Objective

We believe there is significant opportunity to **improve the health and quality of life for residents** through strategic interventions to **reduce the impact of extreme heat and enhance common outdoor spaces.**
Overview

• This guide identifies a range of interventions to reduce the impact of heat and enhance outdoor common spaces at social housing sites.

• Examples were gathered from interventions at social housing sites and from low-cost improvements in public squares and plazas in cities around the world.

• Rather than in-depth case studies, these examples are intended to present the universe of possibility and inspire creative thinking and strategic planning.
Guiding Principles

- Maximize cooling impact (shading, air flow, and materials)
- Responsive to the needs of residents
- Improve public safety (including visibility and lighting)
- Low-cost (capital and maintenance)
- Promote social interaction
Local Engagement

- Residents should guide projects wherever possible and be involved in all stages of design, implementation, and maintenance
- Engage in design to understand their needs and develop early project buy-in
- Engage in implementation to encourage a sense of ownership and pride in the project
- Engage in ongoing maintenance, including watering plants, moving tables and chairs, and pulling down umbrellas
- There are a variety of tools to effectively engage residents, ranging from workshops to fun and festive activities, such as the social dinner image on the right

Via Palmanova, Milano
Intervention Sites – Outdoor Common Space Typologies

1. Grey Spaces
2. Green Spaces
3. Hybrid Spaces
Interventions in Grey Spaces
Design Elements

Grey spaces at social housing sites present a key opportunity to improve the overall quality of outdoor common spaces.

- De-paving
- Seating
- Shade as Public Art
- Lighten surfaces
- Permeable pavement
- Asphalt art
- Water/Green Wall
- Misting
- Play equipment
- Above-ground planters
Description: Retrofit of social housing project in London to address drainage and stormwater management needs while adding green to a grey area.

De-paving

Improved drainage through green installation
Description: A ‘parklet’ in Philadelphia takes over a street parking space through a simple installation of planter boxes to mark the space, wooden seating, greenery and shade.
Description: The ‘Umbrellas Street Project’ used 1,000 colorful parasols to bring shade to a pedestrianized street in a historic part of the city.
Lighten surfaces

Description: A City crew in Los Angeles installs new cool pavement surface coating along a street as a pilot project to test the reduction in temperature.

Note: In 2019, Bloomberg Associates completed an assessment of commercially available pavement coatings and the appropriate places for use (see Appendix for details).
Permeable Pavement

Description: This Milan social housing site shows how permeable pavement can be used in grey areas to help with cooling and drainage.
Asphalt art

Description: In Asheville, North Carolina, a local bicycle advocacy group led the painting of a street mural entirely by community volunteers, with a total material cost of $3,000 USD.

Note: In 2019, Bloomberg Associates published a guidebook on Asphalt Art (see Appendix for details).
Asphalt art

Description: In Portland, OR, nonprofit organization City Repair leads volunteers to implement street mural projects in partnership with the Department of Transportation. In 2019, Bloomberg Associates published a guidebook on Asphalt Art (see Appendix for details)
Description: Paley Park utilizes a 6m wall of water and green walls to cool the space and provide a calm and quiet oasis in the middle of Midtown Manhattan.
Description: A bus-stop in Daegu in South Korea uses a public misting system built into the shade canopy to provide relief to users of public transit as they wait for the bus.
Misting

**Description:** A public square in France uses suspended overhead wires to provide cooling mist in an otherwise unprotected and exposed outdoor space.
Description: A social housing project in San Pablo, California included outdoor play equipment for children, which is shared with an on-site daycare center for kids.
Lafayette Greens in Detroit uses a grid of above-ground planters to transform a vacant lot into a small urban community garden.
Interventions in Green Spaces
Design Elements

Grey spaces at social housing sites present key opportunities to improve the overall quality of outdoor common spaces.

- Community garden
- Mini Forest
- Play equipment
- Water
Community Garden

Description: This is a community garden in Dublin, in an area with limited green space. The local community has fought to keep the space undeveloped.
Community Garden

Description: The Emerson Avenue Community Garden in Los Angeles hosts regular volunteer days for local residents to garden.
City staff and volunteers in Oxfordshire recently planted the first ‘tiny forest’ in the UK with 600 native tree species in a 200m² plot in partnership with EarthWatch NGO.

The mini forest was pioneered in the 1970s by Japanese botanist Akira Miyawaki and has been adopted in cities around the world. Mini forests, planted at a density of 3 saplings per m², result in dense, fast-growing forests that are more biodiverse than conventional planted forests.
Description: A town in New Jersey installed ‘gym-quality’ exercise equipment that attracts a wide range of ages to the well-shaded space.
Description: Lexington, KY installed a temporary splash park during the summer months to provide a cooling opportunity for kids in a public park, paid for by donations from local groups.
Interventions in Hybrid Spaces
Design Elements

Hybrid spaces, with both green and grey surfaces, at social housing sites present key opportunities to improve the overall quality of outdoor common spaces.

- Greening
- Seating
- Above-ground planters
- Shade
- Planted buffers
- Mini Forest
- Exercise equipment
**Description:** The Benny Farm housing development in Montreal utilizes circular dense planting areas to add greenery to a small courtyard space.
Description: A social housing project in New York City uses brightly colored seating to enliven a small space, utilizing both fixed and flexible seating options.

Fixed tables and moveable chairs

Fixed benches
A project outside London to ‘climate-proof’ social housing added simple wooden planter boxes to allow local residents to grow food.
Description: A high school in California uses fabric ‘shade sails’ to provide cover to outdoor eating and gathering spaces for students.
Description: The climate-proofing of social housing included new bioswales that serve as planted buffers for the green area and improve drainage.
Mini Forest

Description: Volunteers in Paris prepare the soil for a new mini forest to be planted alongside a highway to reduce noise and improve air quality.

Compost from local horse stables
Exercise Equipment

Description: A senior housing development in Malaysia included an ‘outdoor gym’ for elderly residents to use for daily exercises.
Combining Elements

**Description:** Social housing project in Singapore with a plaza on top of an underground garage that combines lighting with diverse seating and greenery.
Combining Elements

Description: Social housing project in London utilized a variety of natural materials that won’t get hot in the sun.

- Wooden play equipment
- Permeable flooring
- New tree planting
Imagining the future of outdoor common spaces ...
AFTER
APPENDIX
Appendix - Resources

- **Asphalt Art Guide**
  Bloomberg Associates

- **Cool Pavements Research**
  Bloomberg Associates

- **Healthy Housing for All**
  Urban Land Institute, Center for Active Design

- **Design Guidelines – Rehabilitation of NYCHA Residential Buildings**
  NYC Housing Authority

- **Designing New York: Quality Affordable Housing**
  NYC Public Design Commission