Heat Adaptation Guide for Arts and Cultural Venues

Written by Shade the UK
Commissioned by the British Film Institute, South Bank and Waterloo Sustains Us, with support from The Old Vic

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Contents

Glossary

Active cooling Mechanical or electrical systems or products, such air conditioning, that remove heat and lower indoor temperatures.

Adaptation Changes that reduce harm from a changing climate (e.g. retrofitting buildings to keep them cool during heatwaves).

Air conditioning A mechanical system used to regulate indoor air temperatures by removing heat from inside a space and releasing it outdoors, helping to maintain a more comfortable environment during hot weather. Air conditioning is an example of active cooling.

Amenity space Typically outdoor areas of a building, such as pavements, courtyards, gardens (either private or public), terraces, or balconies.

Arts and cultural organisations The entities that own, manage, operate, or programme arts and cultural venues and activities. An organisation may operate one or multiple venues and they are responsible for governance, staffing, programming, operations, and strategic decision-making, including how venues respond to risks such as extreme heat.

Arts and cultural venues Buildings and outdoor spaces that support cultural, creative, and community activities. This includes theatres, museums, galleries, cinemas, concert halls, performance venues, cultural centres, exhibitions spaces, and multi-use facilities. These venues are typically open to the public and play an important role in supporting community resilience, offering accessible spaces that can contribute to wellbeing and provide respite during heatwaves.

Conservation area An area of a town or a city with special architectural or historic interest where some additional planning controls apply.

Cooling hierarchy A framework which prioritises passive and low-energy cooling measures, such as external shade and cool surfaces, before resorting to active cooling measures, such as air conditioning, to reduce indoor temperatures.

Cool space A publicly accessible indoor or outdoor space for people to shelter from the sun, cool down, rest, and take respite on hot days. These spaces typically provide conditions that are noticeably cooler than the surrounding outdoor ambient temperature.

Heat-health alerts The UK Health Security Agency and Met Office issue 'Heat-Health Alerts' based on the risk to health systems and vulnerable populations, not just temperature. The alerts are tiered yellow-amber-red and provide early warning of potential health impacts. Organisations can use the heat-health alerts to prompt early action and safeguarding measures, even before peak temperatures are reached. For further information visit **https://weather.metoffice.gov.uk/warnings-and-advice/seasonal-advice/heat-health-alert-service**

Heatwaves The Met Office defines a heatwave as three consecutive days above a location-specific temperature threshold. Temperatures seen during heatwaves greatly exceed those typically felt in that region at that time of the year.

Internal heat gains Various conditions within rooms and spaces within buildings can cause a room to overheat. People, lighting, and electrical equipment all emit heat into a room or space, which is referred to as internal heat gains.

Maladaptation A measure that solves one problem but creates another (e.g. insulating a building without ventilation causing damp/mould).

Mechanical Ventilation with Heat Recovery (MVHR) A system that extracts stale indoor air and replaces it with fresh air from outside. MVHR systems can help reduce overheating in the summer by increasing controlled fresh air intake and remove built-up heat from a building. MVHR is not a form of active cooling, instead it supports ventilation and heat exchange within a building.

Passive cooling Solutions that reduce temperatures without using mechanical or electrical systems, such as shading, lighter coloured or more reflective surfaces, openable windows, and planting.

Resilience Resilience refers to the ability of people, buildings, infrastructure, services, and urban environments to prepare for, respond to, and recover from disruptive events while minimising harm and maintaining essential functions. In the context of this guide, this specifically relates to heat resilience i.e. the capacity to withstand and adapt to extreme heat events while protecting health, wellbeing, and operational continuity.

Single aspect A room or building with windows on only one side, limiting air flow through the room or building.

Solar gain The sun increasing the temperature of a room through a window or through the fabric of a building. Solar gain can be reduced by installing measures to block the sun hitting the building, such as external shade.

Thermal mass Thermal mass is related to building materials and the ability to absorb and store heat. High density materials like concrete, bricks, and tiles naturally store heat during the day and release it slowly at night; they are therefore considered to have high thermal mass.

Tropical nights When the temperature does not fall below 20°C. Tropical nights are expected to increase in frequency due to climate change.

Urban Heat Island (UHI) effect Densely built urban areas can be several degrees hotter than surrounding rural or greener areas, especially at night. This is because grey infrastructure (e.g. concrete, asphalt) absorbs more heat than green and blue infrastructure (plants, grass, trees, and bodies of water).

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This guide has been informed by direct engagement with arts and cultural organisations across London. Insights were gathered through a two-hour interactive workshop with a range of stakeholders from arts and cultural organisations, alongside an online survey capturing additional perspectives. These insights helped identify key overheating challenges and practical adaptation needs, ensuring this guide reflects real world experiences and constraints across arts and cultural venues.

Thank you to the following organisations who participated in the workshop: BFI, South Bank and Waterloo Sustains Us, The Old Vic, National Theatre, Tate, Southbank Centre, Somerset House, South Ken Zen+.

Legal notice

This guide is intended to provide general guidance only for arts and cultural organisations. It does not constitute legal advice and should not be used as a substitute for surveys or assessments carried out by professionals. Organisations should seek advice from suitably qualified professionals before taking, or choosing not to take, any action based on the information contained in this guide.

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Foreword

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Cultural venues are more than places where audiences encounter film, art and shared experience; they are part of the social infrastructure of our communities. As rising temperatures and more frequent heatwaves begin to affect how people gather, the need to adapt is becoming ever more urgent. This guide has been developed to support arts and cultural organisations to respond practically and confidently to that challenge. Well-adapted, arts and cultural venues can play an essential role in supporting community resilience by providing safe, accessible environments for visitors and staff during rising temperatures. In our South Bank and Waterloo neighbourhood, they also support community wellbeing, local livelihoods and are trusted places of refuge during periods of extreme heat.

Heat affects arts and culture in profound ways. It can make venues uncomfortable or unsafe, disrupt performances and screenings, damage collections and equipment, and place additional strain on staff and finances. But it also presents a wider civic question: how can cultural spaces continue to serve the public in a hotter future? Climate change is already causing a large proportion of cultural organisations a serious business risk. For popular destinations such as South Bank and Waterloo, where culture drives employment, footfall and local economic activity, these impacts extend well beyond individual venues. This guidance shows that adaptation is not only about protecting buildings; it is about protecting access to culture, safeguarding the conditions that make creative work possible, and ensuring these vital institutions can continue to serve their communities. That is why this work is so important.

Last year, we hosted a workshop bringing together 85 representatives from cultural organisations. This work was commissioned in response to the challenges, anxieties, and frustrations shared by venues planning for climate resilience. This guidance is a direct output from those very discussions. By connecting cinemas and theatres to museums, galleries and multi-use cultural spaces, we can find solutions to the impacts of overheating on staff, audiences, collections, programming and operating costs. This guide draws primarily on examples from London where the combined complexities of high footfall, urban topography and green space deficiency exacerbate the effects of overheating, particularly in visitor destinations such as South Bank and Waterloo, but its practical recommendations will be useful to cultural organisations across the UK.

The guidance recommends a practical, staged approach with realistic measures supporting better decision-making, helping organisations manage risk and improve the visitor experience. We hope it gives cultural organisations the confidence to act now, collaborate with others, and see climate adaptation not as a constraint on culture, but as an essential part of securing its future.

Section 1: Introduction

Context

As a result of climate change, Europe is heating up faster than any other continent. The UK is particularly underprepared for rising temperatures. UK buildings have historically been constructed to favour heat retention and energy conservation, reflecting the country's traditionally cooler climate and the need to reduce heating costs during the winter. It is not just buildings; our public spaces are also not typically designed to protect people in hot weather.

While anyone can be affected by heat; it can both cause and exacerbate many health-related issues, especially amongst vulnerable people. This includes people with underlying health conditions, the elderly, pregnant people, and young children. Continuous exposure to heat can lead to heat stress, heat exhaustion, and heat stroke, amongst other physical and mental health conditions.

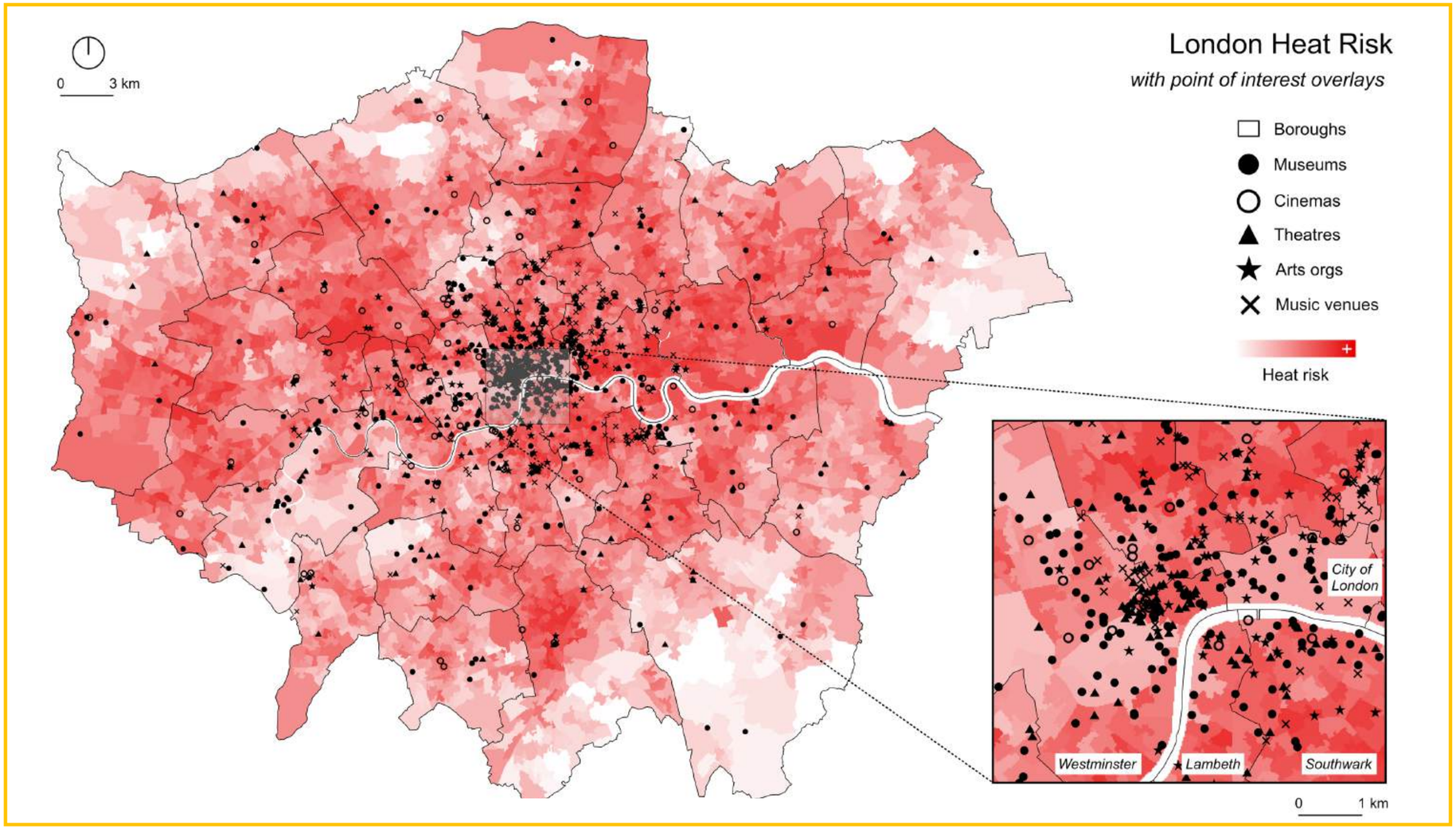


Figure 1: London heat risk map for arts and cultural venues (by Bloomberg Associates for the BFI and South Bank and Waterloo Sustains Us).

1. Association of Leading Visitor Attractions (ALVA) (2026) Latest Visitor Figures. https://www.alva.org.uk/details.cfm?p=423
2. South Bank Bid Quarterly Report October-December 2025

Arts and cultural organisations and their venues, including (but not limited to) theatres, museums, cinemas, galleries, performance venues, cultural centres, and multi-use facilities, are in a unique position when it comes to both heat risk and heat resilience. Many venues are often not equipped to withstand hot weather, with limited provision for shading, ventilation, or effective heatwave protocols. At the same time, many are open to the public and experience high levels of footfall, meaning resilient venues can accommodate large numbers of people at any one time, including individuals who are more vulnerable to heat.

London has one of the highest concentrations of arts and cultural venues in the UK. Each year, an estimated 70 million visits are made to arts and cultural venues across the capital, with over half of these venues offering free entry, making them highly accessible to the general population[1].

Within the South Bank neighbourhood, where a large cluster of arts and cultural venues reside, around 50% of visitors are in the area specifically to attend a film, exhibition, or event[2]. The remaining visitors cite spending time in the area, walking along the river, eating, shopping, or exploring as their main reason for visiting. Even when art and culture is the primary driver, many people go on to engage with other attractions nearby, increasing dwell time and exposure to outdoor heat. Heat risk therefore extends beyond the venues themselves to transient spaces within the surrounding area.

Heat risk mapping (Figure 1) was developed by Bloomberg Associates, in collaboration with the British Film Institute (BFI) and South Bank and Waterloo Sustains Us, as part of a wider series of climate risk mapping for London's arts and cultural sector.

Heat risk is shaped not only by levels of heat exposure (the amount of heat reaching a location over a period of time) but also by vulnerability to heat. This refers to the social, economic, and environmental factors that influence the ability of people and places to cope with and respond to heat.

The findings demonstrate the scale of climate-related risk that arts and cultural venues in London face, including heat. Over two thirds of the mapped venues are located in areas of higher than average climate risk, meaning they are more likely to be affected by extreme weather events, including heatwaves, that are becoming more frequent and intense as a result of climate change.

This spatial understanding is important, as it highlights how heat is not only a building-specific issue, but also a neighbourhood-level challenge. As a result, arts and cultural organisations in these areas have an important role to play not only in adapting their own buildings, but also in supporting wider community resilience during heatwaves.

At the same time, 'tropical nights' (where temperatures don't fall below 20°C at night) are becoming more frequent, resulting in buildings and public spaces having less opportunity to cool down during periods of hot weather. Communities are therefore in need of access to safe, cool spaces into the evening, reinforcing the role arts and cultural venues play in supporting heat resilience beyond standard office hour models.

Understanding heat-related impacts for arts and cultural venues

The diversity of arts and cultural venues means there is no single reason why they might overheat, but rather a range of contributing factors can cause overheating. For example:

High occupancy and crowd density

Arts and cultural venues often experience high footfall, with large numbers of people occupying a space at once, such as for performances, screenings, and exhibitions. People generate body heat, which can quickly raise indoor temperatures, particularly in enclosed spaces.

High levels of glazing

Spaces with large areas of glazing, especially on south- and west-facing façades, are exposed to intense solar gain, particularly in the afternoon. This can significantly increase indoor temperatures if not adequately shaded.

Unshaded outdoor spaces

Many arts and cultural venues have external amenity areas such as courtyards, gardens, or queuing spaces that are often exposed to direct sunlight and lack adequate shade and planting. These spaces are commonly surfaced with artificial materials, such as asphalt, to make them hard-wearing in high footfall area. However, artificial materials absorb and retain heat, making them uncomfortable or even unsafe for visitors and staff during hot weather.

Heat-generating equipment

Technical and production equipment, such as stage lighting, projectors, audio-visual (AV) systems, and filming equipment can generate a lot of heat.

Older and heritage buildings

Many arts and cultural venues are housed in historic or listed buildings. These buildings were typically designed to retain heat to reflect the UK's historically cooler climate and focus on conserving warmth during winter months. These buildings often have constraints that limit retrofit options for overheating adaptation, such as external shading.

Urban Heat Island effect

Arts and cultural buildings in dense urban areas, like London, are affected by surrounding hard surfaces (roads, pavements, buildings) which absorb and re-radiate heat, especially at night. This prevents the ability for buildings to naturally cool down at night.

Limited ventilation

Opening windows can be restricted due to external noise, air pollution, or security concerns. Additionally, single-aspect spaces (with openings on only one side) can prevent effective cross-ventilation, reducing the ability to release built-up heat. As arts and cultural venues are open to the public, single-aspect rooms are common by design due to the separation between front-of-house and back-of-house areas, limiting natural airflow.

Operational constraints

Fixed performance schedules, lighting requirements, and audience expectations can limit the ability to adapt quickly during heatwaves, which can make overheating harder to manage in real time.

Insights from the stakeholder workshop and survey highlighted that increasing temperatures may bring some limited benefits, such as increased revenue from food, drinks, and ice cream sales during hot weather. However, these same discussions made clear that the overall impacts of heat are overwhelmingly negative, affecting operations, staff, and visitors alike. These findings underline the breadth and severity of the challenges organisations face, as set out below.

Financial and business impacts

Damage to collections

Some collections, such as artworks and artefacts, may be highly sensitive to temperature and humidity fluctuations. Although most collections are typically kept under carefully controlled environmental conditions, extreme heat can place additional strain on these systems, increasing the risk of equipment underperformance or failure. This can make it more difficult to maintain stable conditions, potentially accelerating deterioration or causing damage to sensitive collections.

Organisation continuity risks

Repeated heatwaves can disrupt programming schedules, long-term revenue, and staff wellbeing, and cause venues to temporarily close, affecting overall organisational resilience.

Increased operational costs

Higher temperatures drive up energy demand for cooling systems, if present.

Reduced audience attendance and revenue

Heatwaves can deter visitors from travelling, particularly when public transport systems are disrupted or uncomfortable. This can result in lower footfall, attendance, cancelled bookings, and therefore reduced revenue. Evidence from across the sector highlights the scale of this impact: the Director of the Association of Leading Visitor Attractions (ALVA), Bernard Donoghue OBE, noted that the heatwaves in June 2025 saw visitor numbers fall by 9% compared to the previous June, demonstrating the direct effect of hot weather on attendance and revenue[3].

Negative visitor experience and reputational risk

Overheated venues can lead to visitor discomfort, shorter visits, complaints, and negative reviews, which may impact an organisation's reputation and long-term visitor engagement.

3. Savills (2026) Visitor Attractions. https://www.savills.co.uk/research_articles/229130/390560-0

Operational impacts

Increased staffing pressures

Staff may be unable to show up to work due to heat-related transport disruption and increasing health-risks, placing pressure on operations.

Event disruption and cancellations

Extreme heat can force organisations to cancel performances, close exhibitions, or reduce opening hours to protect staff and visitors if areas are severely overheating.

Technical failures

Lighting, AV systems, projectors, or staging equipment may overheat or malfunction, which can then disrupt performances and exhibitions.

Water scarcity

During periods of extreme heat and drought, water shortages may affect sanitation, drinking water for visitors, or the maintenance of green infrastructure on-site. Prolonged dry conditions can also harden and crack the ground, increasing the risk of flash flooding if heavy rainfall occurs at the end of a heatwave. In more severe cases, dry and damaged ground can affect the stability of building foundations, particularly in older buildings.

Health and wellbeing impacts

Staff wellbeing

Front-of-house staff and outdoor stewards may be particularly exposed to heat, feeling discomfort, fatigue, and reduced productivity.

Audience and visitor safety

Overheating can pose serious health risks, particularly in crowded or poorly ventilated spaces, leading to heat stress, heat exhaustion, or even heat stroke. Older adults, children, pregnant people, and those with underlying health conditions are at greater risk from heat-related illness.

Performer health and safety

Performers may be vulnerable to heat due to physically demanding activity, heavy costumes, and exposure to high-intensity stage lighting.

How to use this guide

The aim of this guide is to show that adapting to rising temperatures is both necessary and achievable for arts and cultural organisations. The following sections bring together a range of practical measures that you can apply across different types of venues, whether your building is listed or non listed, large or small, and whether you are working with limited budgets or planning longer term improvements.

The guidance is structured to help you take action in a way that works for your organisation, grouping measures across three key areas:

1

Operational measures

How your organisational procedures can prepare you for heatwaves in advance.

2

Building and amenity measures

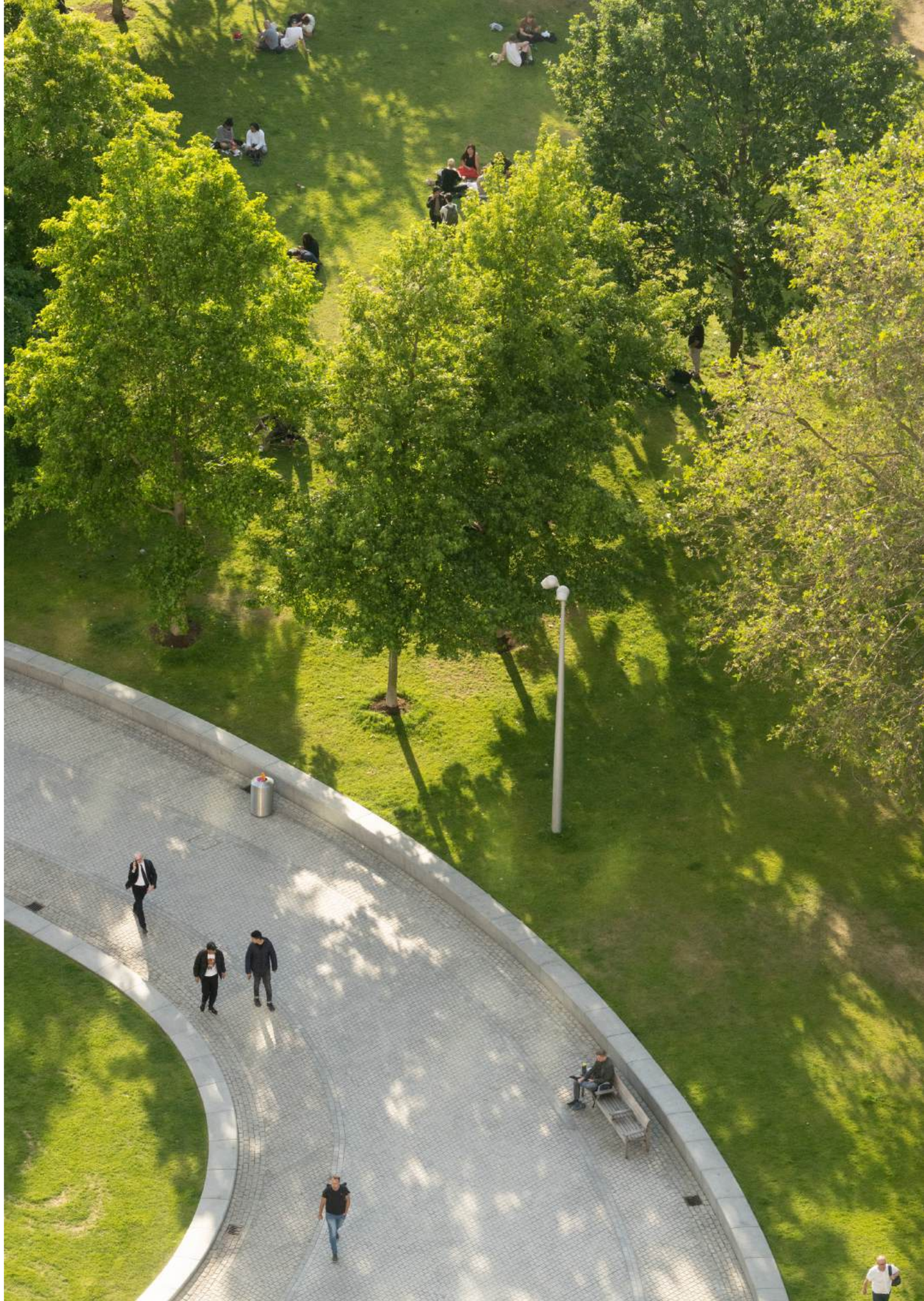
From low cost improvements to larger upgrades.

3

Community resilience

How you can help support keeping your community cool.

Importantly, this guide recognises that adaptation does not have to happen all at once. You can start small and layer actions over time. It is designed to empower organisations to take practical steps that improve thermal comfort, protect staff, audiences, and collections, reduce reliance on energy intensive cooling, limit financial disruption during heatwaves, and strengthen long term heat resilience.



Section 2: Operational measures

How your organisation operates day-to-day plays a critical role in managing heat risk. Across the arts and cultural sector, major retrofit works may not be possible in the short term, particularly where budgets are limited, buildings are complex, or venues cannot afford to close to facilitate works. Well prepared staff, clear protocols, and good communication can significantly reduce heat risk, even where physical changes to the building are limited. The measures below are designed to be implemented ahead of time, reducing the need for reactive decision making during a heatwave.

Policies, protocols, and strategic planning

Embed climate risk into organisational governance

Include overheating and extreme heat within organisational risk registers and business continuity planning. It is important to actively engage senior leadership to ensure heat is recognised as a current and material operational risk, not a future or theoretical one. This includes clearly communicating impacts on finances, staffing, programming, reputation, and compliance, so that heat risk is understood as a concern for finance, operations, and executive teams as much as for estates or facilities managers. Regular reporting, briefings, and post-heatwave reviews can also help ensure ownership and accountability at the director level.

Establish heatwave protocols

Develop clear plans that respond to national and regional heatwave advice. The Met Office defines a heatwave as three consecutive days above a location-specific temperature threshold. Responses to a heatwave should focus on adjustments to manage building performance and operations over several days.

The UK Health Security Agency and Met Office issue 'Heat-Health Alerts' based on the risk to health systems and vulnerable populations, not just temperature. The alerts are tiered yellow-amber-red and provide early warning of potential health impacts.

Organisations can use the heat-health alerts to prompt early action and safeguarding measures, even before peak temperatures are reached.

Organisations should also consider thermal lag within buildings where overheating may persist even after a heatwave officially ends. Therefore, heat responses should often begin before peak temperatures (via alerts) and continue after the heatwave period ends, if buildings remain overheated.

Set temperature thresholds for activities

Define maximum temperature limits for rehearsals, performances, and workspaces, with predefined actions when temperature thresholds are exceeded (e.g. relocation, extended breaks, reduced activity, or cancellation). While guidance by the Health and Safety Executive (HSE) commonly references 26°C as an internal temperature threshold for workplace discomfort, arts and cultural organisations could develop context-specific thresholds informed by staff surveys and feedback.

Different spaces and roles may require different temperature limits, for example, dancers and performers may need lower maximum temperatures than general back-of-house or office-based staff. These thresholds should be informed and reviewed using monitored internal temperature data to ensure they reflect real conditions within different spaces over time.

Workforce and staff adaptations

Ensure equity and sensitivity

Recognise that heat affects individuals differently and create policies that allow flexibility for vulnerable staff, including those with existing health conditions, pregnancy, or caring responsibilities. It is important to also consider less visible conditions that may be impacted by heat, such as diabetes or menopause. Staff surveys can help identify these needs and support more inclusive responses during heatwaves (see below). The approach taken should be proportionate to the size and capacity of the organisation. For smaller venues with limited staff, this may involve simpler, informal arrangements rather than formal policies.

Encourage easy behaviour changes

Use signage and digital communications to encourage staff to switch off unused equipment and lighting to help reduce internal heat gains. Encourage staff to effectively use passive cooling strategies, such as opening windows during cooler periods and closing blinds or shutters during peak sunlight hours.

Flexible dress codes

Allow lighter, breathable clothing during warmer periods to improve comfort and reduce heat stress, especially for outdoor workers and stewards.

Training and awareness

Provide staff training on recognising heat-related illness. This includes having staff on-site first aid trained in heat-related illnesses to attend both visitors and staff.

Provision of basic cooling resources

Supply staff with water bottles, access to drinking water, shaded rest areas, and, where relevant, equipment such as parasols for outdoor roles.

Staff surveys

Use surveys to better understand staff experiences of overheating and identify areas for improvement. The surveys can also identify if staff need extra provisions during heatwaves due to existing health conditions or other needs.

Operational adjustments

Adapt scheduling and programming

Shift rehearsals, performances, and events away from peak heat periods where possible, such as earlier start times or evening programming.

Flexible working arrangements

Enable remote working for office-based roles during heatwaves, where feasible.

Zoning and space management

Close or restrict access to overheated areas and prioritise the use of cooler spaces within the building.

Manage occupancy levels

Reduce capacity in high risk areas during peak heat periods to prevent overcrowding and excessive heat build-up.

Regents Park Open Air Theatre

Regent's Park Open Air Theatre is among the first major arts and cultural venues to shift performance scheduling explicitly in response to rising temperatures.

For the 2024 summer season, the theatre moved selected midweek and Saturday matinee performances in the summer from the traditional 2pm start to an earlier 12:30pm, with the intention to reduce exposure to peak afternoon heat for audiences, performers, and staff. The change forms part of a wider approach to heat risk management, which includes cancelling performances if temperatures exceed 40°C.

The policy reflects a growing awareness within the arts and cultural sector of the need to adapt to protect the health and safety of staff and visitors, hopefully encouraging other venues in the sector to reconsider long established practices as heatwaves become more frequent.

Monitoring and building operation

Monitor internal environmental conditions

Install monitors to track temperature, humidity, and air quality in real time to inform decision-making and trigger heat protocols.

Night-time cooling/night purging

Where possible, open windows overnight or early morning to release accumulated heat and reduce temperatures before regular occupancy. This may require extra security or CCTV.

Figure 2: Campaign partners are exploring opportunities for Cool Off in Culture merchandise; the figure illustrates mock-ups as a creative opportunity to engage with visitors and audiences [developed by LIVE+BREATHE).

Visitor communications

Clear wayfinding and on-site information

Provide visible signage to help visitors locate cooler areas (air-conditioned spaces or designated 'cool rooms'), drinking water stations, shaded areas, and points of assistance.

Proactive communication before and during heatwaves

Use your website, social media, email newsletters, and ticketing platforms to inform visitors about expected conditions, available cooling measures, and any operational changes (such as adjusted opening times or reduced capacity). Clear communication can help visitors plan their journeys and manage expectations during hot weather.

Enhance visitor comfort through services and amenities

Offer accessible drinking water and consider expanding retail or catering options to include cooling and hydrating items such as cold drinks, ice creams, and chilled foods.

Seasonal retail and merchandise

Gift shops and kiosks can provide practical items to support visitor comfort during heatwaves, such as reusable water bottles, fans, hats, sunscreen, and parasols.

Adapt ticketing and operations

Introduce flexible ticketing, refunds, or rebooking policies during heatwaves to maintain visitor trust.

Section 3: Building and amenity measures

This section sets out a range of heat adaptation measures for both buildings and surrounding amenity spaces. Instead of reading this as a checklist to complete in one go, think of it as a menu of options, some quick wins, some medium term improvements, and some longer term investments.

The measures are grouped into three broad areas to help you navigate what's most relevant to your venue:

→ **External building measures**
→ **Outdoor amenity measures**
→ **Internal and services measures**

A helpful way to prioritise measures is to follow the cooling hierarchy. This is a simple set of design principles that encourages you to start with the most effective, low energy measures before considering more energy intensive ones:

- Block the sun before it hits the building (e.g. using external shade).
- Release the heat from the building (e.g. improving ventilation by opening windows early in the morning and late in the evening).
- Reduce internal sources of heat (e.g. switching to high-efficiency appliances).
- Mechanical ventilation (e.g. ceiling fans).
- Active cooling (e.g. air conditioning).

The same design principles apply to cooling outdoor spaces too:

- Shade the space to limit the amount of sun reaching the outdoor area (e.g. canopies, pergolas, shade sails).
- Cool the surfaces by using natural or lighter coloured materials for ground surfaces (e.g. grass, mulch, stone, rather than dark asphalt).
- Move and cool the air by encouraging air and moisture movement (e.g. trees, planting and water features).

For more complex or sensitive buildings, it may be beneficial to seek specialist advice through an overheating assessment to ensure that any measures are effective in reducing heat risk and do not create unintended issues elsewhere.

Heritage and planning permissions

Many arts and cultural venues are located within listed buildings or conservation areas, which requires careful consideration when making any alterations. Any works, whether internal or external, that could affect a building's architectural or historic significance typically require listed building consent.

While these requirements can add complexity, there are still many opportunities to implement reversible and low-impact adaptations that can mitigate overheating without compromising heritage. Historic England have created guidance on adapting historic buildings, including specific advice on managing overheating.

Given the additional constraints involved, it is strongly recommended that organisations seek early engagement from local authorities and heritage officers to explore suitable options and ensure proposals are both effective and compliant.

External building measures

Minor retrofit measures

1. **Place green and leafy potted plants on flat roofs.** Potted plants on roofs and balconies are a more flexible and cheaper option than installing a green roof. The pots can also be moved around to where they're most needed.

2. **Place trellises with fast-growing climbing plants around doors and windows.** Climbing plants, like honeysuckle or jasmine, can quickly cover walls, doors, and windows. They act as a green curtain, blocking sunlight from heating up these surfaces. This not only cools the building down but also adds aesthetic value. Using trellises make it easy to remove or relocate the plants.

3. **Install removeable shading above, around, or on windows and doors e.g. removeable awnings.** Shading options like awnings or detachable blinds can be put up when needed in the summer and removed when it gets colder, helping control the heat without making any significant changes. They can be temporary and adjustable, but being an external feature means they may still need approval for listed buildings.

Moderate retrofit measures

4. **Install external openable shutters on windows and doors.** External shutters are particularly effective for east, south, and west facing spaces by blocking direct sunlight, helping to keep interiors cool. Their ability to be adjusted throughout the day or in response to changing weather conditions makes them one of the most efficient passive solutions for mitigating overheating without relying on air conditioning. Perforated shutters are optimal to allow air flow even when the shutters are closed. It may be difficult to gain permission to install external shutters on a listed building. However, there is growing leniency due to the increasing awareness of the overheating benefits of shutters.

5. **Install fixed shading above, around, or on windows and doors e.g. brise soleil, overhangs.** They provide constant protection from the sun, so the building does not heat up as much during the day. They can also be motorised, such as external blinds or louvres that respond to sunlight.

6. **Replace high-glazing areas with insulated opaque, mesh, or perforated panels.** Large glazed surfaces can allow excessive sunlight and heat to enter. The panels can be opaque, mesh, or perforated, depending on the level of light and views desired, and openable to allow ventilation.

7. **Paint dark-coloured roofs and external walls with light solar reflective paint.** Dark colours absorb more heat, so painting roofs or external walls with light paint or reflective materials help reflect sunlight away from the building. This reduces the amount of heat the building absorbs, keeping it cooler inside.

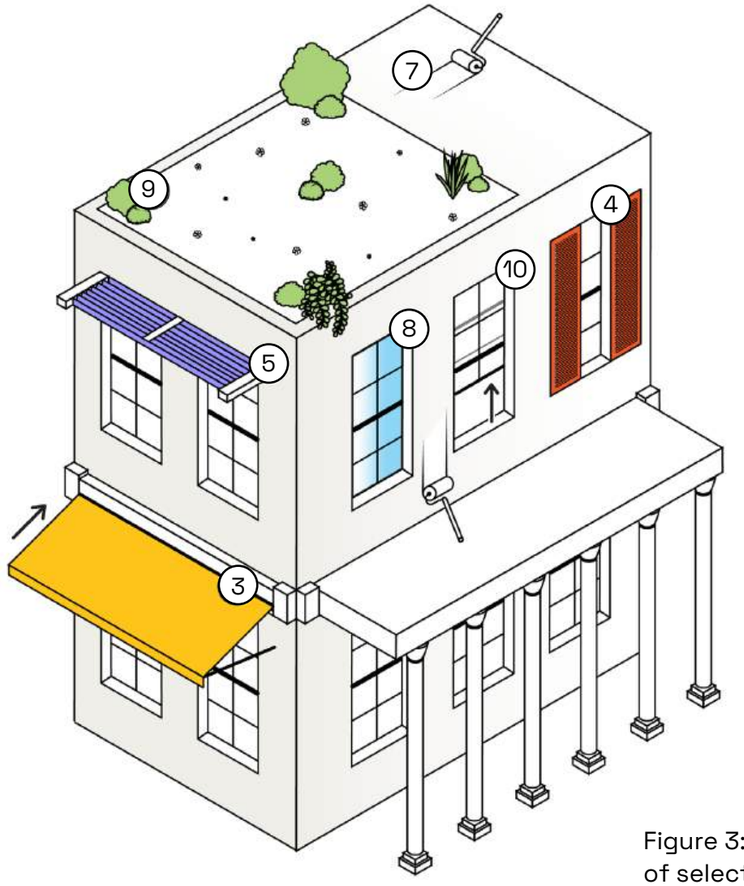


Figure 3: Ilustration of selected external building measures

8. **Install solar reflective film to the outside or inside of windows.** Solar film reduces the solar gain within a building without compromising daylight or views. Solar film with a low g-value between 0.20-0.40 is recommended for east, south, and west facing glazing.

Major retrofit measures

9. **Install a green roof, if structurally allowed.** Green roofs are highly effective in reducing overheating in buildings by absorbing sunlight and heat, preventing it from penetrating the building's structure. It can also act as insulation in the winter to regulate temperature all year round. This passive cooling method not only improves occupant thermal comfort but also reduces cooling demand.

10. **Install windows that can be opened while remaining secure.** Many non-residential buildings have large, fixed glazing systems. Integrating openable panels into the fixed glazing allows for natural ventilation in the building, letting cooler air enter during the night and remove heat buildup from the day.

11. **Increase the thermal mass of internal walls, floors, and ceilings.** Increase the thermal mass by adding dense materials, such as hempcrete or concrete, which naturally store heat during the day and release it slowly at night. Night cooling, i.e., ventilating a building during the night to flush out heat that has accumulated during the day, is most effective in buildings with a high thermal mass.

Internal building measures

Minor retrofit measures

1. **Place leafy indoor plants by windows exposed to direct sunlight.** Indoor plants can act as a natural filter for sunlight. When placed internally near windows, they help absorb some of the sun's heat and release moisture, which cools the air inside.

2. **Install blackout blinds or thermally lined curtains on windows exposed to direct sunlight.** Blackout blinds are made from thick fabric that block the majority of sunlight. Putting them up in the warmer months and taking them down when it's cooler helps manage the temperature inside more effectively.

3. **Buy and install energy and thermally efficient light bulbs (LEDs) and electrical appliances.** Internal heat gains are generated by various sources within a building, such as people, electrical appliances, lighting, and other equipment that produce heat when present or switched on. Energy-efficient appliances and light bulbs produce less heat, helping to keep the space cooler.

4. **If ceiling heights allow, install ceiling fans.** Ceiling fans facilitate ventilation and make the air feel cooler as it evaporates sweat from the skin. They're a cost-effective way to keep the air moving and reduce heat buildup.

Moderate retrofit measures

5. **Install internal shutters on windows exposed to direct sunlight.** Internal shutters act as a barrier between office windows and the interior space, helping to block direct sunlight and reduce heat build up.

6. **Upgrade the Building Management System (BMS).** A modern BMS can monitor real-time data on occupancy, temperature, humidity, and equipment use, enabling smarter control of building services. The BMS can also facilitate night-cooling by optimising night-purge ventilation strategies using automated window actuators, fans, or mechanical ventilation to flush heat out before the day begins.

7. **Insulate hot water pipes and, if possible, any floors or walls they go under or behind.** Insulating hot water pipes prevents them from heating the surrounding areas, which helps keep the building cooler. It's a simple way to reduce unwanted heat during the warmer months.

8. **Install zonal lighting controls so that only occupied areas are lit.** Zonal lighting control ensures that only occupied areas of the buidling are lit, thereby minimising unnecessary heat generation from lighting fixtures.

9. **Install high-level opening vents in atria or stairwells.** This allows hot air, which naturally rises, to escape from the building, improving airflow and reducing heat build-up.

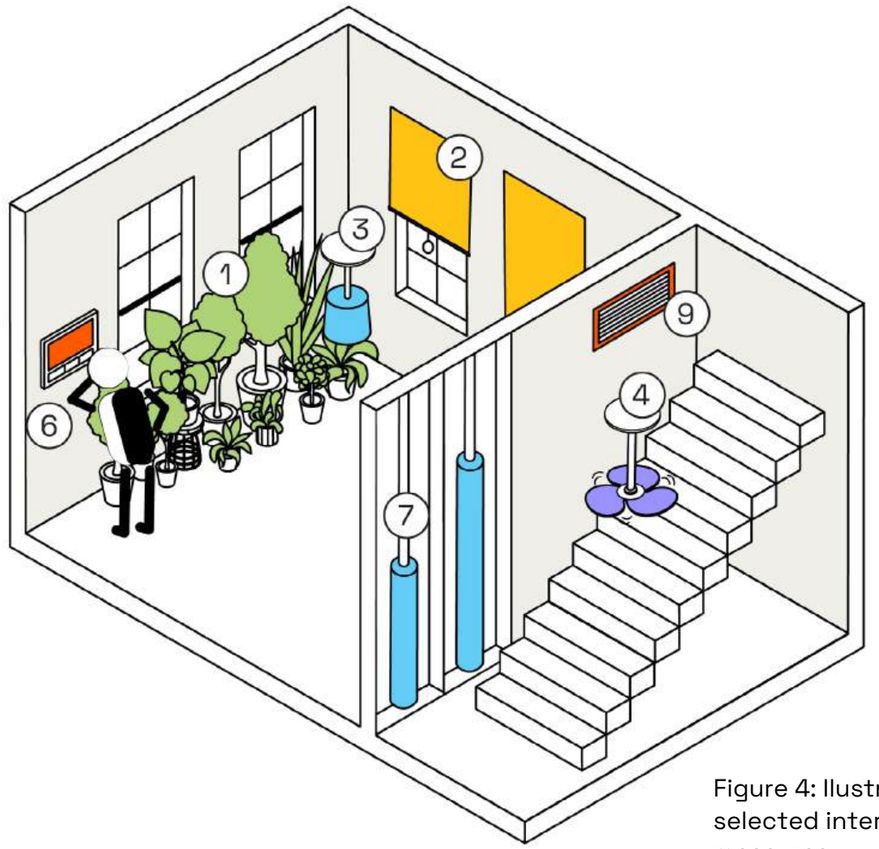


Figure 4: Ilustration of selected internal building measures

10. **Install phase-change material (PCM) panels integrated into ceilings or walls.** They absorb heat during the day and release it at night, improving the thermal mass without adding brick or concrete to improve temperatures, especially when combined with night-time cooling.

11. **Use floor and wall finishes, such as ceramic tiles or stone, and limit the use of carpets in rooms that overheat.**

Major retrofit measures

12. **Install mechanical ventilation with heat recovery (MVHR).** In the summer, the system bypasses heat recovery to bring in cooler air without adding heat, helping reduce indoor temperatures. This consistent airflow prevents heat buildup to maintain thermal comfort.

Outdoor amenity measures

Many arts and cultural venues have access to outdoor amenity spaces, such as gardens, courtyards, and terraces, which are often under-appreciated when it comes to managing heat. These spaces can hold a significant role in reducing heat exposure and improving comfort for visitors and staff during hot weather. Making better use of your full estate, including outdoor areas and the immediate surroundings, can be just as important as retrofitting your buildings.

Well designed amenity spaces can create cooler microclimates through shade, planting, and water, while also supporting operational strategies, such as managing crowd numbers and improving airflow. Some venues are already demonstrating what is possible: the South Bank Centre's use of planting and water features, including their Natura Nostra Forest and Jeppe Pein: Appearing Rooms, help provide localised cooling while enhancing the visitor experience.

1. **Plant trees and shrubs.** Prioritise planting around entrances, queuing areas, and outdoor seating areas. Climbing plants on trellises can also provide a more non-permanent or moveable solution.

2. **Create gardens or cool planting areas in underutilised outdoor spaces.** Identify underutilised areas, such as rooftops or leftover public realm, and transform them into planted, shaded spaces. Even small interventions, such as pocket gardens, can create cooler microclimates and provide welcoming places for visitors and staff.

3. **Provide creative shading solutions.** Use light coloured shade sails, canopies, umbrellas, or other built shading structures for visitors and the public. Shading can be designed creatively, for example as temporary installations or public art, to enhance the cultural offer while significantly improving thermal comfort.

4. **Install gazebos, pergolas, and umbrellas for flexible use.** Gazebos, pergolas, and umbrellas can create shaded areas for outdoor performances, workshops, activities, or rest areas during heatwaves, and can be taken down in the colder months.

5. **Choose cooler outdoor surface materials.** Where resurfacing is possible, replace dark, heat absorbing materials (asphalt) with lighter coloured stone, gravel, grass, or wildflower planting to reduce surface temperatures in outdoor areas.

6. **Provide accessible drinking water points.** Install water fountains or refill points in outdoor areas, particularly near entrances and queueing spaces.

7. **Introduce water features for cooling and play.** Shallow water features, such as fountains or misting systems, provide family friendly amenities, offer immediate relief from heat, and help cool the surrounding air through evaporative cooling.

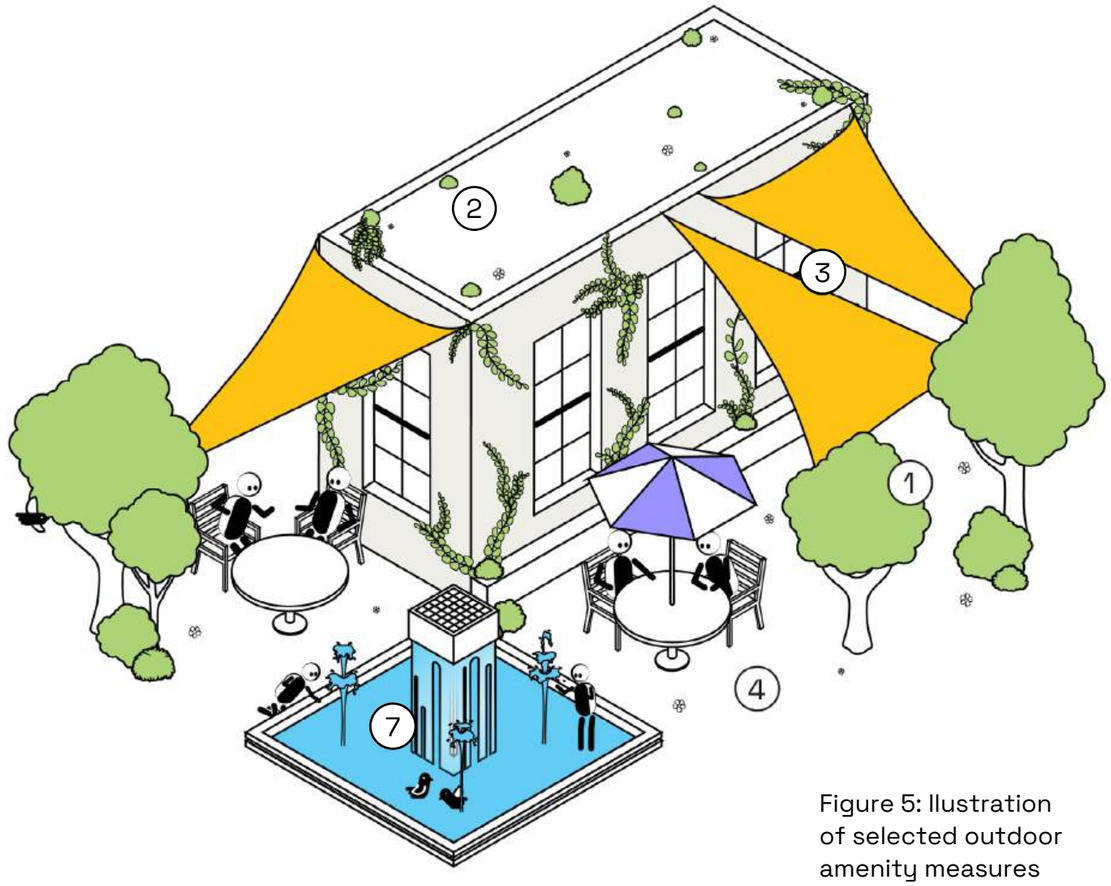


Figure 5: Ilustration of selected outdoor amenity measures

Active cooling

Active cooling (such as air conditioning) has long played an important role within the arts and cultural sector. Controlled temperature and humidity have been essential to protecting culturally significant assets, especially in venues preserving collections, artworks, film, textiles, archives, and printed materials.

As summers become hotter, active cooling is also increasingly used to maintain safe indoor temperatures for visitors and staff, with many arts and cultural venues already relying on it in parts of their buildings. However, active cooling can significantly increase operational costs and carbon emissions, place strain on the electricity grid, and contribute to higher outdoor temperatures by expelling heat into the surrounding environment.

Active cooling systems can be prone to breakdowns and inefficiencies, particularly during extreme heatwaves, when it is most needed. Systems may be centralised across an entire building or localised to specific rooms and spaces, which affects how responsive and flexible they are in practice. The effectiveness of these systems often depends less on the technology itself and more on how well they are operated. A well-configured and actively managed BMS, with clear controls and zoning can significantly improve performance and reduce overheating risk without the need for major capital upgrades. In many cases, optimising existing systems and controls is a lower-cost, lower-effort intervention that can deliver meaningful improvements, highlighting that increasing heat resilience does not always require a fully intrusive retrofit.

There are also opportunities to improve heat resilience while supporting your organisation's decarbonisation goals. These include upgrading to high efficiency systems (e.g. air source heat pumps or VRF systems), transitioning away from fossil fuel based cooling, integrating on site renewables, and reducing overall cooling demand through passive measures.

Fashion Museum Bath

The Fashion Museum Bath is planning to refurbish the Old Post Office in Bath city centre as its new home.

The approved plans for the Grade II listed building include the installation of external awnings to help mitigate overheating. This simple, passive measure blocks solar gain before it enters the building, improving comfort for visitors and staff while helping protect sensitive textile collections.

The scheme also includes transforming the former Post Office yard into a public courtyard garden, introducing airflow into the site and creating a cooler, more welcoming environment for visitors.

Together, these measures demonstrate how targeted heat adaptation strategies can be sensitively integrated within a historic building, improving comfort while preserving heritage.

For more information, visit https://www.fashionmuseum.co.uk/our-future

Section 4. Community resilience

As temperatures continue to rise, arts and cultural organisations have an important role to play beyond their own venues. Heat disproportionately affects the most vulnerable in society, including older people, children, and those with underlying health conditions, and many people do not have access to cool spaces during hot weather. As trusted, publicly accessible spaces, arts and cultural venues are well placed to help support communities when they need it most.

Many venues are already, often unknowingly, acting as informal places of refuge from the heat. With some simple steps, this role can be strengthened and made more intentional. The actions in this section are designed to help you think about how your organisation can contribute to wider community resilience, from simple, immediate actions through to co-ordinated neighbourhood responses.

What is a cool space?

A cool space is a publicly accessible place that offers a safe, comfortable environment that anyone can find respite during heatwaves. These spaces typically include libraries, community centres, public parks and other publicly accessible spaces that already provide accessibility and basic amenities.

Many arts and cultural venues already function as cool spaces, knowingly or not, by providing free or low-cost access to indoor spaces, air-conditioned environments, seating areas, places to rest, and access to toilets and drinking water. During heatwaves, these qualities become especially valuable to the wider public.

Recognising this role can help arts and cultural venues be better prepared, formalising and enhancing the support they already provide. Advertising your venue as a cool space can also offer multiple benefits to the organisation itself, including increased revenue from food and drinks, improved reputation, and stronger engagement with local communities and audiences.

How can my organisation become an effective cool space?

If you are considering becoming a cool space, the following features can help ensure your venue is effective, welcoming, and safe:

- → Free access to designated cool areas.
- → Accessibility, ensuring spaces are inclusive and easy to navigate.
- → A thermally comfortable environment during hot weather.
- → Free access to drinking water and toilet facilities.
- → Clear signage and visibility, so visitors can easily identify and locate the cool space.
- → Opening hours that align with periods of heat risk, including evenings, where possible.
- → Basic staff training to recognise heat-related risks and support visitors appropriately.
- → Most importantly, ensure that cool spaces are welcoming and safe for all, particularly for vulnerable groups who may be disproportionately affected by heat.

Cool Off in Culture

The Cool Off in Culture campaign was created by the BFI in 2025, and is now managed in partnership, led by Julie's Bicycle, with the BFI, LIVE Green, and Arts Council England. It brings together museums, galleries, libraries, cinemas, and arts spaces across the UK to act as cool spaces where people can find relief from rising temperatures.

At the heart of the campaign is a public map of venues that helps the public easily locate nearby cultural spaces, offering facilities such as air conditioning, shaded seating, or free water refill points.

The campaign hub provides information, resources, and a shared platform for the sector, positioning culture as essential community infrastructure in the face of climate change.

Cultural venues are encouraged to sign up via the campaign form to be included on this national map. Signing up is simple, venues submit their details and facilities, and in turn they:

- → Become visible on a campaign map as trusted cooling spaces for the public.
- → Strengthen their role as community hubs during extreme heat.
- → Attract visitors when they need safe, comfortable environments.
- → Can utilise a suite of free Cool Off in Culture marketing assets by LIVE+BREATHE.
- → Can get involved in an optional promotional campaign using out-of-home displays with Dropcast.
- → Join a collective movement proving cultures importance in climate resilience.

By signing up, venues not only support their local communities but also help demonstrate how the cultural sector can respond creatively and practically to climate challenges.

Figure 6: Example Cool off in Culture marketing communications for the BFI [developed by LIVE+BREATHE]

Wider community resilience

Beyond providing a physical cool refuge, arts and cultural organisations can contribute to broader heat resilience in the local community considering the following:

Programming and cultural engagement

Develop exhibitions, events, or creative programming that respond to and raise awareness of climate change and extreme heat. For example, the BFI's film programme during London Climate Action Week brings together screenings and Q&A events focused on climate change.

Visitor journey planning

Consider how visitors travel to and from the venue and how heat exposure can be reduced along the way. Provide clear wayfinding to shaded walking routes, nearby green spaces, water points, and transport options, both within the venue and the surrounding area. During heatwaves, digital wayfinding (e.g. websites, social media, maps) can also help raise awareness of your venue as a cool space, encouraging people who may not already be in the area to seek out your venue as a place of respite from the heat.

Outdoor adaptation

Where applicable, provide shaded areas, seating, and water access in external spaces such as courtyards or forecourts that are open to the general public, not just visitors.

Supporting neighbourhood initiatives and outreach

Work with local community groups, neighbourhood forums, and grassroots organisations to understand local heat risks and support initiatives that improve comfort and safety during heatwaves.

This may include outreach to vulnerable groups or hosting community focused activities during heatwaves.

Partnerships and local networks

Work with local authorities, community groups, and neighbouring organisations to coordinate responses during heatwaves and share resources. This can include engaging directly with culture, climate, and public health policy teams at local authority level to align venue-based actions with wider heat resilience planning in the area. Also, work with nearby venues and partners to align messaging during heatwaves, providing clear, consistent information to the public about cool spaces, opening hours, travel advice, and available support.

Creating cool corridors

Explore opportunities to work with neighbouring venues, landowners, and local authorities to create shaded, well signposted walking routes between cultural venues, transport hubs, and other public spaces, helping people move through the area more safely during hot weather.

Demonstrating best practice

Sharing lessons learned, both successes and challenges, can help build sector wide knowledge and support wider uptake of effective cooling solutions. Through events, networking, workshops, and online communications, let others in the sector know how your organisation has implemented adaptation and resilience measures to encourage best practice.

Community infrastructure and resources

Partner with neighbouring organisations to share or co invest in temporary or portable heat resilience infrastructure, such as shading kits, misting systems, water, and shaded seating.

Metro fans in Toulouse

In Toulouse, an innovative approach has been used to support the public in the summer through the distribution of free maps identifying cool spaces and amenities across the city. The maps were designed to be folded into handheld fans that serve a dual purpose: helping people navigate to cooler locations (including arts and cultural venues, pools, parks and drinking water) while also providing immediate physical relief from the heat. By combining wayfinding and low cost cooling solutions, this approach demonstrates how arts and cultural venues could work together as part of a visible, connected network of cool spaces that support people across a wider area.

Figure 7: Cool spaces map fan in Toulouse [Source: Guide Fraîcheur, Tisseo, 2025]

Section 5. Next steps and further information

Avoiding maladaptation

When considering what measures to implement, they should be considered holistically to avoid maladaptation. Maladaptation is where installing one measure solves a problem but creates another. For example, installing too much permanent, non-moveable shading helps mitigate overheating in the summer but could make the space colder in the winter.

If unsure, seek professional advice and/or commission an overheating assessment for your venue.

Maintenance

Many adaptation and resilience measures can become ineffective because they are not checked or taken care of in the long-term. A simple routine can keep your venue safer and protect any investment you make in retrofit:

- → Inspect fixings on awnings, shade sails and shutters, especially after high winds.
- → Keep vents and trickle vents clear so buildings and spaces can ‘breathe’ (avoid condensation).
- → Clean filters and grills on extract systems and any mechanical ventilation units.
- → Maintain planting during hot, dry periods using low tech solutions such as water butts connected to downpipes. This helps ensure greenery continues to provide cooling benefits without increasing water demand.

Ongoing monitoring

Alongside physical maintenance, it is equally important to monitor and evaluate how operational measures perform over time. Regular reviews help ensure that policies remain effective and align with the changing climate, such as:

Reviewing heatwave protocols and response measures

After each heat event, assess how well protocols were implemented, including whether the set temperature thresholds were appropriate and whether actions were taken at the right time.

Reviewing implementation of staff and visitor feedback

If staff surveys and visitor feedback have been implemented as an operational measure, ensure that the feedback has been taken on board and evaluate their effectiveness. Also, it is important not to just implement one survey, ensure the surveys are regular to reflect changes in climate and operations.

Evaluating the use of spaces during heatwaves

Review how different areas of the building are used (e.g. cool rooms, shaded spaces) over time to improve usability and accessibility in future heat events.

Updating policies and practices regularly

Use the findings from the temperature monitoring and feedback from the surveys to refine overheating policies, communication strategies, and operational responses on an ongoing basis.

Further information (links)

- → Cool Off in Culture sign up form to register your venue as a cool space
- → Cool Off in Culture campaign hub
- → Cool Off in Culture public map
- → Climate risk mapping for London’s cultural venues
- → Guidance on creating overheating policies for your organisation (office based)
- → Sign up for Met Office heat-health alerts
- → UKHSA hot weather advice
- → Historic England overheating advice
- → Consider an overheating assessment for your organisation

Section 6. Case studies

6.1 The Old Vic

Key considerations

- → **Focus investment**: target areas with the greatest heat risk (the auditorium) where passive measures are limited and reliable mechanical ventilation and cooling upgrades are most critical.
- → **Formalise the organisational heatwave plan:** implement clear heatwave protocols, staff training, and audience-focused operational adjustments.
- → **Work incrementally**: due to heritage, budget, and operational constraints, utilise short-term measures using existing resources (e.g. heatwave kits) while planning longer-term upgrades.

Context

The Old Vic is one of London's most well-known theatres, with a history spanning over 200 years. Like many long established arts and cultural organisations, it operates across a complex estate made up of buildings of different ages, construction types, and performance requirements.

The venue received Grade II listed status in the 1950s and last underwent a major upgrade in the 1980s. More recently, a new extension (known as 'Backstage') was completed in 2025. Today, the estate can be broadly understood as two distinct parts:

- → The Old Vic – the historic theatre where performances take place.
- → The Old Vic Backstage – a newer extension, including a café and bar, script library, writers room, green room, flexible studio space, and an event space with a roof terrace.

This mix of old and new results in varied thermal conditions across the site. Some areas feel cooler and benefit from passive airflow, while others (particularly enclosed, high occupancy spaces) experience higher temperatures.

This highlights the importance of tailoring heat adaptation measures to different parts of the venue and thinking about year-round thermal comfort.

Current adaptation strategies

The Backstage extension offers a good example of how art, design, and adaptation can co-exist. The south west façade of the extension is fitted with three dimensional brise soleil. They are partly made from repurposed theatre lighting accessories known as 'barndoors' and have been repainted in shades of red, yellow, orange, and purple to form a flower like arrangement. The brise soleil performs a dual function of reducing solar gain while acting as a visible public art installation that emphasises the venue's cultural identity.

This approach illustrates how shading and overheating adaptation measures can also enhance architectural character and visitor experience.

Additionally, simple measures, such as a deep external overhang and planting on the upper level balcony and terrace, help reduce direct sunlight.

Building measures (focus area)

Like many older venues, the building relies on legacy infrastructure, systems and products, including an ageing air handling unit (AHU) from the 1970s in the auditorium and uninsulated pipework. Across the wider estate, some areas benefit from active cooling and newer systems, primarily within the Backstage extension.

Passive design and operational strategies are already being used where possible. For example, stairwells and vertical shafts help move air through the building, with doors being opened before and after performances to release built-up heat. However, the realities of live performances mean that noise and lighting are a distraction for the audience experience, which limits how far these strategies can be used during a show.

During particularly hot periods, portable cooling units have been brought in to maintain safe conditions. While effective in the short term, these solutions can be costly and are not a substitute for longer term system improvements.

As with many arts and cultural venues, any major building upgrades must be carefully balanced against heritage requirements, operational continuity, and budget constraints. Closing the venue to allow for retrofit works is often not feasible, so rather than taking an all-in-one approach, focusing on high priority areas can help direct investment where it has the greatest impact on comfort and safety. At The Old Vic, the auditorium is a clear priority.

The auditorium

The auditorium presents one of the most complex environments within The Old Vic when it comes to managing heat.

As a high occupancy space, the auditorium experiences significant internal heat gains from audiences, stage lighting, and technical equipment. At the same time, it must accommodate diverse user needs, from audiences seated for extended periods, to performers undertaking physically demanding activity, and often in heavy costumes. Also, most shows require a degree of smoke and haze effects, which can be disrupted by the AHU.

Passive cooling options are very limited. There are no windows, and while adjacent spaces such as stairwells are cooler, doors to the stairwells cannot be left open during performances without affecting sound, lighting, and audience experience.

Internal heat gains from people, lighting, and equipment build up during the day and can remain in the space until early the next morning. Material and fabric changes are constrained too, both by heritage considerations and by the desire to retain the character of the space.

As a result, reliance on passive measures alone is unlikely to provide sufficient thermal comfort. This is a clear example of where reliable, well-designed mechanical ventilation and active cooling systems are essential to maintain safe conditions for audiences, performers, and staff during hot weather.

Despite these constraints, there are still opportunities to improve conditions by improving the thermal conditions of adjacent building areas:

→ Cool adjacent and supporting spaces, such as foyers, bars, and circulation areas, to provide thermal relief before performances, during intervals, and after shows have ended.
→ Use pre-cooling strategies, both passive and active, where possible, to reduce internal temperatures ahead of occupancy.
→ Use zoning and system optimisation to ensure that any active cooling is prioritised where it is most needed.
→ Supporting these passive and active measures with operational changes (see below).

Operational measures

Alongside building improvements, operational changes can play a significant role in improving thermal comfort and safety, particularly in a venue where major retrofit works are constrained.

The Old Vic is currently developing a formal heatwave plan, which provides an opportunity to strengthen preparedness across the organisation. Key considerations for the heatwave plan include:

→ Establishing clear protocols linked to national heatwave alerts.
→ Setting internal temperature thresholds for different spaces and activities.
→ Training staff to recognise and respond to heat-related health impacts.
→ Introducing staff wellbeing measures during hot weather, such as flexible shifts, additional breaks, and lighter dress codes.

Different groups within the building experience heat differently. Performers, especially those undertaking physically demanding roles or wearing heavy costumes, may have very different needs to front of house or office based staff. Working with sector bodies such as the Society of London Theatre (SOLT) or the Broadcasting, Entertainment, Communications and Theatre Union (BECTU) could help establish appropriate guidance and temperature thresholds for these roles.

More broadly, factors such as show length, audience demographics, and occupancy levels all influence how heat is experienced in practice and should be considered as part of planning.

A useful existing precedent at The Old Vic is the presence of emergency toolkits, which are stored in brightly coloured, clearly labelled rucksacks, and ready to be deployed during incidents. This approach could be extended to include a number of heatwave response kits around the theatre on hotter days and evenings, containing items such as bottled water, electrolyte drinks, cooling packs, handheld fans, small towels, and clear guidance for staff on responding to heat-related illnesses. Having visible and easily accessible heatwave response kits would support quicker responses during hot weather and reinforce heat as a recognised health and safety risk for the theatre, alongside other emergency scenarios.

Most importantly, these operational measures can be implemented incrementally and do not require building closure, making them particularly relevant for busy, publicly accessible arts and cultural venues.

Community resilience measures

The Old Vic already provides some measures that support people during hot weather, including free access to drinking water at the traditional Old Vic bars, the new Backstage café, and from sinks in toilet facilities.

As a highly visible, publicly accessible venue in a densely populated area with high footfall due to visitors, commuters and workers, the Old Vic also has the potential to play a wider role in community heat resilience. Whilst ensuring the building itself remains thermally comfortable and safe for staff, actors, performers and audiences is the priority, there are opportunities to strengthen The Old Vic's more outward facing role in the neighbourhood over time. For example, through clearer communication, wayfinding, or coordination with nearby venues.

Key takeaways

The Old Vic offers a clear example of how complex and historic venues can begin to adapt to rising temperatures. Instead of one single solution, progress comes from combining targeted building improvements with strong operational planning, and working incrementally within the constraints of the building.

Even in challenging spaces within theatres, there are practical steps that can be taken now while longer term investment and upgrades are planned to improve thermal comfort and build resilience over time.

At the same time, the Old Vic highlights a wider challenge for buildings in the arts and cultural sector. Meaningful improvements to building systems often require significant capital investment. For many arts and cultural organisations, access to funding for critical infrastructure upgrades, and how critical infrastructure is defined, will be essential to ensure venues can remain safe, operational, and financially resilient as temperatures continue to rise.

6.2 BFI Southbank

Key considerations

- → **Build on the venue's already cool internal environment:** strengthen wayfinding, signage, and communications so visitors can easily identify cooler areas, water refill points, and places to rest.
- → **Focused building interventions:** where adaptations will have the greatest benefit, such as reducing solar gain and glare at highly glazed entrance areas through lightweight, reversible external shading that supports thermal comfort while aligning with decarbonisation goals.
- → **Work with neighbouring arts and cultural venues venues:** through Cool Off in Culture, create a connected network of cool spaces, coordinated messaging, and recognisable cool routes across the South Bank to support people as they move through the area in hot weather.

Context

BFI Southbank venue is one of the UK's largest independent cinemas and film archives, forming part of a cluster of arts and cultural venues in the South Bank area.

Originally built in the 1950s as the National Film Theatre (NFT), it occupies a unique location beneath the Grade I listed Waterloo Bridge. The site expanded in the late 1980s with the addition of a new building for the Museum of the Moving Image (MOMI), before both buildings were refurbished, combined, and relaunched in 2007 as BFI Southbank.

Today, BFI Southbank comprises four cinema screens, a library, studio, shop, café, bar, events spaces, and a public access venue for the BFI National Archive. This broad mix of uses attracts a diverse audience, ranging from regular cinema goers and festival visitors to families, students, and people spending time in the South Bank area.

The venue's prominent position overlooking the River Thames, combined with the high footfall of the South Bank means large numbers of people engage with it in some way every day.

This scale and visibility create a significant opportunity for the venue to support community heat resilience, offering safe, accessible spaces for people to find respite during hot weather.

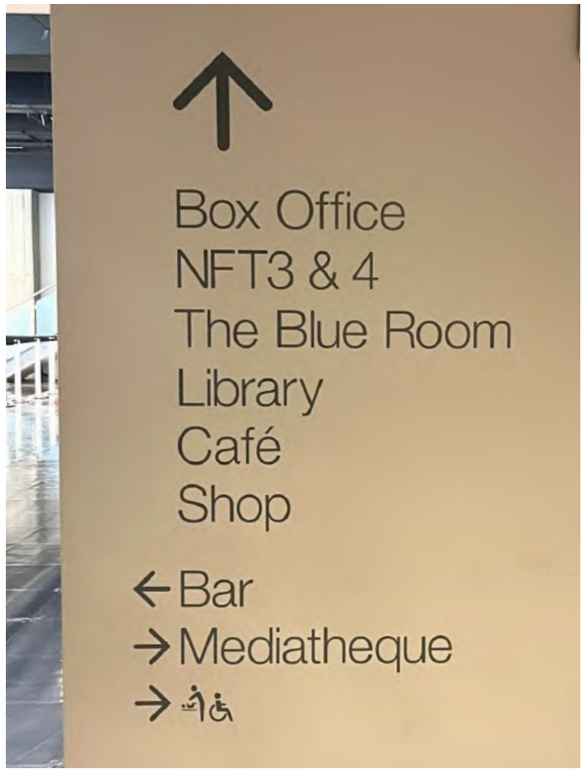
Building measures

The venue benefits from a relatively stable and generally cool internal environment, supported by active cooling and its position beneath Waterloo Bridge, which provides a degree of natural protection from direct solar exposure. However, thermal conditions can vary across the building. While the majority of the indoor spaces are comfortable to be in, areas with large expanses of glazing or very high usage behave differently. The café and box office entrance has a large, glazed façade which is more exposed to solar gain, leading to localised thermal discomfort and glare.

Despite the presence of some indoor planting and active cooling systems here, visitors often move further into the building to find more comfortable conditions.

Although the venue is largely well-cooled, even well designed and efficient systems can come under strain during extreme heat events and during busier than usual times. Reducing reliance on active cooling where possible, and aligning heat adaptation measures with wider decarbonisation plans, as well as improving staff and visitor experience, is therefore an important consideration.

In this context, external shading, such as canopies or shading devices, could significantly improve thermal and visual comfort at the point of entry by reducing direct solar gain. However, the fully glazed façade does not easily accommodate traditional fixed shading such as shutters, so lightweight, moveable solutions, such as demountable canopies, seasonal shading structures, or motorised external blinds or louvres, could offer effective, flexible alternatives.



Operational measures

BFI Southbank has a number of operational practices in place that support day to day heat management. The venue monitors internal environmental conditions, including temperature, humidity, and carbon dioxide levels, and managers have the ability to adjust temperatures within individual rooms. This allows a degree of responsiveness to changing staff, visitor and audience needs and external conditions, particularly during hotter weather or busy periods.

The presence and regular maintenance of indoor plants and greenery also contributes to the quality and comfort of the indoor environment and amenity spaces.

There are opportunities to strengthen this approach further:

→ **Improved wayfinding and on site information**

There is already clear and consistent signage and wayfinding throughout the building for features such as stairs, toilets, and Wi Fi. This provides a good foundation to build on in terms of extending wayfinding to clearly highlight cooler areas, water refill points, shaded spaces, and points of assistance, helping visitors navigate the venue more comfortably in hot weather.

→ **Staff training and first aid preparedness**

Expand training so more staff are first aid trained, with specific knowledge of recognising and responding to heat related health impacts such as heat stress, heat exhaustion, and heatstroke.

→ **Heatwave protocols**

BFI Southbank currently uses heat-health alerts to inform simple internal and external communications, such as encouraging visitors and staff to stay hydrated during hot weather.

There is an opportunity to build on this by embedding more formal, structured protocols into operational procedures, using these alerts as clear triggers for specific actions. Examples include activating heatwave response plans, adjusting operations, and implementing additional measures to protect staff and visitors during periods of elevated risk.

→ **Enhanced staff wellbeing**

There are already various staff wellbeing measures in place, such as flexible dress codes during warmer weather. This could be further strengthened by providing basic cooling resourcing during hot weather, including supplying staff with water bottles, access to drinking water, shaded rest areas, and, where relevant, equipment such as hats, caps and parasols for outdoor roles. Regular staff surveys could also be used to better understand how different teams experience heat, helping to capture less visible sensitivities and ensure wellbeing measures are inclusive and responsive.

→ **Gift shop**

The on-site gift shop has the opportunity to sell both sustainable and practical items that support comfort during hot weather, such as reusable water bottles, paper fans, hats, caps and parasols.

The measures above should include engaging with on site partners and tenants (such as Benugo who run the on-site café), to ensure that everyone working within the venue is aware of heat related risks, understands how to respond appropriately, and knows when and how to escalate concerns.

A coordinated approach across all front of house and visitor facing teams can help ensure consistent, timely support for both staff and visitors during hot weather.

Community resilience (focus area)

BFI Southbank is particularly well placed to act as a cool space given it's a trusted venue in a high footfall location and already provides many key features of an effective cool space, including:

- A cool, accessible indoor environment
- Free access areas within foyers and circulation spaces
- Free access to drinking water and toilet facilities
- High visibility
- Programming and cultural engagement that raises awareness and responds to climate change and extreme heat.
- Sharing learning and best practice at events and online.

There is an opportunity to build on this foundation by making the venue's role more visible and embedded within a wider neighbourhood level response to heat. Many visitors come to the South Bank area not for a single destination, but to spend time walking, exploring, and moving between multiple cultural venues along the river.

In this context, BFI Southbank can function not only as a point of relief during periods of extreme heat, but as part of a connected network that helps reduce overall heat exposure as people move through the area. Working collaboratively with neighbouring venues through the 'Cool Off in Culture' campaign could help establish a shared approach to supporting visitors during hot weather.

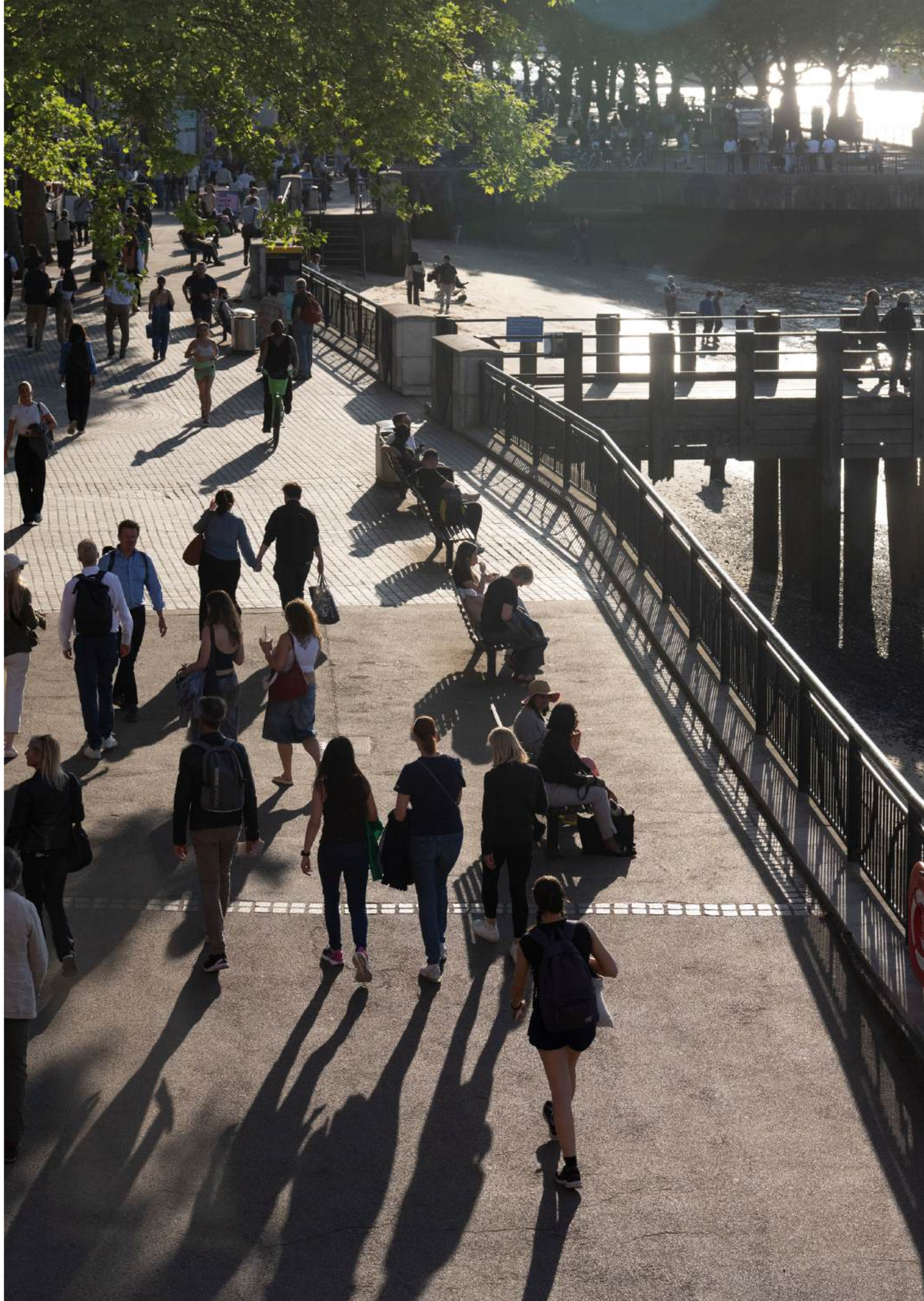
This might include:

- Coordinating physical and digital wayfinding to guide people between venues, transport hubs, riverside routes, and other shaded or cooler spaces, helping to create a recognisable 'cool route' network across the South Bank and Waterloo neighbourhood.
- Aligning opening hours and communications during hot weather to ensure cool spaces are available throughout the day and into the evening, reflecting how the area is actually used.
- Collaborating with local authorities, community groups, and neighbouring organisations to support shared planning and resource sharing during hot weather, including temporary or portable infrastructure such as plants, urban greening, shading, misting, drinking water provision, and seating.

Key takeaways

For BFI Southbank, while targeted physical improvements, such as external shading, could help reduce overheating and support wider decarbonisation goals, the greatest opportunities lie in making existing cool spaces more visible, accessible, and well used.

Doing so has the potential to strengthen visitor experience, enhance reputation, and support revenue generation. By working in partnership with neighbouring venues through the Cool Off in Culture campaign, BFI Southbank can demonstrate how a prominent cultural institution can move beyond managing its own internal environment to actively support community heat resilience, helping protect people as they move through the local area during hot weather.



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