

1

ON WEATHERING AND “CLIMATE-READINESS”

A strengths-based approach to adaptive practice
in Western Sydney

Stephen Healy and Abby Mellick Lopes

Introduction

For nearly 100 years, Western Sydney has been a frontier of suburban expansion. The region, now home to one in ten Australians, is under threat as anthropogenic climate change moves from spectral possibility to present-actuality. In Australia, and around the world, public policy debates about how to become “climate ready,” the experiences and creative participation of everyday residents are often missing. The context for this chapter is a set of design and action research projects that seek to identify how communities are currently living with the heat in Western Sydney, and strategies that can improve conditions for living well, cohering under the name *Cooling the Commons*. Over the last ten years this project has gathered insights from various fields, including design, geography, landscape architecture, and the natural sciences. We have worked in partnership with residents, state agencies, councils, and social housing providers to figure out what it will take to survive in the warmer twenty-first-century climate. We live and work here too, so this question of survival is a shared one.

The risks associated with climate change are becoming increasingly apparent in Western Sydney. The Climate Council, an independent, evidence-based Australian organisation dedicated to communicating climate science, predicts that parts of the region will become uninsurable due to fire and flood risk within a decade.¹ Similarly, the Western Sydney Region of Councils (WSROC) has declared that the present standards for home construction are inadequate for the climate to come.² But thus far, this awareness seems to have done little to redirect the trajectory and momentum of urban development, the suite of impermeable surfaces and dark-roofed, built-to-boundary homes deployed in

DOI: 10.4324/9781003485568-3

ways that block the breezes when they come, while leaving us exposed to a merciless sun. Our own work as a collective has been to insist that climate change adaptation should not force life indoors, but that we should extend the concept of climate-readiness beyond the four walls of home, to seek, find, and amplify the possibilities for coolth in outdoor life.³

Our basic orientation is to take a strength-based approach into a process of collaborative design to think with the community concerned about climate-readiness. The present context seems a salutary time for this. “Heat” is on the agenda at all levels of governance, enabling academic and practical research to focus on this question. In our research looking at climate-readiness in social housing, we are working with housing provider-partners who are keen to do what they can to support community resilience and improve the quality of the housing they manage to better cope with the heat. We know that residents, particularly those who are older or who are unable to install/afford air conditioning, can suffer greatly during the summer months. Yet in interviews, our partners report that “heat” does not come up as an issue in Tenant Advisory Groups. How are we to understand this paradox: where heat is anticipated as a central issue of liveability at all levels of governance, and yet it is absent as an expressed concern in organised forums of people who are frequently cited as the most vulnerable to its consequences?

In relation to this paradox, here we explore the concept of weathering. Weathering in arenas from public health to architecture describes the persistent impacts of things that diminish us: wearing away at our health, agency, and well-being in ways that can have long-term or even intergenerational implications. It also points to the ability of the built environment to sustain its present form and function when beset by chronic and acute weather events. But weathering also speaks to how things are sometimes borne without complaint, or even skilfully.⁴ To paraphrase Lauren Berlant, we aim through this program to identify the “know-how,” practices, places, and relationships that *sustain us*, without minimising all the ways in which the heat *diminishes us*.⁵ The practical expression of these ambitions involves identifying those things in the domains of the built environment and social practice that block coolth, as well as those that enable it. We see our efforts in Sydney as part of a larger set of ongoing experiments in climate adaptation whose impact and efficacy depend upon our capacity to share findings in the short term and to conserve them, and ourselves, in the long term. It is in this sense that we speak of the commons as both the spaces we access, use, and care for, and the collective care of our shared existence.

In the section that follows we specify what we mean by the concept of weathering as a way of framing an area of concern. We use a method of thick description called the “vignette” to explore the complex blockages to sustaining qualities of life that we have discovered through our research. These stories,

centred on the dynamics of social practice, reveal how weathering forms an ontological condition of everyday life in a warming world, whether that is expressed in the ingenuity of working around intractable built forms or even policies, or in the reproduction of the institutional practices that sustain them. These blockages are often far further “up the chain” than the problems we originally anticipated, such as those we can see and point to in the built environment, like the ubiquitous black roof tiles or the lack of shade trees. The blockages we are trying to get to also arrive as a consequence of weathering, of enduring conditions through time, to the point they are simply “what is” and unavailable as a matter of concern. We expose the complex sets of relationships that hold in place barriers to change and shed light on the challenges and forces at play when trying to work across institutions. We have found that entrenched cultures, conventions, and practices in institutions seem to have an insistence of their own, despite the good will expressed by individual actors seeking to move things in alternative directions. Building on our previous work, we understand this process of identifying barriers as a preliminary step in *repatting* the fabric of urban life in ways that enhance climate-readiness. We then share our strengths-based approach to developing collective responses to “climate-readiness,” particularly as we mobilise these in the latest iteration of our project in the context of social housing.

On weathering the realities

Tanya is a 60-year-old early educator working in a new centre in Penrith. She gets up with the sun to prepare for the day. She looks at the morning weather report, but knowing this only provides an average expected temperature, she goes to her Willy Weather app for a more detailed forecast and the Sun Smart app to understand today’s UV rating. She spends her morning strategising about how to move all the outdoor play activities indoors, in anticipation of an extremely hot day. As the kids arrive, she adds more sunscreen to their faces and arms. She puts T-shirts on those who have arrived in spaghetti strap sundresses and puts hats on their heads. She ushers them outside for an hour of play before the shade starts to dissipate and the plastic “softfall” and “AstroTurf” start to heat up. It’s 10 a.m. and she’s exhausted. She needs to rest and thinks to herself, not for the first time, “I’m getting too old for this!” Even so, she cares about the kids in her charge and wants to make sure they are getting in some physical movement and social play. Rather than giving up and letting the TV take over, she encourages the kids to move around the air-conditioned toddler room that’s way too small for this purpose. Thankfully, the air-con makes the weather momentarily disappear.

Weathering, as both what wears away and the conditions under which we persevere, is relevant to our efforts in finding common solutions to climate change as the challenge of our times. Weathering is a multivalent concept that first found expression in the context of the work of public health researcher Arline T. Geronimus in the late 1980s. For Geronimus, it was a term for expressing how differential maternal health translates into significantly higher mortality rates for African American mothers in the United States.⁶ Bruce McEwen and Elisabeth Lasley point to the allostatic load of everyday life for Black mothers, the accumulating impacts carried in the body including everything from persistent exposure to environmental toxins, to various forms of racialised discrimination.⁷ The weight of this load carries the consequences of weathering across generations.

In the context of public health, weathering connects our insides, the bodies' cellular (and even molecular) composition to a constitutive shared outside condition. In a comprehensive review paper, Kristi Ebi and colleagues detail the breadth of heat health risks for different bodies.⁸ While air conditioning offers respite, they also show how increased use of air conditioning in urban environments intensifies urban heat and associated risks. Weather is yet another term that belies the distinction between agent and structure, individual and social. Feminist environmental humanities scholars Astrida Neimanis and Jennifer Mae Hamilton smartly follow critical race theorist Christina Sharpe in redefining weather in ways that connect the "social" atmosphere to an increasingly restive Anthropocene.⁹

Weather becomes "the total climate,"¹⁰ something that encompasses anti-black violence and what Rob Nixon once called the slow violence of a changing climate.¹¹ For Neimanis and Hamilton,

Weathering here is neither metaphor nor analogy (anti-blackness is not only like bad weather and surviving it is not only like surviving bad weather); in a climate-changing world, climatological phenomena are themselves imbricated in these embodied lifeworlds. In the face of the greatest climatic transformation that human bodies have ever known, weathering means learning to live with the changing conditions of rainfall, drought, heat, thaw and storm as never separable from the 'total climate' of social, political and cultural existence of bodies. This includes anti-blackness, but also, we suggest, coloniality, misogyny and the resourcing and thingafication of other bodies – poor, queer, non-human, disabled.¹²

Weathering reframes the Anthropocene as a time when some human communities have generated the climate conditions in which we find ourselves, *as well as* identifying resources – embodied practice, know-how, places and

relationships that enable us to weather what has been rendered – all the ways at present that we might weather together. As much as weathering is about initially recognising and then marshalling our tacit capacities for enduring, it is also, as Tony Fry contends, an exercise in thinking-in-time.¹³ Weathering together means responding to the immediate dangers of hot days through timely interventions. Tanya’s capacity to anticipate and respond to heat, to work around the weather, and with the available resources, is driven by an ontological commitment to performing her duties of care, regardless of the challenges and dangers.

However, it must be remembered that weathering is unpaid work. Tanya absorbs the labour of weathering within the constraints of her job, which she accommodates by deploying her finely tuned care skills and anticipatory intuition. In Tanya’s case, life turns on the weather, but the work environment often does not help. The designed conditions – the inadequate shade, the choice of heat-exacerbating materials, the reliance on air conditioning, the inappropriate summer clothing, and more – constitute a multitude of microaggressions that only increase the burden of care. A central concern for us then is how do we “surface the heat” as an issue? This is not only for those like Tanya whose care work in a hot environment can turn harm to her own body but also for those whose work knowingly or unknowingly sends harm to others, throwing it forward to future generations, by design.

What this looks like in place and through time is determined by our attunement to the particularity of our situation. Western Sydney is a context that can work against this timeliness. Since the end of the Second World War, urban planning in Western Sydney has been something of a rear-guard action, in which comprehensive planning was outstripped by population growth and the pressure to develop the fringe as an alternative to inner-city slums. One telling example was the 1948 Cumberland Plan, noted for its use of “green belts” to contain development. The plan projected that Western Sydney’s population would rise to 2.1 million by 1980, when in fact Sydney’s growth curve blew past this projection in 1960, a full twenty years earlier. Sydney has been playing “catch up” ever since. Then as now, the “crisis” functions as an imperative to increase the housing supply in ways that are ready-to-hand. Much of the new housing being built is replicating patterns that deny weather and reproduce an image of “product-based well-being,” fixed in modernist space and time.¹⁴ Built-to-the-boundary, fronted with large garages and with little space for future shade trees while displacing swathes of woodland, such housing stretches across new growth areas in Western Sydney, locking in ways of living that will increasingly depend on air conditioning for survivability. This housing, which appears to have already given up on life outdoors, will be with us for at least the next 50 years.

“How would you define ‘now’?” The facilitator, lanthe, asked the workshop participants, mostly State government development agency employees engaged in planning a “greenfield” site in Western Sydney. She is there to explore the introduction of community spaces and resources – commons – into new builds. lanthe continues, quoting from the Long Now Foundation:

For most of us it signals what’s immediate; it could be a day, or a week. It is a predictable time period, and a period in which we feel we are acting and taking responsibility. However, for many non-western cultures ‘now’ is (at least) seven generations back and forward. Our task here is to introduce an ethic of designing in time in response to a changing climate. So, let’s talk about this site. How will you start?

The sustainability project manager responds,

well, what is exciting here is that we have a clean slate – we are not burdened by legacy stock or needing to retrofit. In fact, we’ll seek a Green Star rating over our Master Planning under guidance of our sustainability team ...

lanthe looks at the map of the site displayed on a slide,

“But this map seems to already be colonised with housing in a way that maximises yield, without much space for commons – that’s not really a clean slate, is it?”

“Well, we do have a housing shortage and a growing population ...”

lanthe responds, “Over what period of time do you exercise custodial responsibility for the land you determine the use of?” Silence.

Finally, a senior project manager speaks up:

Well, it depends on the council we are handing over to. We stay involved through the stages of the business plan, masterplan; we are collaborating with multiple partners and agencies, dealing with changing priorities, governments and the market. So it can be anywhere between three to ten years.

“OK, so once this is built, what’s the lifespan of the stock?”

The manager thinks about it, confers with colleagues, and replies,

“That depends on whether we are talking single or multi-storey – let’s say on average, 30 to 50 years.”

lanthe does not let up. “So, you are specifying the conditions of a building for 50 years into the future ... what’s your process there?”

In the silence, it’s clear that those in the room are stumped for an answer.

This vignette reveals an entrenched pattern of decision-making that shows how ill-prepared development agencies are for the climate changes to come. The dynamic being expressed is the misalignment between the imperative to deliver a particular form of housing and the custodial responsibility that the development agency exercises over that housing, which requires a different relationship to designing in time. It is clear that current construction standards are an ill-fit for tomorrow’s climate. What shift would an inflection in understanding bring to the materialisation of the future city?

In our engaged research practice with the development agency, we attempted to create a space where this misalignment could take shape as a matter of concern, by introducing an ethic of designing-in-time. In our engagement, we mobilised examples from across the world where development practices include the introduction of safeguards *against* future development. We shared examples such as the ban on construction within breeze corridors that ventilate the city, or orders that ban the removal of mature trees in the City of Stuttgart. While housing is needed, the form that housing takes matters. Being at home in the world requires infrastructures of care that extend beyond the four walls of the home.¹⁵ We need housing that embodies social intelligence, that can protect commons and enable people to move and gather in the outdoors now, but also for the coming 50 years. Without this, the quality of life in hot cities – where to secure one’s safety from harm increasingly means to bar oneself indoors – will continue to diminish.

The acute expression of the housing crisis in Western Sydney is for people living on low incomes. To wit, public housing stock built in the 1950s is still in use to cater to the needs of low-income communities living in the hottest parts of the region now. One consequence of this mismatch between housing supply and the needs of those living on low incomes is in what residents must weather. One staff member of a community housing provider we are partnering with recalls growing up in public housing and how they coped with the heat of the summer in uninsulated fibro housing. The vagaries of the weather and diurnal rhythms sent the children down to the river to cool off, or to sleep on open verandahs. Years later, in far more comfortable conditions, he notices that even ten minutes without the air conditioner is intolerable for his family. For us, this story presents us with a paradox of weathering. On the one hand, as our community housing sector colleagues observe, the construction of climate-appropriate affordable housing is long overdue and the need for respite from the heat is particularly acute for older and health-compromised individuals, or for those with mobility challenges. On the other hand, the quality of housing that gets delivered, NatHERS (Nationwide House Energy Rating Scheme) ratings compliant though it may be, is already climatically redundant at the start of its life and sets a maladaptive barometer for the future of “trickle down” social housing.¹⁶ Yet, as J. K. Gibson-Graham reminds us, a situation of structural impossibility can always give way to an ethical project of possibility, but what is

required is for us to think differently.¹⁷ For us, reconceptualising the city as commons and enrolling ourselves and others as commoners charged with its care, shifts the context for adaptive practice, opening new possibilities for weathering well together.

“Home” as a distributed proposition

“Can you please hold Eric’s hand?” Bettina, a Cranebrook mother of four under five, assembles her children into a safe chain as they cross the busy Northern Road to get to Watergum Park in the far better resourced adjacent suburb, Jordan Springs. Once there, beneath the scanty gums, the kids anticipate the arrival of the mobile play van, a free local council service valued by the community for 40 years, which had thankfully resumed its itinerary after a Covid-19 hiatus. The van arrives at 10 a.m., and Miss Vanessa starts unpacking it and laying out its fabulous cornucopia on the bare grass; all the kids in the local vicinity are magnetically drawn out of their houses to join the activities, music, and story time on today’s agenda. It reminds Bettina of the Mr Whippy truck from her childhood, not that she ever tasted much of the ice cream. She allows herself to relax when she sees her friend Tanya arrive with her two grandkids. Awesome, she must have a day off, she thinks. Maybe the coffee van will also show.

Lauren Berlant describes the commons in anti-utopian terms, as a kind of provisional strategy for our being-together. The commons is to be understood here as infrastructure, as that which holds the structure together, its form as much improvisatory as it is durable. If 70-year-old housing stock represents an enduring, but ill-fitting response to the housing crisis and to the climate, then social practices like the mobile play van are an instance of how episodic events can infrastructure our being-together in ways that extend our capacity to be at home with one another.¹⁸

Stories like Bettina’s give us a sense of the uneven terms of our common existence. Sydney, like a lot of cities throughout the world, is defined by a stark divide. Indeed, the more well-resourced communities of the city centre, North Shore, and inner west, are communities that also have the highest tree canopy cover (see Figures 1.1 and 1.2).

In contrast, communities like Cranebrook are defined at once as communities with large segments of the population living on low income and those that must endure the full effects of summer heat without the advantages of leafy streets, or other forms of amenity that might provide safe passage to parks, bus stops, and shops. While Bettina’s story provides a reminder of how disadvantage

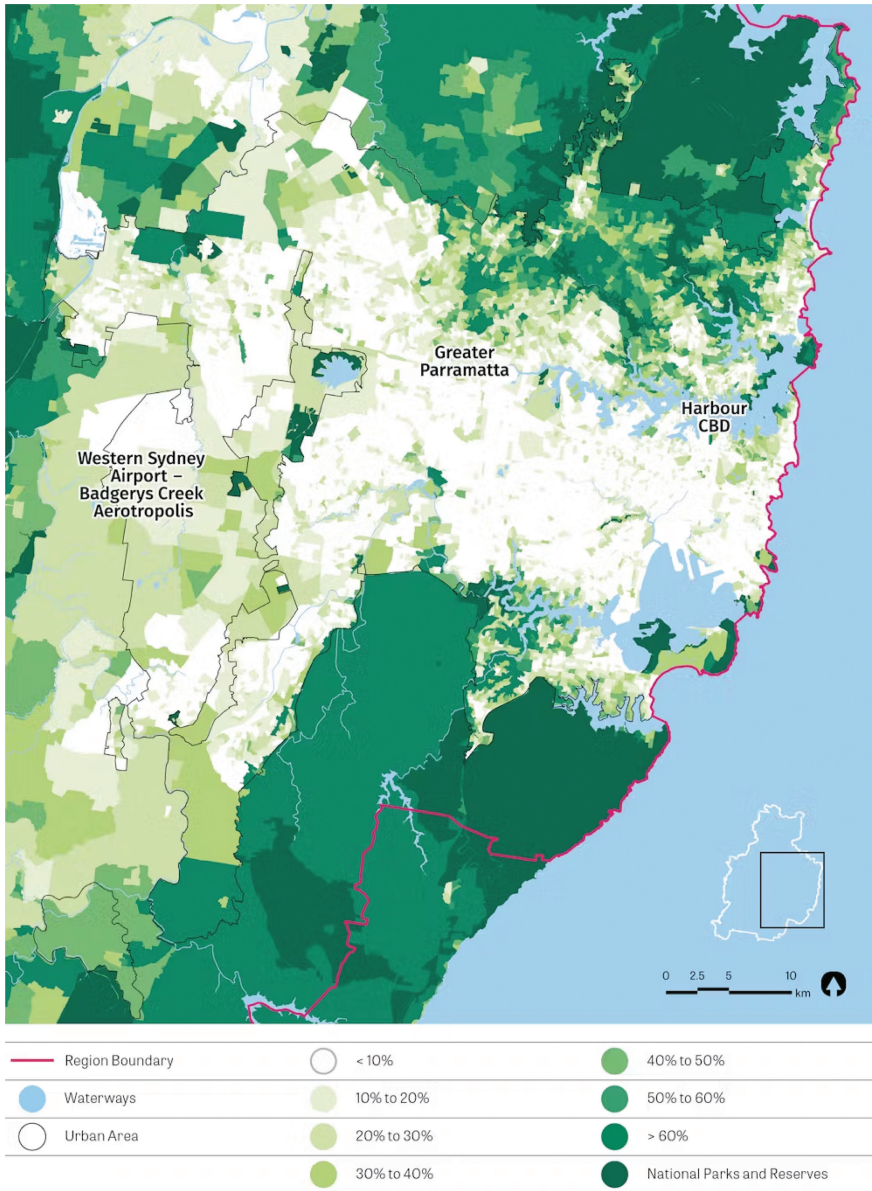


FIGURE 1.2 Tree canopy cover in Greater Sydney. © State of New South Wales through the former Greater Sydney Commission. Data: SPOT5 Woody Extent and Foliage Projective Cover (FPH) 5-10m, 2011, NSW Office of Environment and Heritage. Reproduced with permission.

Developing our patterns we learn from Alexander that they are not prescriptions or design principles, but rather configurations based on living examples that might emerge organically or be intentionally designed. In the latter case, this is intentional design that is sensitised to those living configurations and the relation between material and social elements that compose them – that is, a commons.²⁰

Making sense of the patterned fabric of the city, its spots of coolness and spaces of unendurable heat, means recognising that our own experience cannot be divorced from the space of the city, our patterned interactions with the places, practices, and relationships that sustain or diminish us. It is precisely for this reason that we recognise the strength of Bettina’s and Tanya’s expertise and authority in adaptive practice by virtue of their lived experience of weathering. Weathering in their stories is a “focal practice” that demands care and attention; it constitutes an ability to “hack” the heat, in contrast to the background comfort delivered by devices such as set and forget air conditioning, which, as Albert Borgmann theorised, are characterised instead by a distinctive pattern of division.²¹

The coming community

“Honestly,” says the sales rep, Justine, at the office of the new release housing development in Macarthur, Western Sydney,

I’ve never had anyone ask me about that park or any of the night-time activities. People around here are just not that interested in going out at night or in what their neighbours are up to. Yeah, we have a barbeque, but you can tell it’s never been used. People are attracted to the idea of community – which is maybe why we feature it on our billboards – but in reality they are flat chat trying to pay off their mortgages.

Macarthur Heights is a suburban development adjacent to Western Sydney University’s Campbelltown campus. The cul-de-sac deployment has many of the features we associate with business-as-usual development: black roofs, fencing, and auto-dependent infrastructure. But it also has at least some of the design features that might be enrolled into climate adaptation: cycle paths, developing canopy cover, green and blue infrastructure. In the centre of the development is a curious park set upon a hill. When we initially encountered the park, we thought what we were seeing were again elements of poor design: no shade, heat-absorbing soft-fall, and play equipment ill-suited for summer heat.

But what we were in fact looking at was a night park built around an observatory platform as “a place of learning and discovery.” The panels of Khaled Sabsabi’s installation (not a climbing wall, after all!) illuminate to show the constellations of the Southern sky.²² The park set up for sky watching would also be a perfect venue for a diversity of night-time activities – outdoor cooking, film screenings, night markets – what Zoë Sofoulis and colleagues called “park as event.”²³ What we saw in this was a potential for heat-adaptive practice centred on reworking the cadence of life, shifting convivial sociability to night-time. The initial barrier was the illegibility of this common resource. No one in the sales office had any idea about the careful design of this park with the Macarthur Astronomical Society and Aboriginal Elders, and the resulting artwork *Gates of Light* by Sabsabi; nor did they understand its purpose. The second more substantial barrier that struck us was the assumption that people are not interested in cool sociability after dark, part of a configuration of assumptions locking in a way of life and acting like a warrant for the housing and “machine space” surrounding us.²⁴ Giorgio Agamben believed it necessary to contest the fixity of personal identity and the substantivisation of community as a community *of*.²⁵ This resonates strongly with the situation we see in Western Sydney, where the return of the same will increasingly be unravelled by the community to come.

Massive changes to Western Sydney are underway. An entirely new city is being constructed from the ground up. High-density urban green infrastructure, if the future visions presented by the Western Parkland City Authority are to be believed, will rise magically from the horizontal skyline, in Parramatta – also one of the oldest colonial cities in Australia – and in Bradfield in the new Western Parkland City.²⁶ The Nancy Bird Walton Airport at Badgerys Creek will open in the next decade and operate, curfew-free, for five million passengers a year.²⁷ The coming community of Western Sydney will include knowledge workers and their families, as well as “learn and leave” students of the new industry-connected education facilities and learning precincts. These residents will come largely from regions throughout Asia and the Middle East. Walking in the city, you will hear Mandarin, Cantonese, Japanese, Urdu, and English. As well as languages, the new residents will bring new cultures to Western Sydney, including knowledge about how to live well in an extreme environment, with summer temperatures expected to regularly reach 50°C and rarely dip below 32°C in the coming decades. Many of these people will come from parts of the world where night-time sociability is a norm. In design studios associated with our research, we have learned much from international students from China, Indonesia and elsewhere, who come from places where climate-adaptive social practices are standard practice. We’ve learned about forms of everyday vernacular practice – the cadence of life, forms of dress, cool architectures, collective styles of cooking and care – that can be carried by the pattern language into our research context and shared.

In keeping with the theme of this book, we believe that our best chance is to create situations where all hands are on deck, where the full range of

know-how and practice can be brought to bear upon the question of how to live with the heat. But an initial obstacle is actually surfacing the dimensions of the heat as a shared matter of concern that we can address, rather than a reality to be endured in the familiarity of weathering. The heat cannot surface as an issue the public can address for people, at present, who are expected to simply weather it, including outdoor workers, childcare workers, people living on low incomes and people residing in social housing. In the absence of interventions such as socially engaged research and community activism, these voices remain “below deck.”²⁸ In equal measure, weathering-together, responding to the heat requires something different from those who can retreat to air-conditioned comfort. While not eschewing the affordances of air conditioning, we need to open ourselves to a fuller range of patterns that can be enrolled into climate-readiness, as well as creating a city capable of repatterning in response to coming communities.

In our project partnered with social housing providers, social housing advocacy organisations, and social housing residents, we have focused on becoming climate-ready in social housing. We see this as another context to think together about the role that commons-based responses might play in a hot city. An initial step is surfacing the heat as a matter of concern in the first place. Through the years of this project, we will aim to form an “issue public” around climate-readiness, recognising expertise and aspiration about how to live with the heat and how this knowledge might be shared and realised. In the first stage, we have worked with resident-researchers using sensing technology to understand micro-climates in and around their homes, and together have learned that Western Sydney, a region stretching over 9,000 square kilometres, is not one place, but many, a region of diverse weathers and capacities for weathering. A next step is convening groups of residents living in three quite distinctive housing complexes to design climate-ready adaptive practices to trial and evaluate across the following two summers, but also potentially across generations. Weathering-together, rather than singularly enduring the heat, developing and mobilising strengths and shared expertise in adaptive practice, brings cool commons into view. Doing this work together is also how we come to understand ourselves as commoners. In this, becoming a commoner involves us both in a process of pattern recognition, identifying what stands in the way of the coolth as well as identifying the forms of coolth we might enact, repatterning ourselves, where we live, and the cadence of life. By way of the strength that comes from thinking together in time, the cool commons opens a space of shared possibility and shared responsibility.

Conclusion

Weathering, as we have treated it here, is a concept that carries much of the experience of living in our time. Weathering refers to what diminishes us, the way the heat wears away at human bodies and desires for example. In an urban

context, heat can make outdoor spaces like playgrounds, pathways, and bus stops unendurable in summer. In this respect, weathering wears us down *by design*. Places like Sydney format familiar but maladaptive patterns that subtract the time needed to grow the capacious verges and deep canopy that characterise Sydney's older suburbs. Maladaptive design also *defutures*, the consequence of future-negating practices of design identified by Tony Fry that fail to intuit our world and all the challenges we face, as ultimately shared. Indeed, the suburbs being presently built will work to hasten life indoors – a pattern of existence in which air conditioning, for those of us who can afford it, invites us into comfort but also sedentism, social isolation, and all that goes with it.

But we contend that weathering has another meaning as well, a term seemingly ready-to-hand, that describes a range of adaptive practices. What we have highlighted through the vignettes is an ability to “think-in-time,” as Fry and Gibson-Graham put it, in ways that mean attunement to bodily needs and timely responses to the needs of others.²⁹ These forms of embodied knowledge, adaptive capacity, and collective capacity are part of a knowledge commons that we seek to mobilise with our partners in social housing to think ambitiously about both the process of retrofitting existing housing and new builds that reframe “climate-readiness” as an expression of community expertise, resourcefulness, and creative leadership for the next 100 years.

Notes

- 1 Hutley et al., *Uninsurable Nation*.
- 2 Upadhyay et al., *Future Proofing Residential Development in Western Sydney*.
- 3 The Cooling the Commons research program is an interdisciplinary group of scholars including (in alphabetical order) Bhavya Chitranshi, Cameron Tonkinwise, Emma Power, Helen Armstrong, Katherine Gibson, Louise Crabtree-Hayes, and Sebastian Pfautsch.
- 4 Strengers and Maller, “Adapting to ‘Extreme’ Weather.”
- 5 See Berlant, *Cruel Optimism*; Berlant, “The Commons”; Berlant, *On the Inconvenience of Other People*.
- 6 Geronimus, “The Weathering Hypothesis”; Ruha Benjamin, *Viral Justice*.
- 7 McEwen and Lasley, “Allostatic Load.”
- 8 Ebi et al., “Hot Weather and Heat Extremes.”
- 9 Neimanis and Hamilton, “Weathering”; Sharpe, *In the Wake*.
- 10 Neimanis and Hamilton, “Weathering”; Sharpe, *In the Wake*, 85.
- 11 Rob Nixon, *Slow Violence and the Environmentalism of the Poor*.
- 12 Neimanis and Hamilton, “Weathering,” 81.
- 13 Fry, *Design Futuring*. See also: Gibson-Graham, Cameron and Healy, “Commoning as a Postcapitalist Politics 1,” 192; Miller and Gibson-Graham, “Thinking with Interdependence,” 313.
- 14 Manzini, “Scenarios of Sustainable Wellbeing,” 8.
- 15 Mellick Lopes et al., “Infrastructures of Care.”
- 16 Upadhyay et al., *Future Proofing*.
- 17 Gibson-Graham, “Diverse Economies.”
- 18 Crabtree, “Disintegrated Houses.”

- 19 Alexander, *A Pattern Language*.
- 20 Mellick Lopes et al., *Cooling Common Spaces in Densifying Urban Environments*, 17.
- 21 Borgmann, *Technology and the Character of Contemporary Life*.
- 22 Landcom, “New Community Lights up Macarthur,” press release.
- 23 Sofoulis et al., *Out and About in Penrith*, 55.
- 24 Horvath, “Machine Space.”
- 25 Whyte, “A New Use of the Self.”
- 26 Western Parkland City Authority, *Bradfield City Centre*.
- 27 Hajkovicz, “Industry Growth Opportunities.”
- 28 Mellick Lopes and Crabtree-Hayes, “A Conversation about the Weather.”
- 29 Fry, *Defuturing*; Fry, *Design Futuring*; See also: Gibson-Graham, Cameron, and Healy, “Commoning as a Postcapitalist Politics 1,” 192; Miller and Gibson-Graham, “Thinking with Interdependence,” 313.

Bibliography

- Alexander, Christopher. *A Pattern Language: Towns, Buildings, Construction*. Oxford: Oxford University Press, 2018.
- Benjamin, Ruha. *Viral Justice: How We Grow the World We Want*. Princeton: Princeton University Press, 2022.
- Berlant, Lauren. *Cruel Optimism*. Durham, NC: Duke University Press, 2011.
- Berlant, Lauren. “The Commons: Infrastructures for Troubling Times.” *Environment and Planning D: Society and Space* 34, no. 3 (2016): 393–419.
- Berlant, Lauren. *On the Inconvenience of Other People*. Durham, NC: Duke University Press, 2022.
- Borgmann, Albert. *Technology and the Character of Contemporary Life*. Chicago: Chicago University Press, 1984.
- Crabtree, Louise. “Disintegrated Houses: Exploring Ecofeminist Housing and Urban Design Options.” *Antipode* 38, no. 4 (2006): 711–34.
- Ebi, Kristie L., Anthony Capon, Peter Berry, Carolyn Broderick, Richard de Dear, George Havenith, Yasushi Honda, et al. “Hot Weather and Heat Extremes: Health Risks.” *The Lancet* 398, no. 10301 (2021): 698–708.
- Farid Uddin, Khandakar, Awais Piracha, and Peter Phibbs. “A Tale of Two Cities: Contemporary Urban Planning Policy and Practice in Greater Sydney, NSW, Australia.” *Cities* 123 (2022): 103583.
- Fry, Tony. *Design Futuring*. Sydney: University of New South Wales Press, 2009.
- Fry, Tony. *Defuturing: A New Design Philosophy*. London: Bloomsbury, 2020.
- Geronimus, Arline T. “The Weathering Hypothesis and the Health of African-American Women and Infants.” *Ethnicity & Disease* (1992): 207–22.
- Gibson-Graham, J.K. “Diverse Economies: Performative Practices for ‘Other Worlds.’” *Progress in Human Geography* 32, no. 5 (2008): 613–32.
- Gibson-Graham, J.K., Jenny Cameron, and Stephen Healy. “Commoning as a Postcapitalist Politics 1.” In *Releasing the Commons: Rethinking the Futures of the Commons*, edited by Ash Amin and Philip Howell, 192–212. London: Routledge, 2016.
- Greater Sydney Commission. *Greater Sydney Region Plan: A Metropolis of Three Cities: Connecting People*. Sydney: NSW Government, 2018. Online: <https://greatercities.au/strategic-planning-region-plans/metropolis-three-cities>

- Hajkowicz, Stefan, Andrew Reeson, David Evans, Alexandra Bratanova, and Lucy Cameron. *Industry Growth Opportunities: A Technical Report to support the Western Parkland City Economic Development Strategy*. Research report for the New South Wales Government by CSIRO Data61 Insights, Australia, 2021.
- Horvath, Ronald J. "Machine Space." *Geographical Review* 64, no. 2 (1974): 167–88.
- Hutley, Nicki, Annika Dean, Nathan Hart, and Jordie Daley. *Uninsurable Nation: Australia's Most Climate-vulnerable Places*. Sydney: Climate Council of Australia, 2022.
- Khandakar, Farid Uddin, Awais Piracha, and Peter Phibbs. "A Tale of Two Cities: Contemporary Urban Planning Policy and Practice in Greater Sydney, NSW, Australia." *Cities* 123 (2022): 103583.
- Landcom. "New Community Lights up Macarthur." Press release, 8 October 2014. Online: <https://www.landcom.com.au/news-and-insights/news/new-community-lights-up-macarthur/>
- Manzini, Ezio. "Scenarios of Sustainable Wellbeing." In *Design Philosophy Papers Collection One*, edited by Anne-Marie Willis. Ravensbourne: Team DES, 2004.
- McEwen, Bruce, and Elizabeth Norton Lasley. "Allostatic Load: When Protection gives way to Damage." *Advances in Mind-body Medicine* 19, no. 1 (2003): 28–33.
- Mellick Lopes, Abby, Vanicka Arora, Stephen Healy, Emma Power, Helen Armstrong, Louise Crabtree, Katherine Gibson, and Cameron Tonkinwise. *Cooling Common Spaces in Densifying Urban Environments: A Review of Best Practice and Guide for Western Sydney Renewal*. Sydney: Landcom, 2020.
- Mellick Lopes, Abby, and Louise Crabtree-Hayes. "A Conversation about the Weather." In *Feminist, Queer, Anticolonial Propositions for Hacking the Anthropocene*, edited by Jennifer Mae Hamilton, Susan Reid, Pia van Gelder, and Astrida Neimanis, 177–187. London: Open Humanities Press, 2021.
- Mellick Lopes, Abby, Stephen Healy, Emma Power, Louise Crabtree, and Katherine Gibson. "Infrastructures of Care: Opening Up 'Home' as Commons in a Hot City." *Human Ecology Review* 24, no. 2 (2018): 41–59.
- Miller, Ethan, and J.K. Gibson-Graham. "Thinking with Interdependence: From Economy/environment to Ecological Livelihoods." In *Thinking in the World: A Reader*, edited by Jill Bennett and Mary Zouranzi, 313–39. London: Bloomsbury, 2019.
- Neimanis, Astrida, and Jennifer Mae Hamilton. "Weathering." *Feminist Review* 118 (2018): 80–84.
- Nixon, Rob. *Slow Violence and the Environmentalism of the Poor*. Cambridge, MA: Harvard University Press, 2011.
- Sharpe, Christina. *In the Wake: On Blackness and Being*. Durham, NC: Duke University Press, 2016.
- Sofoulis, Zoë, Helen Armstrong, Michael Bounds, Abby Mellick Lopes, and Tara Andrews. *Out and About in Penrith; Universal Design and Cultural Context: Accessibility, Diversity and Recreational Space in Penrith*. Sydney: Centre for Cultural Research, University of Western Sydney with Penrith City Council, 2008.
- Strengers, Yolande, and Cecily Maller. "Adapting to 'Extreme' Weather: Mobile Practice Memories of Keeping Warm and Cool as a Climate Change Adaptation Strategy." *Environment and Planning A* 49, no. 6 (2017): 1432–50.
- Uddin, Farid Khandakar, Awais Piracha, and Peter Phibbs. "A Tale of Two Cities: Contemporary Urban Planning Policy and Practice in Greater Sydney." *Cities* 123 (2022): 103583.

Upadhyay, Anir, Nick Asha, Katie Fallowfield, Patricia Rocha, Judith Bruinsma, and Kelly Gee. *Future Proofing Residential Development in Western Sydney*. Sydney: Western Sydney Regional Organisation of Councils, 2022.

Western Parkland City Authority. *Bradfield City Centre*. Sydney: NSW Government, n.d. <https://www.wpca.sydney/our-region/bradfield-city-centre>

Whyte, Jessica. “A New Use of the Self”: Giorgio Agamben on the Coming Community.” *Theory and Event* 13, no. 1 (2010). DOI: 10.1353/tae.0.0115