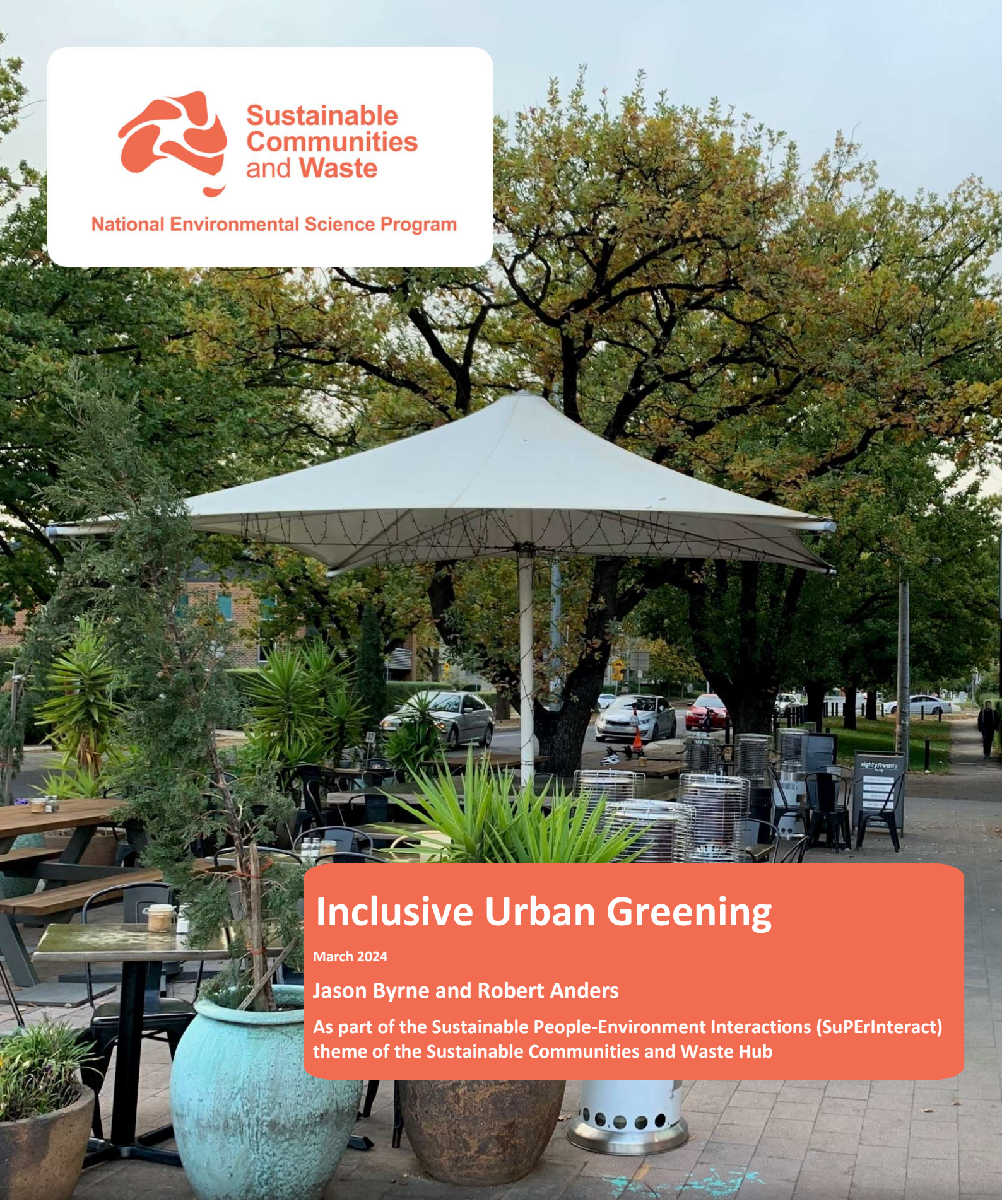

Sustainable Communities and Waste

National Environmental Science Program

# Inclusive Urban Greening

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**As part of the Sustainable People-Environment Interactions (SuPErInteract) theme of the Sustainable Communities and Waste Hub**

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## Executive summary

Around Australia and across the world, cities and towns are preparing and implementing urban greening strategies. These strategies seek to increase urban tree cover to mitigate climate change impacts (e.g., stormwater runoff and extreme heat) and improve residents' health and wellbeing. Australia's Strategy for Nature recognises the need to improve people's access to, and interaction with, diverse forms of nature. This is important if we are to build a broad base of support for environmental restoration actions.

Research shows that while parks, street trees, and other types of green infrastructure can increase biodiversity in our cities, they are not uniformly distributed. Moreover, tree canopy cover is decreasing across Australia's cities, associated with densification. People experiencing marginality and disadvantage typically have fewer parks and street trees in their neighbourhoods. They often face barriers to participating in urban greening activities and are rarely included in the development of urban greening strategies. This situation presents an environmental inequity.

This short report examines the causes of social exclusion in urban greening and identifies steps that can be taken to make urban greening more inclusive. The causes of exclusion include embedded patterns of elitism, racism, sexism, homophobia, and other forms of discrimination. Potential solutions include adopting principles that enable diverse groups of people to participate actively and meaningfully in the spectrum of greening processes and activities.

Social polarisation in Australia is worsening and it harms the social fabric of our communities, is associated with ill health, and presents a substantial impediment to prosperity, wellbeing, and environmental quality. Taking steps now to promote inclusive urban greening can strengthen civil society, increase the resilience of communities to extreme events associated with climate change (e.g., heatwaves), and can also bolster biological diversity by increasing urban tree canopy cover and greenspace provision across built environments.

Effective steps to improve inclusion in greening include diversifying community engagement to allow more opportunities for participation from different groups of people, providing supporting resources that enable ongoing participation, strategically targeting poorly represented groups to bolster participation, building longer term partnerships with groups experiencing exclusion, marginality and disadvantage and adopting principles for inclusive greening to guide effective practice, among other actions.

## Acknowledgements

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All errors and/or omissions remain those of the authors.

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All photographs taken by Jason Byrne with exception of Figure 2 by Robert Anders. Sites as follows: Figure 2 – disturbance of an Aboriginal site in Hobart for greening works. Figure 3 – a community workshop space in Launceston, Tasmania. Figure 4 – Augustus Hawkins Nature Park, Los Angeles. Figure 5 – Hyde Park, London, UK. Figure 6 – A 24 Carrot school garden in Hobart, Tasmania.

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Cover photo: Street trees and café owner greening in Canberra, Australia (J. Byrne)

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## Recommendations for policy and decision-makers

Recognise First Nations people as rights holders. Understand how histories of genocide, trauma, and dispossession require building trust, open communication, taking time to get to know elders, showing respect, providing diverse opportunities to participate, and respecting people's right to say no.

Provide venues that have facilities for all-abilities, so that people who have a disability can attend forums and participate without barriers.

Ensure processes of engagement are age-friendly, so that venues and greening activities enable people with mobility challenges to participate.

Design activities and engagement processes allowing for neurodiverse people to participate, such as quieter venues and sessions that may have fewer people present.

Understand that the queer community can face discrimination in greenspaces and public forums and design activities and processes in partnership with diverse groups of people.

Create opportunities for young people to participate in engagement sessions and greening activities that are not patronising, and which enable genuine involvement.

Outreach to migrant communities to ensure that engagement activities are sensitive to cultural differences.

Offer to remunerate low-income, First Nations, and other groups for their time, recognising that not everyone can afford to attend workshops.

Provide multiple options for participation and engagement including surveys, site visits, workshops, interviews, hotlines, and drop-in sessions.

Translate engagement material for non-English speakers and ensure audio versions are available for vision-impaired participants.

Ensure venues are accessible via public transport and where necessary, arrange transport options for those with special needs.

Initiate opportunities for engagement activities to occur outside, such as planting days, visits to Country, and go-along neighbourhood walks.

Recognise attachments to place and the cultural values of different plants when developing species lists and plant palettes and where possible and appropriate, use culturally inclusive plants and trees (e.g., food plants) across diverse neighbourhoods.

Consider ways to develop livelihood opportunities for on-going greening work, rather than expecting communities to volunteer time and labour.

## Introduction

Cities around the world are adopting urban greening strategies to improve liveability and help adapt to climate change. Urban greening is a process whereby existing vegetation in cities is protected and enhanced and new vegetation is planted to increase vegetation cover – on both public and private land (Byrne et al., 2016). This can occur as part of urban redevelopment initiatives or as a part of a climate change adaptation response. Here we are concerned with the latter. Urban greening has been identified as a nature-based solution to a broad range of urban issues, including stormwater runoff, urban heat islands, poor physical and mental health, and habitat fragmentation. But urban greening benefits are not uniformly distributed across urban areas. And residents have diverse attitudes, perceptions, and beliefs about what constitutes appropriate greening, such as preferences for different types of plants based on appearance, food provision, and nature experiences (Kaplan et al., 2023).

Research shows that greenspace and tree cover distribution in cities is spatially and socially uneven (Schwartz et al., 2015). People who experience marginality and disadvantage usually live in places with fewer parks and trees compared to wealthier households, who typically have better access to nearby nature and reside in areas with more tree canopy cover (Wolch et al., 2014). And because some trees can represent "symbols or expressions of particular cultures, preferences, histories and planning approaches", even the act of tree planting is not value neutral and may lead to some people feeling excluded or that they do not belong (Shackleton and Gwelda, 2021, p. 2; also see Braverman, 2008). It can result in displacement of residents (Reed-Thryselius, 2023). Especially important in Australia is how First Nations people have experienced dispossession (Mata et al., 2020).

The United Nations Sustainable Development Goals on good health and wellbeing (goal 3), reduced inequalities (goal 10), sustainable cities and communities (goal 11), and climate action (goal 13) provide a framework to remedy these and other urban problems.

*Figure 1: United Nations Sustainable Development Goals*

**Australia's Strategy for Nature** (2019-2030) is aligned with the UN Sustainable Development Goals, with key initiatives mapped across these goals. The strategy seeks to protect ecosystems, increase biodiversity, and promote human health, wellbeing, and quality of life. Urban greening is a vehicle to help achieve these objectives. The core approach of the strategy is to promote steps that help to connect all Australians with nature, sharing and building knowledge about nature's benefits.

A key goal is building collaborative decision-making and partnerships between diverse actors to empower all Australians to be active stewards of nature. This will require increasing diversity in participation and respecting and foregrounding First Nations' traditional ecological knowledge. Cities are recognised as important places to connect with nature and enhance biodiversity. Objective 9 of Australia's Strategy for Nature is to enrich cities and towns with nature, and key indicators for success are to increase the number and extent of greening projects, create ecologically diverse greenspaces, and promote nature-based initiatives. At the heart of such initiatives should be explicit frameworks to foster social inclusion and ensure diverse groups of people can participate (Barona et al., 2023).

This short report considers how to build inclusive urban greening approaches in Australia and highlights some case examples that can inform more inclusive greening in Australian cities.

## Aboriginal people's perspectives on urban greening

Australia is an Aboriginal cultural landscape, cultivated by First Nations peoples for millennia (Mata et al., 2020). Their tangible occupation is indelibly etched into this landscape through heritage sites such as stone artefact scatters, living areas (middens), sacred birthing trees, cave sites, rock engravings, songs, and stories, that provide a direct link and connection to the past. The sites now occupied by towns and cities are unceded Aboriginal lands and waters (Porter et al., 2020). Before European invasion and colonisation, Aboriginal people cared for Country as kin (Jackson et al., 2017). And Aboriginal people continue to maintain deep attachments to plants, animals, and landscapes, with ongoing connections of care and reciprocity as custodians and ecological stewards (Bush et al., 2023).

When working with Aboriginal people on matters related to urban greening, it is vitally important to recognise First Nations people are rights holders, not stakeholders. Moreover, the wealth of traditional ecological knowledge of First Nations people can deeply inform and shape urban greening strategies and actions. Urban greening can also provide opportunities for First Nations people to reconnect with Country and re-establish meaningful ties, including livelihoods (Bush et al., 2023). Associated with this are important considerations about managing Aboriginal heritage values of sites.

> *"Academics, practitioners and policy-makers involved in setting objectives…have failed to meaningfully engage with …Indigenous individuals, communities and organizations, while…neglecting to integrate local and Indigenous voices, perspectives, interests and concerns into their decision-making protocols". (Mata et al., 2020)*

*Impacts of urban greening on Aboriginal sites*

Early impacts of colonisation on Aboriginal heritage sites began with extensive mining of shell material from coastal middens to produce lime and mortar in the construction of colonial brick and sandstone buildings. More recently, weak Aboriginal heritage legislation has resulted in the destruction of Aboriginal heritage sites as towns and urban areas have expanded. On the Gold Coast, a burial ground was disturbed as part of a canal estate development and Aboriginal remains of the Kombumerri people were excavated and then reinterred in land that is now a park.

Stronger legislation and increased awareness have begun to influence some planning decisions, but there is much more work remaining. For example, in South Australia when a burial ground was discovered on a master-planned community site, intended to house 33,000 people, the Kaurna people, were outraged that care was not taken to prevent excavation and that development approval had been granted for a site that was rich in Aboriginal cultural artefacts (Donnellan, 2023). It is still being debated whether the remains of 31 Aboriginal people, predating colonisation, should be reinterred where they were found, or moved to a park.

Unless undertaken with care and consultation, urban greening activities could breach Aboriginal heritage legislation. For example, site works associated with the planting or removal of vegetation could inadvertently harm or destroy Aboriginal heritage sites. In Hobart, Tasmania a Planning Minster approved the destruction of an 8,000-year-old Aboriginal heritage site as part of development of an aged care facility in the Wirksworth Park, Bellerive (Figure 2). Once harmed, such sites cannot be restored, and this can be a source of ongoing trauma for First Nations people. So too can the destruction of sacred trees, such as birthing trees (Malins et al., 2020).

*Figure 2: Site works and tree planting can harm or destroy Aboriginal heritage*

*Monuments, statues, and remembering*

A critical consideration for urban greening is how Aboriginal people and places are remembered and celebrated. This includes recognising Aboriginal place names (such as rivers or mountains, which may have more than one name and in different Aboriginal languages), acknowledging Aboriginal ecological knowledge and practices, working with

Aboriginal people on drafting strategies and plans, on shaping outreach and engagement, and in ongoing plan implementation, monitoring, and evaluation. Respecting cultural heritage requires acknowledging painful histories of dispossession and genocide, reinstating First Nations place names, and restoring pre-European ecologies. It also requires better understanding Aboriginal preferences for parks, greenspaces, gardens, and yards and creating opportunities for supporting and maintaining cultural practices such as cultivating bush tucker and medicinal plants (O'Rourke and Nash, 2019). Improving food security, for example, is one way that urban greening could benefit First Nations people (Sherriff et al., 2022).

Few parks and greenspaces across Australia have Aboriginal statues, monuments, art, or other forms of recognising and celebrating First Nations people, although this is beginning to change. The Black Lives Matter movement has drawn attention to how monuments and memorialising in Australia celebrate colonial figures and ignore Aboriginal people. The recent decision of the City of Hobart to remove the contentious figure of a colonial surgeon implicated in genocide and the mutilation of Tasmania's last 'bush born' Aboriginal man William Lanne, is just one example of change that is underway (Petrow, 1997; Scholes and Lehman, n.d.). Removing and/or relocating such monuments to histories of "invasion, colonisation, frontier warfare, subjugation and dispossession" (Gregory, 2021, p. 580) is an important step in inclusive greening. So too are initiatives to instate murals, statues and monuments that celebrate Aboriginal cultural heritage in parks and greenspaces, such as those in Adelaide (Malone, 2007).

Contracting services to First Nations businesses can also build more inclusive greening. For example, using Aboriginal businesses for catering workshops, the design, planning, monitoring and management of greenspaces, development of greening strategies, provision of plants for revegetation, undertaking cultural or ecological surveys, graphic design, art and murals and the like can create and maintain livelihoods (Taylor at al., 2022; Lopes et al., 2023).

Throughout this report are specific examples and discussions of working with First Nations people on urban greening.

## The task of greening our cities

**How to increase green cover** in those parts of cities where vegetation is sparse and how to ensure that communities experiencing disadvantage and marginality are not displaced by urban greening efforts have become issues of global concern. Reasons for entrenched disparities in access to green infrastructure include market forces, historical patterns of inequality and discrimination, legacies of colonisation, and government policies that can unintentionally privilege elites at the expense of people who are comparatively disadvantaged (Angelo, 2019). Researchers have found that urban greening can have unintended negative consequences including forcing up property prices and rents, damage to infrastructure and assets (e.g., pavement uplift, ruptured pipes, limbs dropped on houses and cars), increasing insurance and maintenance costs, and creating health burdens (e.g., asthma from pollen) (Roy et al., 2012; Rigolon et al., 2020; Roman et al., 2021).

*Inclusive urban greening requires new approaches that incorporate diverse knowledge and experience, include a greater variety of voices, and which are open, transparent, and participatory (Wolch et al., 2014).*

**Inclusive approaches to urban greening are urgently needed**. They must actively foster participation among diverse groups of people who may have been underrepresented in the past. A key consideration is how to design public engagement and participation processes that avoid special interest capture, rent seeking, and bureaucratisation (Rydin and Pennington, 2000). What matters is not so much having more participation rather *more inclusive* participation is needed. Inclusive greening must move beyond consultation in policy and strategy formulation, to encompass other aspects of greening such as tree and plant selection, tree growing and planting, vegetation maintenance and monitoring, opportunities for learning more about trees, vegetation, and ecosystems in cities, as well as building community cohesion and connecting with cultural heritage.

An important dimension of inclusive greening is a commitment to redressing disparities that arise in societies from unequal access to resources and the limited power of some social groups to change unfair or unjust circumstances. An example is exposure to extreme heat. Inclusion thus entails a commitment to equity and is outcomes focused (correcting harms), rather than equality, which is means focused (i.e., equal treatment). Inclusive greening must necessarily be attentive to 'poverty, deprivation, and discrimination' (de Haas et al., 2021, p. 2).

*Social inclusion is a process that seeks to redress historical patterns of exclusion by enabling all members of society to earn a living, have access to resources, participate in civil society, and enjoy formal citizenship (De Haas et al., 2021).*

A deep commitment to inclusive greening will require addressing: (i) dispossession (by engaging with First Nations peoples are rights holders); (ii) entrenched social inequity (such as providing affordable housing to counteract gentrification); (iii) social planning for community cohesion (e.g., actively including people who were previously excluded); and (iv) developing stable and enduring livelihoods (Mata et al., 2020; Rigolon et al., 2020; de Haas et al., 2021).

## Reasons for urban greening

**Urban greening is a process**. The idea of urban greening is to increase the proportion of parks and green spaces in urban areas as well as tree canopy cover. Often these green assets are termed green infrastructure. The term green infrastructure means an interconnected network of green walls, green roofs, parks, gardens, street trees and other intentionally created features that are designed to improve access to nature, increase biodiversity, augment habitat, and provide nature-based solutions to urban problems (Matthews et al., 2015).

There are many reasons local governments, community groups, developers and residents undertake urban greening. Some of these relate to improving urban amenity. Others are about improving access to fresh food and increasing residents' health and wellbeing through gardening. Urban greening is also being used as a nature-based solution to reduce climate change impacts, such as lowering temperatures and reducing stormwater runoff (Pataki et al., 2021; Bush et al., 2023). Giving children better access to nature is another reason for urban greening, as is remedying historical injustices associated with land development, especially how some development has entrenched racist and elitist ideologies (Pulido et al., 1996).

## Historical systems of oppression have created inequitable cities

Research by Byrne (2012; 2020) and Finney (2014) shows how **green spaces and green infrastructure can be exclusionary**. Histories of racism, sexism, homophobia and other forms of discrimination and oppression configure present green spaces and green infrastructure, leaving enduring legacies of social exclusion (Haase et al., 2017). In the United States, Jim Crow systems of racial oppression created separate and supposedly equal park systems; in reality parks, beaches, and other recreation areas designated for people of colour were smaller, had fewer facilities, and had lower levels of investment and maintenance (Jackson, 2019). Processes of mortgage redlining and restrictive covenants on housing created 'white only' neighbourhoods. These systems of oppression were only abolished in 1948 for racially restrictive housing covenants and in the 1960s for segregated spaces (Grove et al., 2018).

South Africa's apartheid and Australia's White Australia policies enacted similar processes of discrimination, leaving comparable patterns of marginality, disadvantage, privilege, and exclusion across cities in these nations. Shackleton and colleagues have shown high levels of disparity in access to parks and greenspaces in South Africa and inequities in tree canopy cover (Shackleton and Njwaxu, 2021; Shackleton and Gwelda, 2021; McConnachie and Shackleton, 2010). Settler-colonial nations such as Australia have histories of forcibly relocating Aboriginal peoples off their lands and into reserves and missions, imposing curfews, policing movement, and designating white only districts on town boundaries (Byrne and Wolch, 2009; Byrne, 2012). Scholars have shown how Aboriginal people in Australia were evicted from park spaces, relegated to lower-quality housing on the outskirts of cities, and constantly surveilled in urban spaces (Byrne and Houston, 2005; Jackson et al., 2018). Immigrant groups have also been excluded from parks and greenspaces in the past (Byrne and Goodall, 2013; Mushangwe et al., 2021).

*There are consistent patterns across Australia's cities where some places have fewer parks and greenspace, fewer street trees, reduced access to fresh food and healthcare, and reduced access to public transportation, among other disparities.*

We can also see past examples of discrimination in employment. For example, white males typically designed cities up until the 1960s and 1970s. Social movements have since opened employment to growing numbers of women planners, engineers, and other built

environment professions. Yet people of colour have remained underrepresented in these and other professions until more recently. Such systems of social exclusion have created place-based disparities that exist into the present time, which are reflected in social polarisation within built environments.

Communities want and need these historical systems of oppression and discrimination to be acknowledged. They want and need better access to environmental benefits. And they want equitable participation in the design, management, and monitoring of green infrastructure.

## Inclusive urban greening

Social inclusion is a complex concept relating to the ability of people to access resources and participate in society. The United Nations recognises that social exclusion occurs due to unequal power relationships and can manifest at different scales, from the body to the nation. Importantly, lack of, or denial of, access to resources and the inability to participate in the workforce, society and decision-making can produce interconnected social disparities and deep injustices.

> *Social inclusion refers to the ability to earn a living, the ability to participate in civil society, the ability to participate in diverse social settings, and may extend to formal citizenship rights (Rawal, 2008).*

Disparities arising from social exclusion include unemployment, low educational attainment, poor physical and mental health, substandard or non-existent housing and/or insecure tenure, and reduced mobility (United Nations, 2016). Many of these inequities are place-based, and they are typically (re)produced through entrenched and systemic discrimination such as sexism, racism, elitism, homophobia, and ableism. To begin to remedy these drivers of social and environmental inequity and to cultivate individual wellbeing and build resilient, prosperous, and sustainable cities requires attention to residents' diverse needs and capabilities.

> *Inclusive urban greening refers to the equitable distribution of the benefits associated with green infrastructure across places and populations and structures and processes of decision-making that enable public participation (Kim and Yang, 2023).*

Inclusive greening processes and actions are attentive to differences among people and how these differences shape needs and aspirations. Inclusive greening must also be attuned to ensuring equitable outcomes, so that people experiencing marginality and disadvantage are not displaced from their homes, neighbourhoods, and livelihoods because of greening activities.

## Diversity and greening

People differ based on gender, age, ethno-racial background, (dis)ability, religious beliefs, indigeneity, and socio-economic status, sexual orientation, political affiliation, marital status, nationality, migrant status, educational attainment, parental status, occupation, languages spoken, and physical and mental abilities, among other axes of difference. If urban greening strategies and activities are not responsive to diversity and are blind to patterns and processes of social exclusion, they can create and entrench pernicious social and environmental inequalities. It is therefore important to find effective ways to build social inclusion into urban greening activities and to foster inclusive community engagement activities and processes, as well as evaluating the efficacy of steps to remedy inequity.

*Key to success is ensuring that diverse perspectives are identified and legitimately considered in policy and planning, rather than dismissed in efforts to build consensus. Many actions to build inclusivity take time and require appropriate resourcing. They depend on empathy and trust.*

**Efforts to foster inclusion** should include improving the ability of people to understand engagement activities (e.g., addressing differing levels of literacy), making sure people feel safe and respected in public meetings, forums and planting days (e.g., following cultural sensitivity protocols), giving underrepresented groups a voice (e.g., opportunities for children to participate), providing multiple opportunities to attend meetings (e.g., all abilities venues, accessible locations, different times of day and day of week for meetings), and for genuine involvement (e.g., co-design). Where appropriate, providing financial compensation for time (e.g., for Aboriginal people to attend meetings) and transport assistance (e.g., for people from remote locations) will improve inclusion outcomes.

*Inclusive greening requires actions, policies and approaches that can boost the participation of all people in greening initiatives, and which also seek to avoid the negative impacts that can arise from greening, such as social exclusion, gentrification, and loss of trust in government (Fors et al., 2021).*

Inclusive greening must be attuned to how power and privilege can promote some views and exclude others; elevate some actions at the expense of others (Angelo, 2019; Miller, 2016); and how some voices can dominate, silencing others (Rydin and Pennington, 2000). If urban greening is to be more inclusive, steps must be taken to bolster diversity in workshops and community engagement activities, as well as in co-design of greening strategies, in vegetation planting and maintenance activities, and in ongoing monitoring of greening efforts – to identify successful examples as well as unintended consequences (Barona et al., 2022). To date, few urban greening strategies have explicitly engaged with diversity (Byrne, 2023) and fewer still have achieved the intent of social inclusion (Bush and Doyon, 2020). Scholarship on diversity in urban greening research is rare (Barona et al, 2022; Barona et al.,2023).

## Cultivating inclusivity in public engagement

Exclusion can manifest in many ways, ranging from unequal access to resources and decision-making to barriers that prevent people from fully participating in society. Understanding the mechanisms that can lead to social exclusion is important. These mechanisms vary from lack of awareness and knowledge to different cultural norms, from entrenched inequalities (e.g., lack of access to education or public transport), to absence of trust in government (Fors et al., 2021).

**Barriers to participation can be user-based or governance-based**. User-based barriers to greenspace visitation and participation in urban greening activities include lack of time, lack of trust, scepticism about making a difference, perceptions of tokenism, lack of interest, and fear of crime. Other user-based forms of exclusion may relate to specific activities of some users. Draus et al (2020) have observed that active exclusion of people from greenspaces may be based on livelihood (sex workers), substance use (drug users), and criminal activity. But discrimination and prejudice can also act as barriers where some ethno-racial groups, young people, LGBTQIA+ people, homeless and street artists are 'viewed suspiciously or policed more aggressively (Draus et al., 2020, p. 322). Governance-based barriers include missing or substandard facilities, poor maintenance, lack of funding, lack of commitment, short-term thinking, individual champions leaving an organisation, bureaucratic and administrative impediments (e.g., top-down managerialism), lack of staff knowledge and training, poor choice of participation tools, unclear roles and responsibilities, and unwillingness to share power (Fors et al., 2021). Resolving these issues will require diverse approaches such as different types of information provision, education and awareness-building, training, financial support, skill-development, and even new policy and legislation.

**Adopting a wide range of community engagement approaches can help to promote inclusive urban greening**. These include value mapping, collaborative planning, co-design, and co-management. Specific tools used by local government for community outreach include letterbox drops, public events, surveys, interviews, field days, public meetings, school-based activities, and workshops. Some councils such as Midcoast Council in New South Wales have developed community engagement strategies that feature an explicit mapping of different types of community engagement onto the International Association for Public Participation's spectrum (IAP2, 2019).

The Midcoast Council community engagement strategy identifies diverse stakeholders with different needs, including Aboriginal people, older people, people with a disability and their carers, working families, culturally and linguistically diverse communities, and children and young people. Their commitment to inclusive engagement highlights accessible venues, multiple channels of communication, simple language, and targeted communication.

*There are several different dimensions of social inclusion that matter when considering how best to undertake urban greening. These are accessibility, ability to participate, overcoming entrenched barriers, and fostering welcoming processes to redress historical patterns of exclusion.*

The many options identified in the Midcoast Council community engagement strategy include community surveys, newsletter, advisory groups, social media, information displays,

flyers, radio and television segments, pop-up and drop-in sessions, facilitated workshops, site visits, webinars, and chat rooms, among others. But other potential strategies are less visible in local government approaches and deserve greater attention. They include citizen science initiatives, neighbourhood walks, visiting Country, photography, role playing, and citizen juries, among others (Walsh and Mitchell, 2002).

## Current state of inclusive greening in Australia

A recent review of urban greening strategies and tree planting guidelines in regional Australian settlements found that few of these strategies sought to actively engage with Aboriginal people and few explicitly addressed diversity (Byrne, 2023). The City of Bunbury in Western Australia is a notable exception. Porter et al (2020) have identified how uncommon it is for urban greening activities and strategies to recognise they are occurring on unceded Aboriginal lands.

In metropolitan areas there are examples of community engagement processes that have sought to foster inclusiveness. However, there are fewer examples where urban greening strategies have been translated into languages other than English, and there are no strategies that have been designed to be accessible for people with impaired vision. While many local governments are making inroads in acknowledging diversity, and accept the need for social inclusion, it can be harder to move from principles to practice.

### Barriers to social inclusion

One of the challenges with ensuring that urban greening strategies are inclusive relates to the timelines and financial resources that are allocated to preparing greening strategies. Oftentimes these strategies are led by local government and are required to be prepared within strict timeframes (e.g., a few months) to meet deadlines rather than allowing the necessary time for deeper engagement to occur (up to a year or more).

*'Have your say' processes may only reach people who are personally impacted by a local issue or who have more time available to answer questions, to participate online (e.g., internet access), to attend a community forum, or provide a written submission.*

While local government has established modes of outreach and engagement, such as surveys of ratepayers, websites, community forums and 'have your say' processes, these can still miss traditionally underrepresented groups and so called 'hard to reach' sections of the broader community.

Standard community engagement processes can act as barriers to people who are neurodiverse, who are working poor, who are unhomed, who have a long-term disability, who do not speak English or who have low levels of literacy. They are typically inaccessible to children. Such formal processes can exclude people who may not have reliable internet access or who cannot afford it. They may also be difficult for recent immigrants who may not have high-level English language skills and/or who may be unfamiliar with government processes in Australia. For sole parents, there may be few opportunities to participate due to work and home commitments. And for people without access to a private automobile,

and who live in places with low levels of public transport, getting to an engagement forum can be difficult. Neurodiverse people may find the formal settings and processes of community engagement to be overwhelming, isolating and/or threatening (Toroni, 2021). And stigma attached to neurodivergent behaviour and coping strategies can lead to exclusion. People with a disability or long-term medical condition may not even be able to access some venues.


*Figure 3: Traditional workshop formats can present a barrier to participation*

## Enablers of social inclusion

**Research on enablers of social inclusion in urban greening is comparatively scarce**, lagging studies on barriers. There are examples from Europe and North America that are instructive. These studies have found that enablers include high level legislation requiring social inclusion be included as a component of greening strategies and projects. A variety of tools can facilitate this, including value mapping, audit tools, monitoring and evaluation tools, co-design, participatory planning, community engagement, visioning exercises, co-management (e.g., friends groups), community gardening, and volunteering (Fors et al., 2021). Specific participation tools include hosting events (e.g., block parties), fieldtrips/excursions, public information meetings, fliers/letterbox drops, surveys and interviews, focus groups and workshops, training, participatory budgeting, fundraising, and maintenance activities (Fors et al., 2021).

In Australia research has found that enablers include a high-level commitment to engaging communities (e.g., a mayor's leadership), capacity-building activities within an organisation, the allocation of sufficient time and resources, specialised reference or advisory groups (e.g., Indigenous reference group), incorporating plural values in policies, plans, and strategies (Taylor et al., 2022).

## Examples of emerging good practice in Australia

The City of Melbourne is a recognised national leader in its attempts to make urban greening more inclusive. Council's outreach strategies have included workshops and mobile information sessions. Similarly, the Greening Adelaide initiative has entailed a longer engagement process with multiple opportunities for participation. Arguably, neither of these flagship initiatives has gone far enough in enabling socially inclusive urban greening. Bush and Doyon (2020) point to the need to move beyond targeting specific groups for participation in community and stakeholder engagement to creating safe spaces for participation. Similarly, Coffey et al (2020) identify the need for governance processes to build social inclusion through transparency, accountability, capacity-building, leadership, meaningful engagement, and flexibility in participation. They point to the damage that can occur to trust if participation is tokenistic.

*Box 1 The City of Launceston Urban Greening Strategy*

In 2022 the City of Launceston began a series of stakeholder workshops to broader the participation of different groups of people in the development of the urban greening strategy (Byrne, 2023). The stakeholders were identified from Council's regular community engagement processes, from a review of the literature, and from stakeholder mapping. Efforts were made to ensure venues were accessible. The time of day was selected in consultation with stakeholder peak bodies and locations were selected that were familiar and comfortable for participants.

For example, residents living in lower SES suburbs were recruited through the neighbourhood centre, which provided social services, and were held at that venue – a familiar setting. The workshop with migrant groups was held at a neighbourhood hall in a suburb with high levels of cultural diversity and was catered with local restaurants supplying diverse foods. The workshop with business groups was held at the Chamber of Commerce. A workshop with councillors and staff was held at the Council Hall. An ethics approval was obtained from the University of Tasmania, ensuring confidentiality of results, and an informed consent helped to build trust.

Potential participants were recruited via email, Council's newsletter, telephone calls to peak bodies, posts to social media, a 'have your say' ratepayer survey, and through word of mouth. A diverse group of peak bodies were approached, including the Migrant Resource Centre, a LGBTQIA+ representative group, environmental groups, and seniors' groups.

The problems facing the city were communicated honestly and openly at the workshops using non-technical, and plain English. Maps, diagrams, and images were used to show the current land surface temperatures, tree cover, and spatial distribution of socio-economic marginality and disadvantage. Participants then reflected on the technical background material and engaged with a series of questions designed to elicit tree preferences, tree benefits, tree problems and their ideas for improving the city as a foundation for the greening strategy.

Problems with representation related to a short timeframe for stakeholder engagement, which meant that it was not possible to hold workshops with Aboriginal groups. For this to occur, a more complex ethics application was needed. A representative from Aboriginal organisations reported they were being over-consulted, despite recognising the importance of their participation. There was no response to invitations to the LGBTQIA+ peak group and disability peak bodies and Council struggled to get youth representatives to participate.

Improvements would include allowing a longer period for community engagement, diversifying engagement beyond workshops to include interviews and 'hands-on' activities, and a sustained period of outreach in the lead up to the engagement activities. Having a broader set of stakeholders represented would also be beneficial – such as religious groups, sports clubs, women's and men's support groups, renter's advocacy groups and the city mission, among others. And having pop-up sessions at shopping centres, parks, and other public spaces could ensure a greater range of voices is heard. Providing supporting resources such as child-care, bus passes and translators could also bolster inclusion. Ultimately though, it must also be accepted that refusal to participate is part of a democratic process.

An emerging concern with inclusive greening relates to how **organisational cultures can stifle innovation, especially if they embed risk-averse governance** (Boulton et al, 2021). Similarly, a lack of leadership on matters such as diversity and equity can result in a business-as-usual approach that excludes full participation in greening activities. That may especially be the case where elected representatives of local government are worried about potential community backlash against initiates perceived to be unpopular, which in turn could endanger their re-election (Bush, 2020). This in turn can affect staff dispositions to risk-taking. And **managerialist approaches to government can produce a focus more on legislative compliance and box-ticking than genuine community engagement** (Lohrey et al, 2019). Research by Taylor et al (2022) found that state government tended to focus on top-down consultation whereas many local governments are making efforts to build partnerships and establish co-design processes. The City of Launceston's Urban Greening Strategy (see box 1) specifically sought to address some of these issues by building a wide base of community support through honest conversations with key stakeholders. The strategy intentionally targeted so-called hard to reach groups as part of its engagement process.

## International examples of inclusive greening

There are emerging examples in Europe, North America, and Oceania of inclusive greening, including in needs assessment, design, and implementation of strategies and plans (Fors et al., 2021). However, these approaches tend to be project specific, piecemeal, and short-term. Employing a mix of different participation types can improve inclusion outcomes. Three examples are instructive – school-based greening, park provision and a social enterprise.

International research has shown that schools can act as community hubs and can play an important role in building social inclusion (Dyment and Bell, 2008; Baró et al., 2021). While children's access to nature spaces has been declining for several decades (Soga and Gaston, 2016), school-based greening and school community gardens have been found to increase connection to nature. School based greening can enable children with diverse abilities to engage in active play, become more physically active and better manage complex emotions and behavioural issues, because green spaces on school grounds can promote feelings of safety and calm (Vanaken and Danckaerts, 2018). There are other benefits from greener school grounds, including improved cognitive function, better academic performance, improved creativity – due to cooling hot classrooms (Pfautsch et al., 2020). Studies of school-based greening have shown improved student ability to recover from stressful events and mental fatigue (Li and Sullivan, 2016). Researchers have reported that in some schools greening programs have mitigated academic underachievement in schools in disadvantaged neighbourhoods (Kuo et al., 2021).

**The OASIS** (Openness, Adaptation, Sensitisation, Innovation and Social ties**) schoolyard greening project in Paris**, France offers insights into steps that can be taken to make urban greening more inclusive. The project seeks to green 760 schools within Paris by 2050, to benefit students and the wider community. A key part of this initiative is creating cool refuges in an otherwise hot city, offering nearby residents some respite from extreme heat events. The project was inclusive because it involved students, teachers, and parents in co-design activities. Peer to peer learning was instrumental in overcoming perceptions that nature-based solutions were untidy or unsafe (Baró et al., 2022).

Park provision is another way of improving social inclusion in urban greening. The **Augustus Hawkins Nature Park in Los Angeles** is a former 3.4-hectare brownfield site in inner Los Angeles that was converted into a park. Initially, the local government believed that the low-income and predominantly Latinx community living nearby would want soccer fields (Byrne and Sipe, 2010). At the time of development, 30% of residents had incomes below the poverty level, and many were unemployed. Park designers (Randolph Hester and team), attempted to engage residents via door knocking, meetings at local schools, and letterbox drops but these were unsuccessful and raised residents' suspicion.

Changing approach, the park designers working with Latinx and African American students, and a local councillor, set up pop-up drop-in centres in a nearby market favoured by local shoppers. This engagement strategy was much more effective. The overwhelming majority of residents said that safety was their first concern, followed by a nature park, where children could interact with, and experience, species native to Southern California. Following a truly participatory approach to inclusive greening, the park designers used co-design methods, and more than 50 residents participated as workers during park construction. The finished park features a 'craftsman' style building with an on-site ranger and after school activities, including arts and crafts, growing native plants and food trees, a homework club and science education. It is cherished by residents (Sorvig, 2002).

In the **Netherlands, the KasKantine initiative** is a non-profit cooperative run by local volunteers from diverse backgrounds who are using a social enterprise to promote inclusive greening. Located in a lower socio-economic area, the site is comprised of shipping containers and a greenhouse and vegetable garden together with a restaurant, kitchen, and temporary gardening plots and garden boxes (De Haase et al., 2021). The cooperative undertook tree planting and now involves residents in learning about growing food. It also features start-up small businesses that create livelihoods. Key aspects that are inclusive are the diverse cultural backgrounds of those involved in the initiative, job creation, and building strong social networks.

*Figure 4: Augustus Hawkins Nature Park, South Los Angeles - Designed with community*

*Box 2 School-based urban greening - 24 carrot gardens Tasmania*

The 24 Carrot Carden program is an initiative of the non-profit Material Institute, based in lutruwita Tasmania. The program focuses on children and young people, aiming to promote health and wellbeing and to develop an appetite for lifelong learning. Targeting communities where experiences of marginality and disadvantage are common, the main activity is developing school gardens that enable children to grow, cook and eat their own food. The 24 Carrot Gardens promote nutrition in neighbourhoods where access to fresh food is more limited and build connections with nature. The Material Institute offers curated workshops that include science and sustainability, aiming to build social capital and foster community cohesion (Material Institute, 2024).

There are 24 schools participating in the program. Students collaborate in the design of the gardens and participate in ongoing garden maintenance. Gardening activities are linked to the school curriculum. Many of the schools hosting these gardens are predominantly located in neighbourhoods that lack safe and accessible play spaces. The gardens include raised wicking beds, orchards, shelters/outdoor classrooms, kitchens, art spaces, composting and vermiculture facilities, chicken coops and some even have pizza ovens.

## Principles for inclusive greening

Myers et al (2023) have formulated some key principles to ensure that urban greening processes and activities are inclusive and equitable. These are similar to those offered by Haase et al (2017) for sustainable and inclusive greenspace development, Calderón-Argelich et al. (2023) for inclusive greening plans, de Kleyn et al (2020) for connection with nature, and Anguelovski et al (2020) for justice in greening (see also Kabisch et al, 2022 – for principles informing nature-based solutions). These principles can be distilled into three categories: (i) principles to guide design; (ii) engagement/participation; and (iii) operation (e.g., maintenance and monitoring) (Williams et al., 2020).

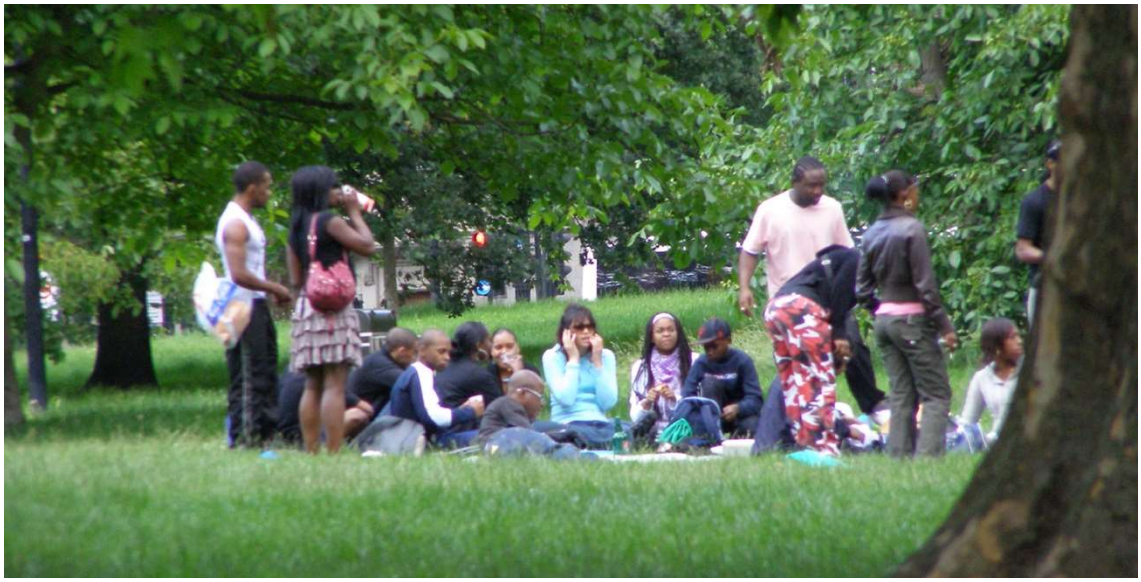

*Figure 5: People need to see themselves represented in green spaces to feel welcome*

## Principles to guide design

- Include Indigenous/First Nations peoples in design
- Recognise histories of oppression and historic injustices and acknowledge socio-spatial disparities
- Plan for diverse engagement across the lifecycle of the greening activities
- Develop and nurture enduring community partnerships
- Include contrasting views, acknowledge diverse needs, and recognise local knowledge
- Provide language and translation services for culturally and linguistically diverse residents
- Ensure people with disabilities can participate
- Actively engage with a broad constituency in formulating ideas and proposals
- Enable a broad cross section of the community to participate by using multiple forms of engagement and ensuring venues and formats are respectful of differences
- Practise clear, transparent, and open communication
- Build trust and practise empathy
- Break down silos within and across agencies
- Target specific groups to ensure representation, recognising intersectional differences
- Create learning environments where participants are upskilled

## Principles to foster authentic public engagement

- Include Indigenous/First Nations peoples in engagement as rights holders
- Recognise histories of oppression and historic injustices and acknowledge socio-spatial disparities
- Ensure that a diverse range of views and voices are reflected in greening initiatives and strategies, as well as engaging diverse stakeholders
- Provide language and translation services for culturally and linguistically diverse residents
- Involve diverse communities in the running of workshops, drop-in sessions etc.
- Ensure people with disabilities can participate
- Enable a broad cross section of the community to participate by using multiple forms of engagement and ensuring venues and formats are respectful of differences
- Compensate participants in meaningful and appropriate ways for their time and effort, such as remuneration for low-income and First Nations participants
- Practise clear, transparent, and open communication
- Build trust and practise empathy
- Acknowledge tree costs/problems alongside tree benefits
- Break down silos within and across agencies
- Target specific groups to ensure representation, recognising intersectional differences
- Consider alternatives to meetings and workshops, such as neighbourhood walks, participatory photography, social media, field trips, art-base activities and storytelling
- Create learning environments where participants are upskilled

**Principles to inform maintenance and monitoring**

- Include Indigenous/First Nations peoples in monitoring and evaluation
- Provide sufficient funding and resources for engagement, activation, and ongoing monitoring and management activities
- Prioritise social equity and environmental justice as key performance indicators
- Create learning environments where participants are upskilled
- Identify pathways to employment as part of monitoring and evaluation
- Practise clear, transparent, and open communication
- Build trust and practise empathy
- Recognise histories of oppression and historic injustices and acknowledge socio-spatial disparities
- Acknowledge tree costs/problems alongside tree benefits
- Break down silos within and across agencies
- Create opportunities for diverse groups to be involved in tree cultivation, management, and monitoring, including livelihood opportunities

## From principles to practice – School based greening

Research undertaken with teachers on school-based urban greening in the northern suburbs of Hobart Tasmania has found that programs like the 24 Carrot Gardens are vitally important for building community health and wellbeing and (Elliott, 2023). This research adopted some of the above-described principles of inclusion. Participants were recruited via an existing organisation – the Tasmanian Geography Teachers Association. The researchers travelled to the school, opting to work with the participants in their chosen setting. The workshop was catered as a form of reciprocity, and researchers focused on active listening. At the end of the workshop teachers were upskilled on the costs and benefits of greening and were provided with an infographic that they could use in their teaching. The workshop was zoom-enabled to accommodate teachers who could not travel but wanted to attend.

Teachers reported that many children from schools located in communities that experience marginality and disadvantage come to school hungry. Teachers said that these children would not typically eat fruit and vegetables at home, due the expense and lack of availability of fresh produce, and less familiarity with nutritional benefits of fresh food. Planting trees on school grounds was identified by teachers as an important way to improve the mental health and wellbeing of children and to cool down hot classrooms in summer. Cooler classrooms can improve students' concentration and in turn improve educational attainment. But a range of barriers were identified by teachers, including little to no budget for tree maintenance (e.g., summer watering), a lack of knowledge about the best trees to plant, concerns with children's health and safety, and not having enough time to supervise tree-planting activities. Risks associated with falls (children climbing trees), allergens (from tree pollen), irritants (tree sap), falling branches and fire hazards were identified as barriers to school-based greening, as was vandalism of trees.

Engaging early with school teachers and department of education staff, parents, community groups and school children was identified as an important enabler of success. Participants

noted that schools are oftentimes the hub of communities. They observed that schools can be places where new ideas can be tested, prototyped, and tested and where it is safe to experiment with new ways of doing things. Schools are places where future generations can be equipped with the skills that they need to navigate changing environments. The teachers discussed an incident where students 'watered' indoor plants with hand sanitizer, resulting in the death of those plants, but used it as a learning opportunity. Once students learned about the needs of plants, they adopted some plants in their classrooms and the replacement plants lived.

Teachers reported that the 24 Carrot Garden on the school grounds was valued by students. They reported that students benefitted from views over greenery and learned about food and nutrition as part of their curriculum. Teachers suggested that the students took these learnings home with them, sharing them with their families, thus engaging the broader community.

*Figure 6: Greening school grounds can help promote social inclusion*

## Towards a policy framework for inclusive greening

**Less has been written about policy frameworks governing urban greening than about other aspects**. Many academic papers conclude with a statement that planners and policy makers ought to act on unfair, inequitable, or discriminatory process and outcomes related to urban greening but are silent about the specific steps that might be taken. What policy and legislative changes could we take to remedy the issues raised in this report?

Simply defined, a policy is a statement of intent about an intended or adopted action or set of actions that an organisation or agency will follow in influencing, framing, or changing an issue (Hassel, 2015). Policies are often thought of as the tools of government. In this final section of the report, we consider how urban greening might be improved in working with First Nations people as rights holders, and then other groups to avoid direct or indirect discrimination.

## Working with Aboriginal people

The United Nations Declaration on the Rights of Indigenous Peoples recognises the need for free, prior, and informed consent and the right to self-determination (e.g., Articles 3 & 4, 10, 19 and 28). The Commonwealth of Australia's Closing the Gap Report highlights the significant injustices that Aboriginal people face, and identifies appalling disparities in life expectancy, educational attainment, health, incarceration, access to safe and secure housing, employment, and access to information. These enduring disparities create barriers to social inclusion.

The Australian National Environmental Science Program recognises the need to engage with Aboriginal people in three ways, ranging from strong engagement to weak engagement. These are: Category 1 – Co-Design with Aboriginal people or organisations to ensure mutual benefit; Category 2 – Collaborate with Aboriginal people and create opportunities for knowledge sharing; and Category 3 – Communicate outcomes, but with no direct involvement of Aboriginal people. There are multiple objectives that should be addressed in Indigenous engagement and participation, as follows:

- Develop enduring partnerships with Indigenous Australians based on trust, openness and honesty, respectful interactions, and capacity-building
- Uphold Indigenous rights
- Nurture effective involvement of Indigenous peoples to address on the ground issues
- Research should be relevant and beneficial to Indigenous Australians
- Research should respect Indigenous priorities and values
- Indigenous Cultural and Intellectual Property must be respected
- Engage with Aboriginal people to the highest ethical standards
- Communicate effectively with Aboriginal people and share knowledge and research results
- Foster co-governance and co-management
- Create opportunities for Indigenous employment, training, and skills transfer
- Increase cultural awareness within organisations and build mutual understanding
- Work collaboratively with organisations and institutions to promote Indigenous perspectives

Integral to these objectives is Caring for Country in ways that enable Aboriginal people to interact with nature, connect with heritage, apply traditional ecological knowledge, and achieve prosperity and wellbeing, such as through the Indigenous Rangers Program. To achieve these objectives, actions should include collaborative agreements with Aboriginal partners, consideration of Indigenous businesses in tenders and procurement processes, and collaboration on research papers and reports, among other activities.

## Policies and strategies relevant to inclusive greening

### *Conventions and legislation*

Australia is a signatory to international conventions that bind the Commonwealth, states, and territories to protect and uphold the rights of individuals. These include the International Covenant on Civil and Political Rights (ICCPR), International Covenant on Economic, Social and Cultural Rights (ICESCR), the International Convention on the

Elimination of All Forms of Racial Discrimination (CERD), the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), the Convention on the Rights of the Child (CRC), and the Convention on the Rights of Persons with Disabilities (CRPD). A key component of this raft of high-level governance is preventing discrimination – both overt discrimination (e.g., intentional targeting) and incidental discrimination (unequal or discriminatory outcomes arising from a process or action that treats all people the same).

> *'In Australia, it is unlawful to discriminate on the basis of a number of protected attributes including age, disability, race, sex, intersex status, gender identity and sexual orientation in certain areas of public life, including education and employment' (Attorney General's Department).*

Australia has several national laws that pertain to preventing discrimination including the Age Discrimination Act 2004, Disability Discrimination Act 1992, Racial Discrimination Act 1975, and Sex Discrimination Act 1984. The states and territories also have their own anti-discrimination legislation.

*National policy*

Aside from legislation and international agreements, policy is also used to manage the actions of different levels of government in Australia. There are two national policies that are directly applicable to inclusive urban greening: Australia's Strategy for Nature (2019-2030) and the draft National Urban Policy. Australia's Strategy for Nature has three broad goals – connecting Australians with nature, caring for nature, and disseminating and building knowledge. The strategy recognises the importance of Indigenous knowledge and values, but says much less about other aspects of diversity, equity, and inclusion. The strategy says nothing about LGBTQIA+ communities, people with a disability, neurodiversity, and multicultural experiences of nature, for example.

The draft National Urban Policy has five goals. Australia's towns and cities should be liveable, equitable, productive, sustainable, and resilient. This policy has some directly relevant provisions that for inclusive greening. The policy seeks to ensure "accessible participation in public life", "inclusivity and safety in public spaces", and providing "sustainable green and blue spaces". Moreover, the policy is guided by six principles that include collaborative planning, fair and inclusive development, and fostering and enhancing diversity. The draft policy is premised on respect for First Nations people and Country. The strategy specifically mentions inclusive urban greening (p. 29) and co-design of public spaces. The policy also specifically mentions "people with disability, migrants and refugees, older people and LGBTIQA+" in the context of safety and youth and culturally and linguistically diverse communities in the context of participation (pp. 27-8). And the strategy addresses heatwaves as a threat to Australia's settlements.

## Considerations for developing a policy framework for inclusive greening

What might a future policy framework look like, designed to promote inclusive urban greening? Hurlimann et al. (2024, p. 3) observe that government policies are intended to guide actions by providing consistency (are fair), predictability (give certainty), and should be based on evidence (are legitimate). They note that policy instruments are applied in

specific policy settings, which include: level of governance (e.g., local, state, federal); sector (e.g., public, private, non-profit); property type; 'life stage' of the built environment (e.g., new development, retrofit, renewal, recovery); and timeframe for implementation (short, medium, and long term). Moreover, Hurlimann et al. (2024) assert that policies can be thought of as complementary instruments or tools for achieving an outcome. Finally, Leung (1985) argues that all policies must be: (i) subjective (accounting for actors, roles, point of view, understanding of the issue, interests, and values), (ii) consistent (no internal contradictions, outcomes-focused, alignment between vision, goals, objectives and measures), (iii) adequate (necessary and sufficient), and (iv) must recognise (inter)dependencies (be seen as legitimate, broadly engendering support). In other words, policies must be effective, implementable, and capable of being evaluated for their success or failure.

Scholars generally distinguish between three types of policy instruments – sermons, carrots, and sticks. Ensuring compliance with these instruments can range from soft coercion to hard penalties (Pacheco-Vega, 2020; Vedung, 1998). More recently this typology has been described as communicative instruments, market-based instruments, authoritative instruments, and a fourth type of instrument – organisational instruments (Willems et al., 2020). Often a combination of these approaches is used to manage a public problem. Such instruments establish the function of government in different capacities – as an advisor, facilitator, regulator, or a coordinator. Let's consider these options in turn.

Sermons or **communicative instruments are used to inform the target set of stakeholders about issues**. They tend to be educative in nature and include tools such as awareness raising campaigns, guidelines, best practices, training, and advice. Hurlimann et al. (2024) suggest that strategies and some plans can be thought of as informational or communicative policy instruments, since they are largely non-binding and seek to guide rather than enforce. They also include toolkits and scorecards as communicative instruments. Willems et al. (2020) argue that communicative instruments build legitimacy and acceptance, seeking to motivate stakeholders to act. But the target audience tends to be treated as passive recipients of advice and guidance. Recent studies identify exchange of ideas and knowledge production as key aspects of this type of policy, which focus on information dissemination. An example is how local governments are increasingly seeking to influence private landholders to plant trees to increase tree canopy cover, via tree stewardship programs. Studies have found that in many cities most of the urban forest is located on private property. By informing property owners of the many benefits of urban trees, local governments can foster an ethics of care, and enrol landowners in tree protection and management (Nesbitt et al., 2019; Coffey et al., 2020). Conversely, such policies have been criticised for transferring responsibility from government to landowners (op. cit.), and for failing to recognise disparities arising from land ownership (Cook et al., 2020).

Carrots are **financial or market-based (dis)incentives or policy approaches, intended to direct behaviour towards specific ends**, typically based on some form of reward. They include grants, loans, subsidies, state finance, rebates, tax breaks, voluntary agreements, and tradeable permits. Hurlimann et al. (2024) include voluntary standards/codes with this type of instrument and works programs. Financial or market-based incentives are said to be a more efficient and accountable form of policy (Willems et al., 2020). However, a growing number of studies have pointed to how market-based policies favour actors with power,

strong social networks, and the capacity and capabilities to apply for and win grants and/or influence government decision-making. Such policies can severely disadvantage communities experiencing marginality and vulnerability. Work by scholars in Los Angeles, for example, has shown how tree programs and park grants tend to benefit comparatively advantaged communities (Pincetl 2003; Pincetl et al., 2013). Another criticism is that financial incentives tend to flow to landowners whereas renters, who are more vulnerable because they lack secure tenure, do not benefit directly from instruments like rates discounts for tree planting (Reidmann et al., 2022; Threlfall et al., 2022). And some populations such as prison inmates can be exploited for their labour (e.g., land maintenance, tree growing), but locked out of incentives entirely (Hazelett, 2023).

Sticks are **law-based approaches that include legislation, regulations, planning provisions, standards, by-laws, taxes, penalties, fees, tariffs, permits etc., that enforce specific ways of doing things**. Commentators point to the power imbalances with such policy instruments as they are often highly technocratic, privileging the knowledge of technical elites (Breyer and Mohr, 2023). Other actors are expected to comply. Typically, public engagement is limited to informing or to minimal consultation. Some characterise this approach as 'decide, announce and defend' and it has been criticised for excluding some groups from decision-making, such as people who do not have the time to make public submissions, or who lack access to the internet or are unable to attend public forums because they have work and family or carer responsibilities, or have a disability or reduced levels of mobility (Anguelovski et al., 2020).

While there appear to be low levels of awareness in local and state government, as well as the academic literature, about urban greening and equal opportunity legislation, as noted above there is a raft of Australian legislation potentially affecting urban greening processes and activities that (re)produce social exclusion. In New South Wales, for example, the state recognises that unlawful discrimination occurs "when you are treated less favourably than somebody else because of your: disability (includes diseases and illnesses); sex (includes pregnancy and breastfeeding); race, age, marital or domestic status, homosexuality, transgender status, and carer's responsibilities" (Anti-Discrimination NSW, 2024).

**Organisational policy instruments develop new ways of bringing diverse stakeholders together to achieve an objective**. Some commentators refer to these approaches as a type of 'social innovation'. The purpose of these instruments is to mobilise different actors – for instance across government, private, non-profit, and community sectors – to achieve a common goal. An example of these types of instruments are voluntary agreements, such as voluntary conservation covenants on private land to protect areas of high biodiversity or wildlife friendly garden programs (Coffey et al., 2020). Community gardens are another example of this type of policy approach – where members from the community come together to grow food on public land, acting as site custodians, but often with insecure tenure. A third example is citizen science, where community members are upskilled and participate in data collection and sometimes analysis and interpretation (Parrish et al., 2019). Some scholars contend that citizen science projects can address environmental justice and inclusion considerations if they are properly designed and implemented (Makuch et al., 2020).

Organisational policy instruments have been recognised as potentially beneficial because they provide more scope for residents, community groups and non-profit organisations to co-create policies and initiatives (Clavin et al., 2021) thus breaking down organisational silos

(Di Marino et al., 2023). New forms of organisation can enable experimentation and prototyping of novel ideas, as well as building social cohesion (Willems et al., 2020). Boeri et al. (2022), for example, have pointed to innovations in urban greening in Europe that they argue spur new forms of participatory democracy. They note how the Municipality of Bologna used temporary pilot projects to experiment with new types of greening (entailing self-construction and co-management), involving citizens and students, devised a participatory budget tool for citizens, and tested deliberative climate assemblies, initiatives reported to be highly successful (Boeri et al., 2022).

On the other hand, such approaches have been criticised because they can naively assume that all stakeholders will want to work together, ignoring the potential for conflict. For example, enrolling community volunteers to increase tree planting on local streets can create conflict with residents who may fear they will lose access to parking (Di Marino et al., (2023) and can potentially threaten the jobs of council workers. Recognising parks as legitimate sites for the LGBTQIA+ community, providing safe opportunities to experience nature, can create conflict with other park users as well as increasing targeted violence and police surveillance (Davis and Edge, 2022). Working in partnership with non-profit groups to manage community gardens can see the displacement of other groups who lose tenure or must compromise on how a site should be used (Eizenberg, 2012). And some scholars have noted that there can be a tendency for better organised groups to steer the community engagement process, develop alternative visions, and potentially exclude others, in the process coming into conflict with government employees over power-sharing arrangements (Verheij et al., 2021).

## Conclusion

Urban greening is emerging as a world-wide initiative to increase parks, street trees, gardens, and other forms of green infrastructure in cities. While the benefits of urban greening are widely recognised, one of the notable problems that can occur is social exclusion. Greening activities can displace residents experiencing marginality and disadvantage and may entrench colonial, elitist and capitalist power relations. Local governments have begun to recognise the need to include a broader range of stakeholders in urban greening initiatives. But attention to inclusive urban greening principles and practices is lagging in practice. Changing this situation is essential if we are to ensure that greening processes and outcomes are fair and equitable. This short report has discussed the issues associated with exclusionary practices, has showcased some initiatives to advance more inclusive greening, and has highlighted potential policy interventions that could foster inclusive greening.

The report points to some essential next steps. Building a national community of practice, potentially though professional organisations such as the Planning Institute Australia, Australian Institute of Landscape Architects, and Environment Institute of Australia and New Zealand, could help to shift attitudes as well as processes for urban greening. Establishing a clearinghouse of examples of successful inclusive urban greening could help a wide range of stakeholders to see how to do things differently. Establishing knowledge-sharing opportunities across jurisdictions, such as annual conferences, grant schemes, community partnerships, and professional development could help to disseminate best practices more broadly. And exploring how to build inclusive greening into the national curriculum could assist with the sharing of these ideas with the broader community.

## Useful resources

**Commonwealth of Australia Closing the Gap Report:**
**https://www.closingthegap.gov.au/national-agreement/targets**
**Indigenous Rangers Program,** National Indigenous Australians Agency:
https://www.niaa.gov.au/indigenous-affairs/environment/indigenous-rangers-program
**Policy Brief: A Guide to Inclusive Urban Greening in Barcelona**, developed by Barcelona Laboratory for Urban Environmental Justice and Sustainability:
**https://www.bcnuej.org/2023/09/27/policy-brief-a-guide-to-inclusive-urban-greening-in-barcelona/**
**Sustainable Cities – How to Make them More Inclusive?**, developed by Council of Europe:
https://www.coe.int/en/web/interculturalcities/sustainable-cities
**Making Green Infrastructure Socially Inclusive**, developed by Scottish Government:
https://sefari.scot/research/making-green-infrastructure-socially-inclusive-principles-and-challenges
**Cooling and Greening Melbourne** resources, developed by the Victoria Government Department Transport and Planning: https://www.planning.vic.gov.au/guides-and-resources/strategies-and-initiatives/plan-melbourne/cooling-and-greening-melbourne
**Supporting Urban Greening and Social Justice in the City of Barcelona**, developed by ClimateADAPT Europe: https://climate-adapt.eea.europa.eu/en/metadata/case-studies/barcelona-trees-tempering-the-mediterranean-city-climate
**Inclusive Cities Urban Area Guidelines**, developed by the Asia Development Bank:
https://www.adb.org/publications/inclusive-cities-urban-area-guidelines

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