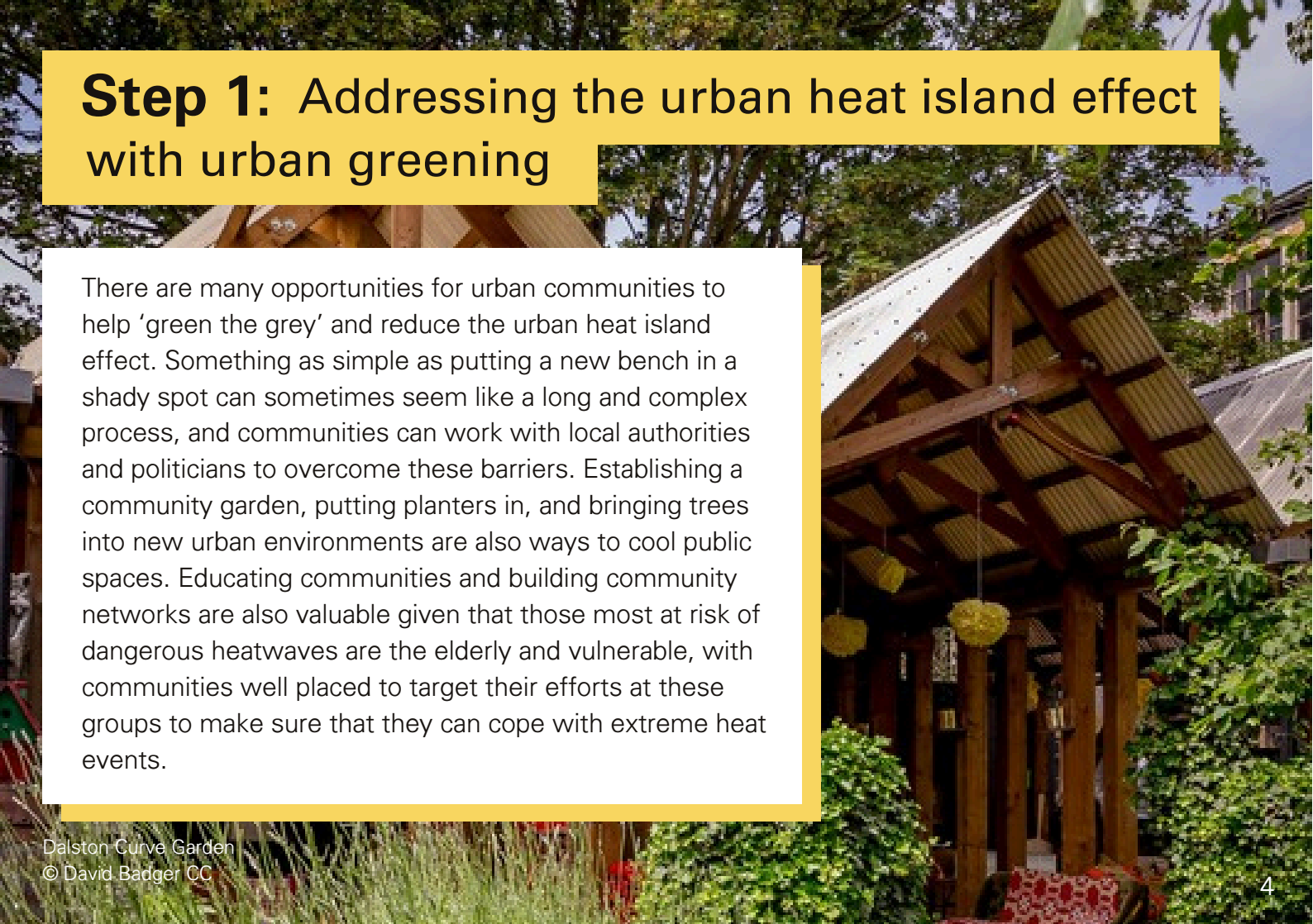
Key benefits of community action to address overheating:

1. Better preparedness for overheating buildings and public spaces and reducing negative impacts and risks.
2. Influencing decision makers and opportunities for local investment.
3. Increases in biodiversity and improved greenspaces.
4. Increased sense of community ownership and cohesion alongside educational and volunteering opportunities.

Dalston Curve Garden © David Badger CC

Step 1: Addressing the urban heat island effect with urban greening

There are many opportunities for urban communities to help 'green the grey' and reduce the urban heat island effect. Something as simple as putting a new bench in a shady spot can sometimes seem like a long and complex process, and communities can work with local authorities and politicians to overcome these barriers. Establishing a community garden, putting planters in, and bringing trees into new urban environments are also ways to cool public spaces. Educating communities and building community networks are also valuable given that those most at risk of dangerous heatwaves are the elderly and vulnerable, with communities well placed to target their efforts at these groups to make sure that they can cope with extreme heat events.



Dalston Curve Garden
© David Badger CC

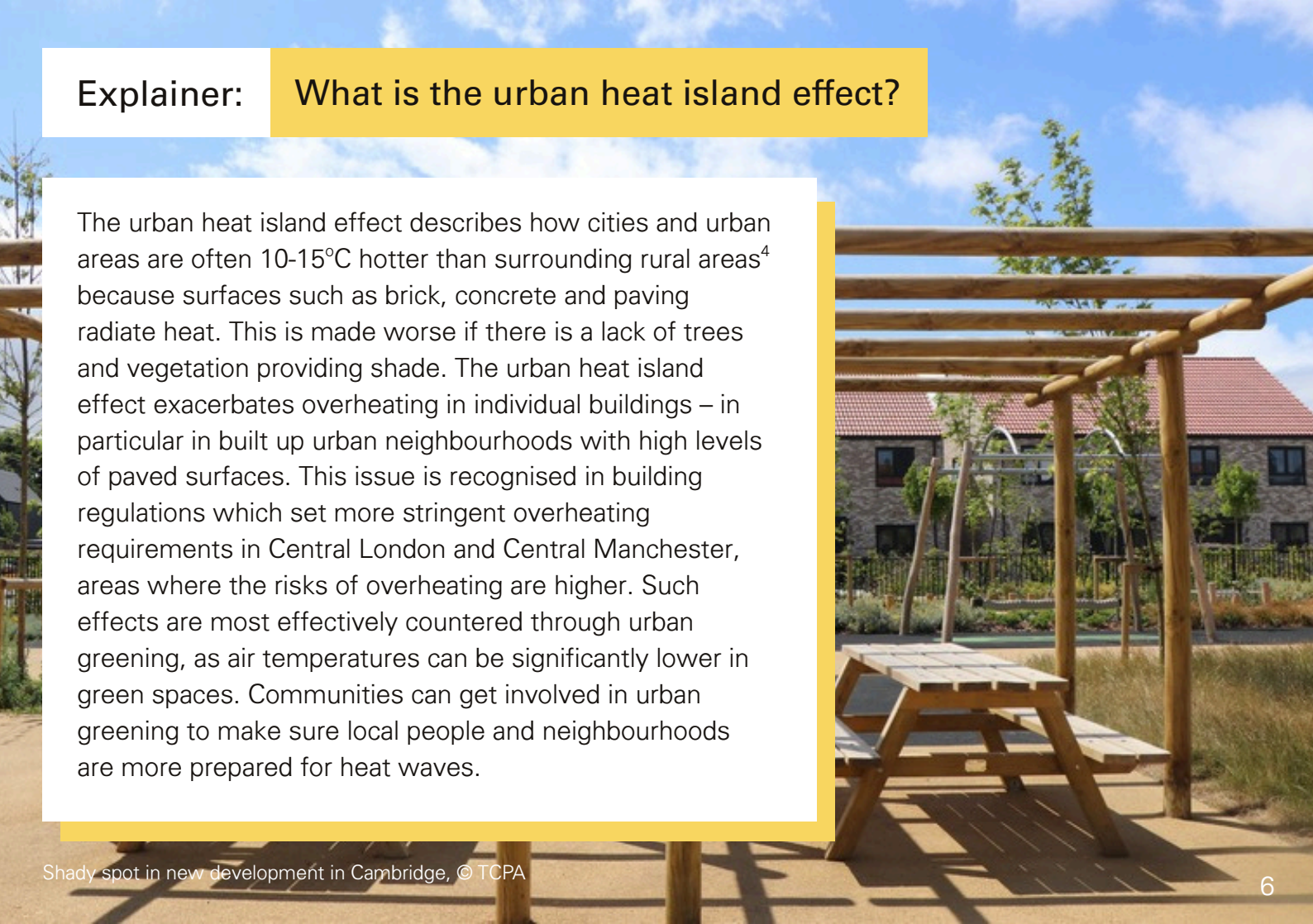
Case study 1: Dalston Eastern Curve Garden, London

Dalston Eastern Curve Garden is a free community garden located in Dalston, Hackney.[2] Built on the site an old railway curve owned by Hackney Council, the garden was established in 2010 as part of Design for London's 'Making Space in Dalston' project. Since 2012, the garden has been operated as a social enterprise, with profits generated from the café used to fund the garden's maintenance. The community garden provides essential greenspace in the capital's third most densely populated borough. The landscape architects responsible for the garden's design incorporated birch, hazel, and hawthorn trees to create a protective canopy.[3] The trees and planting in the garden provide shade and moisture which helps to combat the urban heat island effect.

Aerial view of Dalston Curve Garden
© Google Earth

Explainer: What is the urban heat island effect?

The urban heat island effect describes how cities and urban areas are often 10-15°C hotter than surrounding rural areas[4] because surfaces such as brick, concrete and paving radiate heat. This is made worse if there is a lack of trees and vegetation providing shade. The urban heat island effect exacerbates overheating in individual buildings – in particular in built up urban neighbourhoods with high levels of paved surfaces. This issue is recognised in building regulations which set more stringent overheating requirements in Central London and Central Manchester, areas where the risks of overheating are higher. Such effects are most effectively countered through urban greening, as air temperatures can be significantly lower in green spaces. Communities can get involved in urban greening to make sure local people and neighbourhoods are more prepared for heat waves.



Shady spot in new development in Cambridge, © TCPA

Case study 2: Cold Hub, Northwood Parish Council, Isle of Wight

Cool Spaces and Hubs are primarily indoor places that allow residents to shelter from the sun and heat during the summer months. Networks of cool spaces and hubs across the UK are increasing, including in London, Manchester, and Bedford. In December 2022, Northwood Parish Council, located on the Isle of Wight, started providing a warm space for residents in their village hall.[5] In March 2023, the Parish Council decided to adapt to the changing seasons and turn the hall into a cold hub in the warmer months of the year, as the Isle is one of the sunniest places in the UK. They recognised that this space could play an important role in keeping people cool during heatwaves while also providing a space for residents to meet one another and socialise.

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Step 2: Developing Neighbourhood plan policies to prevent overheating

Local planning authorities assess planning applications against national and local policies. Communities can also prepare a neighbourhood plan which, if approved, will form part of what is considered in planning decisions. The National Planning Policy Framework says that new buildings and places should support the transition to net zero and "take full account of all climate impacts including overheating", and "should take a proactive approach to mitigating and adapting to climate change taking into account the long term implications for…the risk of overheating". However, there is limited guidance in what this means in practice for planners, and neighbourhood plans can help to fill this gap, including by drawing on guidance in the National Model Design Code.

Street trees in Norwich in 2015, © TCPA

Case study 3: Grove Park Neighbourhood Plan, London

Grove Park is a suburban neighbourhood located in the London Borough of Lewisham, with a. Their neighbourhood plan, made in 2021, highlights the need to mitigate the urban heat island effect.[6] Their policies require new buildings to address the urban heat island effect through design measures such as green roofs, and urban design including tree planting and the incorporation of other green and blue infrastructure. Additionally, their policies state that passive design will be favoured to prevent overheating in homes.

Dalston Curve Garden
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Explainer: How hot are our summers getting?

Heat waves are becoming more common in the UK: while just one in ten years saw temperatures reach 35°C or more between 1950 and 2000, 50% of the last 10 years have seen summer temperatures of 35°C or above[7]. Met Office projections for parts of South East England including London and Cambridge show that the average number of days reaching over 25°C went from 21 days between 1981 and 2000, to 37 days between 2001 and 2020[8]. In the next five years, there is a 70% chance that climate change will increase global average temperatures by 1.5°C[9]. Whilst this might not seem like much, increases in average temperatures can result in dramatic heat waves, in part due to warming ocean temperatures[10]. Under a 2°C global warming scenario, the maximum increase agreed in the Paris climate agreement, parts of the South East are likely to experience 46 days a year over 25°C, more than double the average number experienced between 1981 and 2000[11].

Example of street greening © TCPA

Case study 4: Pampisford Neighbourhood Plan and Design Code, Cambridge

Pampisford is a village situated south of Cambridge which is one of the warmest and driest parts of the UK. The Pampisford Neighbourhood Plan was adopted in May 2025 and includes the Pampisford Neighbourhood Plan Design Code, prepared by AECOM in 2021.[12] The design code includes urban design measures that aim to reduce the risk of overheating and increase the provision of shade, while other policies promote the use of permeable paving which can help mitigate urban overheating, as it often absorbs less heat than traditional paving. For existing homes, recommendations include double or triple glazing with external shading provided by trees, as well as maximising green spaces to help reduce the risk of overheating.[13] For new build, recommendations also include incorporating more fresh air through ventilation and passive cooling, as well as external shading on south and west-facing facades.

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Step 3: Making homes cooler during heat waves

The Climate Change Committee, a UK government body, found that around 20% of homes in England overheat even in cool summers[14], and further research has found that 55% of UK homes see bedrooms overheat at night in future[15]. The World Health Organisation suggests indoor temperatures above 24°C for long periods should be avoided for health reasons, and for babies and young children this drops to 22°C[16]. High temperatures can increase the risks posed by many conditions including heart disease, and sleep disruption caused by overheating affects both mental and physical health[17]. Older people are also particularly at risk, with death rates during heatwaves significantly higher among those aged 85 and over. In 2024 the UK saw 1,311 heat-associated deaths[18] and overheating in buildings is expected, if not addressed, to potentially cause 4,500 premature deaths per year by 2050[19]. These stark facts show why community groups should take action to help keep buildings cool. In some cases simple adjustments and behaviour changes can achieve this, alongside wider campaigning to influence the design of new developments and retrofit existing homes.

Appleby blue ventilation courtyard, © Philip Vile

Case study 5: Appleby Blue, London

Appleby Blue, located in Bermondsey, is a social housing development that provides homes for people with low incomes who are 65 and over. The development opened in 2022 and is managed by United Saviour's Charity. Appleby Blue was one of two winners of the 2025 Healthy Homes Award, which recognised exemplar housing projects that incorporated the TCPA's healthy homes principles, such as being designed to provide year-round thermal comfort to residents. For instance, the courtyard in the centre of the Appleby Blue development used water features and tree planting to enhance the cooling of the space through transpiration and evaporation.[20] Building measures have also been included to prevent overheating, such as the provision of solar shading on the south facing façade, and the concrete frame of the building that provides passive cooling in the summer months and at night.[21]

Case study 6: Hot Homes Project, Southwark

In the summer of 2023, the Bureau of Investigative Journalism and the Urban Big Data Centre investigated the challenge of overheating within Southwark.[22] For six weeks, 40 homes were fitted with temperature and humidity sensors. Findings from the project revealed that all the homes exceeded 25°C, which is the temperature that the World Health Organisation recommends as the maximum indoor temperature for resident's safety. The research also highlighted the health impact of overheating, as within the first week of the project 80% of participants experienced at least one symptom of heat exhaustion. As a result of the project's findings, Southwark Council have committed £1m to help protect the borough's housing stock from overheating caused by the changing climate.

Explainer:

What do building regulations say about overheating in new buildings?

Approved Document O: Overheating is the English building regulation which sets out detailed design standards on overheating for new buildings, including situations where computer thermal modelling is required to prevent overheating, such as in blocks of flats, as well as maximum window sizes and minimum ventilation requirements. This regulation addresses both overheating from the sun (solar gain), as well as the less common risk from communal heating systems in larger blocks of flats. Building regulations discourage the use of mechanical cooling, i.e. active air conditioning units, unless absolutely necessary. Estimates suggest that if 30% of all homes had air conditioning in future, there would be an approximate 10% increase in peak loads on the electricity grid[23], which could in itself further exacerbate climate change and the urban heat island effect[24,25] and create costs of over £1,000 per room.[26] Good design and passive cooling features such as shading and adequate ventilation can mitigate overheating in buildings and prevent the need for active cooling.

Marmalade Lane, © TCPA

Case study 7: Marmalade Lane Cohousing, Cambridge

Completed in 2019, Marmalade Lane is an innovative co-housing development commissioned by its residents on the outskirts of Cambridge. Built using modern methods of construction, the houses were designed to be energy-efficient and provide year-round thermal comfort to residents. This was achieved through the use of mechanical ventilation with heat recovery (MVHR) units and Air Source Heat Pumps. However a recent post occupancy evaluation recognised that some residents had experienced overheating during warmer periods, and residents have retrofitted their homes with external shading to rectify this issue.[27] Beyond these design measures, the communal garden Marmalade Lane includes retained mature trees and other vegetation, as well as a small pond created by residents. This green and blue infrastructure provides a valuable space for the community to engage with nature and one another, while also providing critical cooling benefits for the wider built environment in comparison with paving.

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What communities can do

1. Work with landowners and authorities to help ‘green the grey’ and reduce the urban heat island effect through new trees, planting and lighter coloured surfaces.
2. Develop cool refuges and other shady spots in areas that lack them to provide welcome respite from heatwaves.
3. Share learning and advice with homeowners and tenants on how to manage overheating in buildings, and create locally specific guidance.
4. Draft neighbourhood plan policies that provide further detail to show architects and designers how new places can address overheating risks.
5. Share best practice with those commissioning local housing projects to help develop passive shading measures in the design of buildings from the start.
6. Run local heat audits and share findings to raise awareness and advocate for action.
7. Work proactively to retrofit buildings where possible with external shading, or where this is not possible with internal shading devices, and educate residents about how to keep their homes cool.

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Why it matters

You know your local community and the areas most likely to experience significant overheating during heat waves. There are significant opportunities for local communities to address overheating through collective action and education, tackling the lack of shade, and identifying homes and people most at risk of significant overheating issues. Working together to understand how buildings react to sunshine through different times of the day and year and something as simple as installing blinds can help to prevent a dangerous overheating situation.

South facing shading at Abode in Cambridge
© TCPA

Further resources

Resource	Source
Heat, guidance on how to deal with heat waves	Gov.uk, UK Health Security Agency
Guidance on preventing overheating in the home	Department of Energy and Climate Change, Adaptation and Resilience in the Context of Change network (ARCC)
Overheating in New Homes, guidance and tools	Good Homes Alliance
Overheating Adaptation Guide for Homes	Shade the UK
Heat resilience and sustainable cooling, investigation	The Environmental Audit Committee
Addressing overheating risk in existing UK Homes	Arup for the Climate Change Committee
Community-led green space toolkit	Planning Aid for London, Ramboll

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