



# Latent potential? Searching for environmental justice in South African landscape architecture praxis

Dayle L. Shand  and Christina A. Breed 

Department of Architecture, University of Pretoria, Pretoria, South Africa

## ABSTRACT

Landscape architecture is not formally affiliated with environmental justice in South Africa. This is concerning given that the country is the most socio-economically unequal worldwide and that local cities contain dire urban realities and climate-related risks with degraded and unsafe green open spaces. We explored the potential within local professional praxis for addressing inequities related to green open spaces in the urban environment. Narratives were collected via 25 in-depth interviews from a diverse sample. We found that though landscape architects have yet to be exposed to ‘environmental justice’ as a term and as a movement, practitioners have an implicit awareness of environmental inequity as a lived reality. We argue that these professionals have the potential to actively promote environmental justice, evidenced by how practitioners currently address justice concerns and challenges. We call for more active and authentic engagement around environmental justice within the profession here and internationally.

## KEYWORDS

Environmental justice; green public open space; landscape architecture; landscape justice; South Africa

## 1. Introduction

City planning and design impacts the lived realities of urban communities (Wallhagen & Magnusson, 2017), especially the most marginalised in society (Venter, Shackleton, Van Staden, Selomane, & Masterson, 2020), implying much responsibility for the built environment design professions. The importance of green public open spaces in promoting well-being within built environments is gaining more weight (Dobson & Dempsey, 2021; Venter et al., 2020) due to climate change and other identified risks and vulnerabilities (Breed, 2022; Dodman, Leck, Rusca, & Colenbrander, 2017). These green open spaces should, and often do, fall under the purview of landscape architects, as part of the larger cohort of designers that shape urban environments (Egoz & De Nardi, 2017; Breed, Cilliers, & Fisher, 2015; Wallhagen & Magnusson, 2017). The praxis of landscape architecture includes the planning, design and implementation of landscape interventions (Jorgensen, 2016) which extend to green public open spaces, such as parks, gardens, campuses, and urban agriculture. These green interventions have been more recently aligned with green infrastructure and nature-based solutions, important for increasing urban ecosystem services and well-being benefits for urban residents (Kabisch, Frantzeskaki, & Hansen, 2022). The profession has thus progressed from a primarily ornamental and aesthetic endeavour, to, over the past half-century gradually include social, environmental and ecological concerns (Breed, 2022; Deming, 2015).

**CONTACT** Dayle L. Shand  [dayle.shand@up.ac.za](mailto:dayle.shand@up.ac.za)

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In addition, justice has increasingly become an essential topic within landscape and landscape architecture practice and research (Jorgensen, 2016), to the extent that Jorgensen (2016, p. 3) calls for ‘... greater and more explicit engagement with the range and complexity of social and environmental (in)justice in landscape, and for the continued development of theory and language for tackling landscape justice’. But Jorgensen (2016) and Mels (2016) both indicate a gap in the adoption of environmental justice in landscape and landscape architecture research, suggesting that environmental and social justice are not articulated in such explicit terms in published literature (Jorgensen, 2016). Nevertheless, The *Landscape Research* journal, has increasingly touched on a range of topics and issues related to social, environmental and landscape justice (Jorgensen, 2016; Mels, 2016; Egoz & De Nardi, 2017; Olwig, 2022). What’s more, various bodies representing landscape and landscape architects, including the *International Federation of Landscape Architects* (IFLA) (IFLA, 2023), increasingly outline objectives and strategies for addressing various forms of justice, suggesting that justice in the built environment is of great concern to the profession of landscape architecture.

Though not interchangeable, social, environmental, spatial and landscape justice overlap in important ways (Jorgensen, 2016; Soja, 2010). Young (1990, p. 3) argues that, ‘where social group differences exist and some groups are privileged while others are oppressed, social justice requires explicitly acknowledging and attending to those group differences in order to undermine oppression’...But, we also know that space is fundamental to the physical and social worlds in which humans live (Soja, 2010). Thus, spatial justice considers social inequities as manifesting spatially in human environments, and the inequities and oppressions attached thereto (Soja, 2010). Further to this, landscape justice considers ‘...people’s emplaced right to landscape as a common good of importance to their quality of life’ (Olwig, 2022, p. 717), where ‘landscape’ refers to ‘...an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors’ (Council of Europe, 2023) thus reflecting on the emotional bonds which people have to places. Finally, social concerns, and their spatial manifestations have also become progressively associated with environmental issues (Soja, 2010). Thus, environmental justice ‘... reflects on the spatial distribution of environmental quality and risk as well as on the process of how environmental decisions are taken’ (Scott & Oelofse, 2005, p. 449). We argue here that landscape architects can respond to many forms of justice, but most particularly landscape and environmental justice, given the social-ecological, place-based and spatial domains in which they practice.

### 1.1. Study focus

In this article we focus on environmental justice as referring to the equitable, and nuanced access which people should, but do not always have to beneficial amenities, including green public open spaces (Pasgaard et al., in review; Jorgensen, 2016). We are also, in particular concerned with relational aspects of environmental justice (Melcher, 2013; Stanley, 2009).

South Africa, with its colonial history, has a complex socio-political history (Shackleton & Gwedla, 2021) and many enduring negative legacies, making it a critical case study for environmental justice (McDonald, 2002). Inequitable access to green public open space in South Africa has become a growing area of interest for several disciplines. Linked often to ‘environmental justice’ – these studies consider the distribution of, and access that urban residents have to, green public open spaces (Khanyile & Culwick Fatti, 2022; Venter et al., 2020). Globally, the environmental justice movement has gained increasing traction within the fields of landscape research, and landscape architecture (Mels, 2021; Jorgensen, 2016; Wolch, Byrne, & Newell, 2014), but, until recently, few local studies explicitly mention landscape design and designers. Despite being small in numbers locally, landscape architects have a prominent role in the design of green and public open spaces, thus, we find this gap in the literature important to address. In the South African context, the *Institute for Landscape Architects in South Africa* (ILASA) does not make any reference to ‘justice’ specifically, but does highlight the concern for, and contribution that landscape architecture can make to the built environment for previously disadvantaged communities in South Africa (ILASA, 2022).

With the recent increase in research specifically linking green infrastructure and green space design, and environmental justice in South Africa (Breed, Du Plessis, Engemann, Pauleit, & Pasgaard, 2023; Brom et al., 2023; Pasgaard et al., in review), our study is timely. Correspondingly, we believe that the local profession can have a more prominent role in addressing injustices and promoting equitable green and public open space, and should therefore be brought into the contemporary discourse. Our aim is to lend a landscape architecture specific lens to the South African environmental justice research, and a Global South perspective to the international discourse on landscape architecture and environmental justice.

We thus consider the design, provisioning and management of green public open space, and the current and potential roles of landscape architects in these processes. To frame this study we asked the following questions, with a focus on Gauteng, South Africa. 1) How is environmental justice conceptualised within the local landscape architectural profession? 2) What alternative approaches can be aspired to, based on the investigation into the praxis of local professionals, for more just planning and design of green public open space?

## 2. Theoretical underpinnings of the study

The environmental justice movement began as a response to environmental racism in the United States of America (Nwangwu, 2016), specifically in response to the placement of environmentally hazardous materials in proximity to minority groups. The movement now also challenges political and capitalist drivers that influence planning discourse and practice, by centring race and the environment (Sze & London, 2008), as well as the sacredness of 'natural ecology' (First National People of Color Environmental Leadership Summit, 1991), but from an anthropocentric stance (McDonald, 2002), that considers people as part of nature. The movement has evolved to address the specific nuances in each place to which it is applied, making it a global movement, with place-based applications (McDonald, 2002).

South African cities face dire urban realities and increasing climate related crises, compounding environmental risks within the country's urban landscape (Mphambukeli, 2020). Two decades into the 21st Century, the World Bank (2022) has indicated South Africa as the most socio-economically unequal country in the world. The lived realities of the country's residents are symptomatic of a notably unjust society, reflected in the built and natural environments of the country (Shackleton & Gwedla, 2021; Mphambukeli, 2020; Venter et al., 2020). Historically, recreational spaces including beaches, and public amenities such as benches and parks were primarily provided for access by 'white' communities (Khanyile & Culwick Fatti, 2022), consequently, people racialised as 'black African', had little quality open space in their neighbourhoods (Makakavhule & Landman, 2020; Khan, 2002). Further to this, Khan (2002) illustrates that colonial and apartheid regimes actively promoted an ideology that considered black African people as damaging to the environment. These discriminatory biases were used as the basis for securing environmental resources for elitist hunting and game conservation activities that benefitted only a small portion of the population - who were white and largely affluent - while excluding 'black African' communities from access and use of urban and natural environmental resources and their conservation (Khan, 2002). These ideologies had far-reaching consequences on the access and attitudes to natural resources amongst black African communities (Khan, 2002), creating a damaging schism, enforced through legislation (Khanyile & Culwick Fatti, 2022). This has had far-reaching and enduring impacts on how people relate to, access and utilise green public open space (Khanyile & Culwick Fatti, 2022; Makakavhule & Landman, 2020), historically, and today, meaning that issues of environment and race remain central to environmental justice in South Africa (Khan, 2002). Research indicates that 'black African' communities still have the least access to green public and private open spaces (Venter et al., 2020). Additionally, there are cultural biases to the historical and contemporary development of South African public open and green spaces. Shackleton and Gwedla (2021, p. 6) describe the persistent 'Eurocentric legacy' evident in the

public open spaces of South Africa, which can perpetuate injustices for previously overlooked communities – in that public and green open spaces are also linked to cultural and community identity.

In South Africa, spatial legislation has been developed in the last decade to deal with urban planning, and the inclusion of public open space and green infrastructure in South African cities through the *Spatial Planning and Land Use Management Act (SPLUMA)*, which is anchored in four spatial principles of justice, sustainability, efficiency, and resilience (Republic of South Africa, 2013). Although environmental justice has been identified as one of the green infrastructure planning principles in South African spatial policy documents, most principles do not currently manifest on the ground since green spatial planning frameworks at metro level are not legally enforceable (Breed et al., 2023). We believe the value of environmental justice in planning discourse, considers the success, and potential opportunities for improving such planning tools in the processes they follow, and considers the relationships between people and their local environments, both urban and natural. Thus, our interest in the uptake of environmental justice within the local landscape architecture industry. As a profession where value manifests at the nexus of social and environmental concerns (Deming, 2015), landscape architecture contributes to both human and natural factors. Melcher (2013) and other landscape authors such as Spirn (2005), have illustrated the potential close connections between landscape architecture and environmental justice, specifically for promoting greater community empowerment and equity. But, there is room for ‘...increasing practitioners’ agency in promoting potentially context-changing interventions’ (Dobson & Dempsey, 2021, p. 399) for urban communities’ greater use and enjoyment of green public open space.

The recognition of difference, and the inclusion of community in planning and provisioning processes can be a primary step towards overcoming universal and colonial standards (Young, 1990; Landman & Makakavhule, 2021). Greater community participation and autonomy in urban development have been promoted by the likes of Hamdi (2004), while Healey (2003) argues for more relational and collaborative sensitivities in planning and governance processes. Since democracy in South Africa there have been increased attempts to open up participatory processes for development through the Integrated Development Plan (IDP) and housing schemes such as the People’s Housing Process (PHP) that focused on ‘quality’ and ‘sustainable human settlements’ (Newton, 2013), but struggled to provide quality communal green spaces (Sebake, Breed, & Kruger, 2015) or disrupt the status quo of power and empowerment in development (Everatt, Marais, & Dube, 2010). Participation must do more than draw people into development processes, it must also improve people’s opportunities and capacities ‘to claim their rights’ (Everatt et al., 2010). Under the greater umbrella of environmental justice, some scholars argue for more intentional community involvement in green space development that goes beyond public participation into transdisciplinary co-development and -management (Breed et al., 2023; Cilliers, Du Toit, Cilliers, Drewes, & Retief, 2014) or community-led projects.

### 3. Methods

#### 3.1. Research context and participant sample

This study is focused on Gauteng, the most urban and populated of South Africa’s nine political provinces, with 25.4% of the population living on only 1.4% of the country’s land cover (StatsSA, 2018). Moreover, Gauteng receives vast volumes of migrants daily (StatsSA, 2018), meaning that the already overburdened grey and green infrastructure is under immense pressure to support urban populations (Brom et al., 2023). Within the urban context, there are instances of large scale green infrastructure, such as nature reserves, and local community green open spaces (Khanyile & Culwick Fatti, 2022; Schäffler & Swilling, 2013), such as local community parks. However, these are not necessarily equitably distributed, or ‘managed’ (Khanyile & Culwick Fatti, 2022; Makakavhule & Landman, 2020; Schäffler & Swilling, 2013), meaning that there are many inequities related to environmental and recreational resources in Gauteng, including poor conditions of public open spaces (Makakavhule & Landman, 2020) that reduce their levels of access. These realities require the involvement of built environment specialists, such as landscape architects.

At the time of the study there were 221 landscape architects registered with the *South African Council for Landscape Architectural Professionals* (SACLAP), 116 of whom worked in Gauteng (SACLAP, 2018). Only 4% of professionally registered landscape architects in South Africa at the time, identified as 'black African' and of those, all were males (SACLAP, 2018). In the last few decades, more women have begun to enter the profession (SACLAP, 2018), but most registered professionals at the time of the study, were 'white' male practitioners. We aimed for cross-sectional representativeness and therefore purposively included minority perceptions through recent graduates and candidates, to broaden the inclusivity of the sample. Fifteen designers were interviewed, equating to 12.9% of the professionals in Gauteng (SACLAP, 2018), and represented the most prominent firms. The sample included eight males and seven females, 11 participants were 'white' and four were 'black African'.

### 3.2. Interview design and procedure

In-depth interviews were guided by discussion points, shared beforehand, and a series of questions in the form of an interview schedule during the interviews. See Figure 1 below for some of the topics and typical questions.

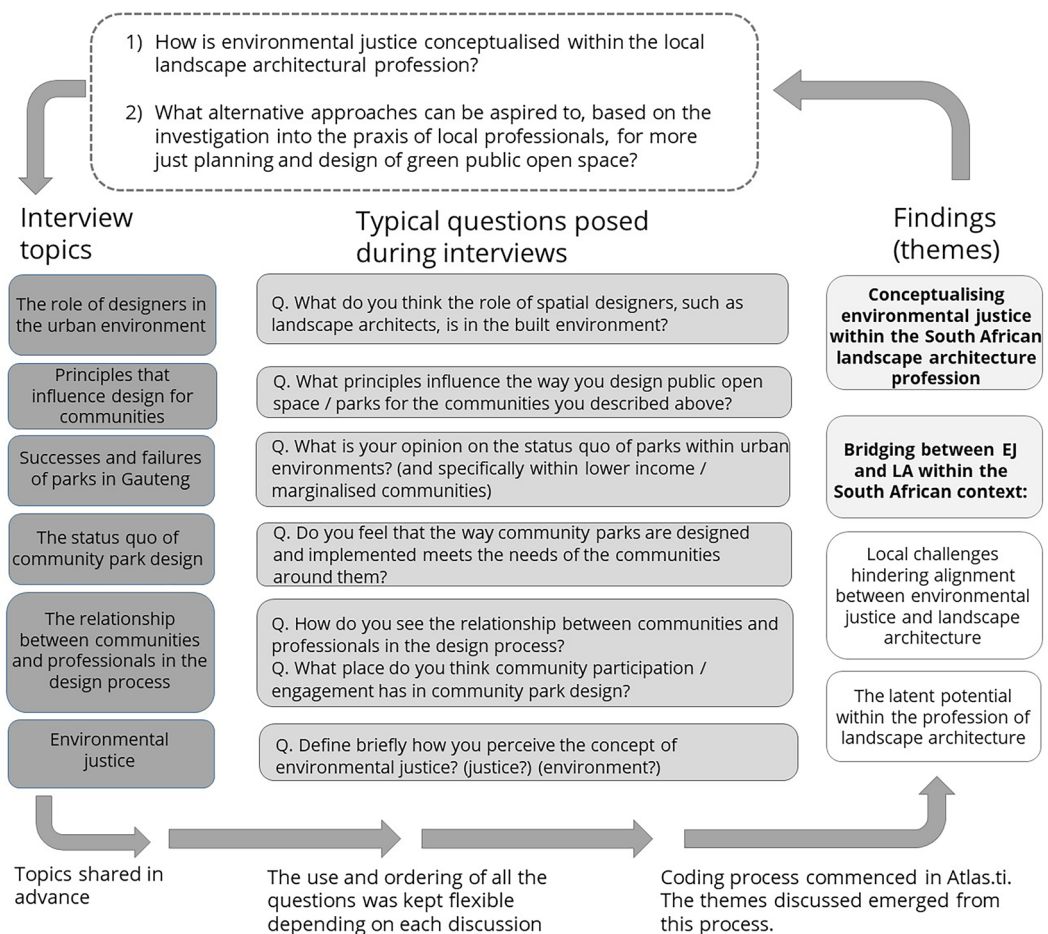


Figure 1. Typical topics and questions guiding data collection and analysis (figure source: authors).

The interviews were on average between 60 and 90 minutes, and took place in two rounds equalling 25 interviews overall. Multiple rounds of interviews allowed for a greater depth in the discussions. The first round of interviews took place between February and October 2018, and the second round in April and May 2019. All the interviews were voluntarily voice-recorded and transcribed with permission, in keeping with ethics protocols. The data was analysed in Atlas.ti, version nine, through a content analysis coding process (Saldaña, 2013). The coding was initially inductive and subsequently deductive, following the research and interview questions to identify emergent themes.

## 4. Results

Two primary themes are presented below, illustrating 1) local interpretations of environmental justice, and 2) the existing and potential relationships between environmental justice and landscape architecture evident in the praxis of landscape architects (see [Figure 1](#)). Further sub-themes are presented which expand on the challenges and potential for applying environmental justice in local landscape praxis.

### ***4.1. Conceptualising environmental justice within the South African landscape architecture profession***

Evidenced by the participant narratives, landscape architects in South Africa have rarely heard the term 'environmental justice'. However, participants were willing to venture interpretations, which we report on below.

While nature was mentioned in many responses, some participants referred specifically to nature-centric conceptualisations of environmental justice, such as 'protection' of the environment, developing in an 'environmentally friendly' way, and being 'faithful' to nature. Human-centric interpretations also materialised in the participant narratives, where environmental justice was interpreted to pertain to people and their use and experience of the environment, progressing also to rights which people have to the environment, or benefits they draw from the environment, as evidenced by statements like: 'people have a right to'. Participants also discussed cultural heritage and knowledge linked to the environment and various communities' relationships to outdoor, shared open spaces – through their collective knowledge and memory associated with those places. Thus, human- and nature-centric themes were related to each other along a continuum. The following excerpt is illustrative of the central theme of 'people' and the 'natural' 'environment', as a recurring thread throughout the interviews.

Is the environment really [...] enhanced [...] in [terms of] storm water [management] and all of those things that we need in a semi-arid country? And then the other side, do we actually give the people places that they can use, and enjoy simultaneously? [Landscape architect interviewee 11, 2018]

Some participants also felt that the status quo of some communities' lived environments is directly entwined with the country's political history, specifically highlighting the 'sins of the past' and tracing justice concerns 'back to apartheid...'. The narratives show that participants considered environmental justice to pertain to redress, as seen in statements like: 'giving a voice to people', 'giving back to [the] community' and '[Giving] people dignity again ... or a sense of worth', and 'repairing wrongs of the past'. These instances have a 'social bias', but also illustrate perceptions about politics and power relationships within the development of the built environment and public open spaces, as well as the value which landscape architects feel their interventions bring to the built environment and people's lives.



## ***4.2. Bridging between environmental justice and landscape architecture within the South African context***

In this section, the findings are illustrative of the experiences that landscape architects have had within the landscape design industry. And, specifically the provision and management of public open space in South Africa, depicting environmental justice as a lived social concern, as opposed to an abstract term which interviewees did not readily identify with.

### ***4.2.1. Local challenges hindering alignment between environmental justice and landscape architecture***

We identified two challenges hindering a closer alignment between environmental justice as a movement and landscape architecture praxis. These are (1) institutional mechanisms and (2) socio-cultural differences as a relational factor.

Participant narratives detailed the provisioning and management of public open space as impacted by 1) institutional mechanisms and government processes. Participants discussed politician-driven motivations, the lack of value placed on public open space, and the budgetary and time-related constraints associated with green public open space provision. Participants highlighted a differential and largely technocratic-driven approach to landscape development within marginalised communities. They felt that open space management and decision-making demonstrated top-down, politically motivated models that direct social-ecological decision-making within the industry based on socio-economic profiles.

...we have all these amazing precedents of how you would deal with storm water, but...because we know it will never work, in [marginalised places], you will just do it in the easiest manner [Landscape architect interviewee 15, 2018].

In addition, interviewees stated that South African urban environments are characterised by many developmental challenges, which, in their minds, render public open space provisioning a minor priority for local governments, who reportedly favour service infrastructure and social housing provision. Their narratives reflected a feeling of powerlessness to change these issues. Landscape architects appear to feel forced to comply with the current mechanisms and processes to keep their businesses afloat, reporting that this leaves little time for effective community engagement and due diligence in addressing social and environmental concerns in projects. There was an overwhelming frustration with the current landscape design and provisioning processes, mainly impacted by tight project timelines, and even tighter budgets, considered to be the result of capitalist-driven motivations within government.

Consequently, participants identified a 2) relational gap in terms of delivering services to the public. Landscape architects indicated feeling disconnected from the communities they design for, based on differences in cultural norms, language, affluence and level of education. The articulation of this disconnect is not to say that designers purposefully disregard the cultural identities of communities they design for, or challenges faced by the urban residents, but rather that they feel ill-equipped to understand or engage with communities effectively - indicating a concern for processes of engagement. Of particular importance to this study is the emergent narrative that 'we' as 'landscape architects', don't 'fully appreciate' the role that local knowledge plays in South African communities.

It's almost a lot of those intangible heritage aspects that we don't understand. Local belief systems, local stories. We don't fully appreciate the important role that they play in our communities [Landscape architect interviewee 8, 2018].

Participants made statements about not being introduced to certain ways of ‘thinking’ during their landscape architecture education, specifically regarding social and cultural considerations. In addition, they suggested that the focus on design thinking and solutions was primarily driven by a Western conceptualisation of landscape architecture, overlooking the local context and environmental and social concerns.

...but we were really only being exposed to a Western, American way of seeing things. It’s weird, because it wasn’t even like a ‘Western-South African’ version, it was predominantly American [Landscape architect interviewee 7, 2018].

#### ***4.2.2. The latent potential within the profession of landscape architecture***

Participants’ discussed their own projects that pose alternative considerations for landscape architecture praxis and the public open space provisioning processes in South Africa. We present examples illustrating the latent potential for more explicit and intentional ‘environmental justice’-driven praxis.

In the first example, we consider a more effective community engagement model. Given the standard tight budgets and short project time-frames, it has reportedly become the norm for clients to treat public participation as a hindrance, or to underestimate its value. Consequently, the process is perceived as rushed and superficially executed. In addition, it was indicated that the project team will bring an almost complete proposal to the community for approval, rather than seeking their involvement and input in decision-making. However, in the instance below, public participation was prioritised and approached quite differently:

... before you even start putting a design on paper. You go and meet the community, you know their needs, their wants. Constraints, opportunities. So your site visit is with the community. It is not just you going out, and you doing everything. Then you go and you workshop the whole thing, and [then] you design. It takes like 6 months...it’s very strenuous. But at the end of the day, you have got a product that the community, actually says, ‘you know what, I helped place that tree there because A, B, C, D’. And they understand the rational of why everything is in that park or that space’ [Landscape architect interviewee 1, 2018]

In the example above, there was an emphasis on workshoping with the community – and giving the community a sense of ownership in the process. This process brought more collaborative potential to the project, promoting long-term sustainability. Importantly, the client was also considered by the interviewee to be an important part of this success.

In the second example, contrary to the typical process - where a landscape architect is appointed as the design-agent of the client, and a landscape contractor as the construction-agent – the landscape architects were both the design-agents and contractors for the project.

...but with those two [parks] we dealt with the community, hands on, because we were also the implementing agents so, we had to build the parks, not just design them. So, in that way, that’s maybe something more unique. [As] landscape architects ...we tend to deal with the client, which is the council, and we deal with the contractor. But we don’t necessarily deal with the people on site because we [are] not with them. [In those projects], we were the actual contractors, the designer, but also the contractor. And the physical connectedness to the people, I think that made some sort of a difference, because it’s not us and them, it’s [that] we are all working together, in a way... [Landscape architect interviewee 11, 2019]

This type of immersive-praxis allowed for additional benefits to the project, including strong relational bonds with the community, rapid and responsive decision-making on site, place-specificity and co-creative processes. Ultimately the participant described a sense of ownership in the surrounding communities and a sense of empowerment among individuals. The park-development process was seen as a valuable exercise that fostered a sense of worth and stewardship.



More than once, participants highlighted the value of collaborative praxis, for promoting ownership – and thereby seeing themselves as facilitators and mediators. Interviewees indicated that the true ‘test’ of a project is its ‘longevity’, and ‘acceptance’ by a community – often seen as the result of the ‘process’ of landscape design and not just the delivery of an attractive product.

Despite some participants feeling ill-equipped to engage effectively with communities and to understand their socio-cultural and ecological needs, the narratives also suggest an awareness of, and in some cases a sensitivity to, indigenous knowledge systems (IKS), unique human-nature relationships and nuances amongst community needs.

...but nature has always been part of all the traditions and cultures in South Africa. So, I think as a profession, it's always very important to look at past practices. [Landscape architect interviewee 14, 2018].

Frustrations aside, it appeared that participants desired to understand and better facilitate community involvement and recognition in public open space provisioning, which is suggestive of the potential promotion of environmental justice.

## 5. Discussion

The ideals of promoting more just environments were evident throughout the narratives shared by participants. Below we reflect on these findings, focusing first on various aspects of environmental justice discussed by professionals, and then on the potential for more just planning and design, evidenced in the alternative approaches taken by local practitioners.

### *5.1. Aspects of environmental justice discussed by local landscape architects*

Pertinent human-centric interpretations of environmental justice were shared, including references to the ‘sins of the past’, which trace ‘back to apartheid...’ and the interpretation of environmental justice as ‘giving a voice to people...’ These perceptions show an inherent awareness of the political history of the country and its impacts on human-nature relationships, as has been outlined in the introduction of this paper (McDonald, 2002; Khan, 2002; Khanyile & Culwick Fatti, 2022). Moreover, landscape architects are acutely aware of the poor status quo of green public open space conditions in marginalised communities, and a general lack of green amenities, along with historically and politically influenced factors of difference, including race, also illustrated by Venter et al. (2020) and Khanyile and Culwick Fatti (2022). This indicates that positionalities on environmental justice in South Africa also consider the intersection between issues of race, and issues of the environment (Sze & London, 2008; McDonald, 2002). Additionally, participants discussed the differential delivery of environmental goods and services in cities, which perpetuate injustices related to the environment. Specifically, participants felt that certain green infrastructure services and innovative nature-based solutions are avoided in marginalised contexts. Reasons ventured for this include institutional factors and mechanisms such as, a) a backlog of service delivery, which consequently requires b) unrealistically short project time-frames, and limited budgets; (see also Makakavhule & Landman, 2020) and this results often in c) a preoccupation with grey infrastructure and housing – as more tangible service delivery, with more immediate time frames to see results (see also Schäffler & Swilling, 2013; and Sebake et al., 2015), which politicians can ‘claim’ for political points. These findings are confirmed by Breed et al. (2023).

Participant narratives also indicate the necessity for bringing urban residents into the process of creating equitable green public open spaces in cities, thereby challenging current ‘top down’ power relations in the green public open space provisioning process. The sentiment amongst interviewees is that public participation and engagement processes between local government

institutions and urban residents are rushed, seen as a hindrance, and often do not give the participants enough time to become actively involved in the processes surrounding green public open space delivery, and eventually, management. This has ramifications for the relational aspects and processes of environmental justice, given that Scott and Oelofse (2005, p. 449) define environmental justice as also pertaining to 'how environmental decisions are taken'. Further contributing to relational factors impacting on environmental equity, participants felt that although they were sensitive to socio-cultural differences, they were not equipped to identify, interpret, and apply local knowledge. Their statements highlight the cultural differences between the landscape designers who design spaces and the residents using them, which if not acknowledged and responded to effectively, can further the injustices experienced by communities (Titz & Chiotha, 2019), through a lack of recognition (Shackleton & Gwedla, 2021), which is also a relational factor of environmental justice, though it was not explicitly articulated as such by the participants.

We believe that it is this awareness of social and environmental inequities, coupled with considerations for 'nature', in relation to ideas about justice, and most importantly a desire to see transformation in marginalised communities, that make landscape architects a critical, but as yet largely unconsidered, role player in environmental justice discourse and praxis in South Africa. But it is also important for those who actively drive the design of such places to reflect on the status quo of their praxis, and to contribute to the discourse. This requires increased agency on the part of landscape architects (Dobson & Dempsey, 2021), in a country where their services and value are largely overlooked, evidenced by landscape architects often being brought in at the tail end of a project, as opposed to in the early planning phases (Breed et al., 2015).

## ***5.2. The potential of alternative approaches for promoting more just planning and design of green public open spaces***

Landscape architects feel that more effective design and planning can increase the quality and multi-functionality of urban green infrastructure; a win for both urban ecology and its human dependents, especially the most marginalised in a community, as argued by Brom et al. (2023). Associated with this, is the need to better incorporate residents and their environmental knowledge into the development process, for more authentic representation in green public open space, also called for by other studies (Cocks, Alexander, Mogano, & Vetter, 2016; Shackleton & Gwedla, 2021). However, it is in this regard that participants expressed a perceived inability to tackle participatory, and collaborative processes in authentic and meaningful ways. Thankfully, good examples of alternative approaches within the profession were shared, that can also illustrate the mediatory and co-creative role that landscape architects can play. In the first example, the success of a model which intentionally incorporated community knowledge from the initiation of the project, to the implementation stages of the project, was discussed. Here participants actively built their own green public open spaces, which resulted in better perceived ownership of the park by local residents. Importantly, for the success of this project, the local government client was on board, and the landscape architects took more of an active role as mediator and facilitator of the community desires. Community member perceptions were considered from the initial stages of the project. By the participants own confirmation, this was a time consuming process, but worthwhile for the success of the park. In another example, the landscape architects positioned themselves as collaborators and co-creators on a project, by extending their scope beyond the design of the project, to the implementation of the project, alongside the community, resulting in a 'physical connectedness to the people', which the landscape architect found value in. This process challenged the power dynamics of accepted public project models, in favour of collaborative efforts towards a final product that contributes meaning to the lives of local residents (Melcher, 2013; Everatt et al., 2010). Such a model highlights the value of the process of landscape architecture, as opposed to the product only.

Because it is in the process that relationships were built, and communities were empowered to change their own local environments, which can also coincide with recommendations for ownership and care (Titz & Chiotha, 2019) and successful co-development examples of green spaces elsewhere on the continent (Ogu, 2000).

Such processes and models are also discussed by Healey (2003) and Hamdi (2004), on a global scale, and are indeed in effect in South Africa too, but not on the scale, at present, that can have a noticeable effect, specifically with regards to green public open space planning and provisioning. In the Global South more emphasis is required on the value contributions that designers can make through examples such as those above, to inspire an alternative norm in South Africa and elsewhere.

### ***5.3. Furthering the potential within local professional praxis***

We hereby argue that landscape architects can contribute to more culturally representative landscapes, as called for by Shackleton and Gwedla (2021) and Cocks et al. (2016). However, unless the designers of those spaces operationalise their desire for change, culturally representative landscapes will not materialise in the public environment, since current spatial planning policy and integrated development 'participation' do not enforce such levels of engagement (Everatt et al., 2010). Within the profession, a consensus is required on appropriate and realistic steps to address the problems in praxis, which could happen through professional self-regulation in South Africa that could impact educational programs (Breed, 2022) or through voluntary associations. Landscape architects actively need to assess, take responsibility for, and endeavour to change their current ways of engaging with each other, built environment professionals, government institutions and communities (Spirn, 2005; Dobson & Dempsey, 2021). There is evidence that environmental justice, and a focus on community knowledge, needs and values, is currently considered in contemporary landscape teaching in South Africa (Breed & Mehrtens, 2021). This can contribute towards more overt environmental justice-driven praxis, which was a concern raised by some participants who had been in practice for a while. It will also be necessary for other built environment practitioners and government institutions to seek out, collaborate with, employ and involve landscape architects throughout projects (Breed et al., 2015). This is important as part of the planning of urban environments, is to provide support for critically required and improved decision making (Brom et al., 2023) and operationalisation (Breed et al., 2023) of green infrastructure in the urban landscape. This will require additional agency on the part of the landscape architects, and their professional organisations (ILASA, 2023). Should these recommendations materialise, we believe that professions related to the landscape industry can be integral to the just, environmentally sound and beneficial built environments of the future, as advocated by Breed (2022).

## **6. Conclusion**

This study brings the voices of a small but important role-player into the discourse on public open space distribution and conditions, and environmental justice, within South Africa. Despite the nuances and challenges apparent in the data, there is evidence to suggest that local landscape architects do promote environmental justice, or at least have expressed a desire and ability to do so. Examples illustrate collaborative and co-creative processes fostered through more authentic public engagement and mediation by the profession.

We suggest that the profession here and beyond should be more actively engaged in making a more intentional difference. For this to happen, the profession needs to become more explicitly aware of the environmental justice challenges in highly unjust societies, and their own potential for addressing these issues. Examples show that a more comprehensive, targeted and intentional

praxis is possible, focused on landscape architects as co-creators and mediators within local landscapes and built environment industries. This is becoming ever more eminent as the future predicts increased risks for the most vulnerable members of society.

## Disclosure statement

No potential conflict of interest was reported by the authors.

## Ethical clearance

Ethical clearance was granted by the researcher's institution. Reference number: EBIT/132/2017

## Notes on contributors

*Dr Dayle L. Shand* lectures at the Department of Architecture, University of Pretoria, in South Africa. She teaches across the disciplines of architecture and landscape architecture in the Earth Studies stream, and runs various design studios. Dayle is also professionally registered with the South African Council for the Landscape Architectural Profession (SACLAP). Since 2009, she has gained practical experience working on various types of public open space projects, including local community parks. Dayle completed her PhD thesis (2023) on the topic of 'Nature-based park making', wherein she considered environmental justice related to local community parks in South Africa, incorporating perspectives from the local landscape architecture profession, the local government, and residents living adjacent to local community parks on the western periphery of the City of Tshwane. The research project was multi-scalar, including geovisualisation at the city-wide scale, and in-depth interviews and observations at the local scale.

*Dr Christina (Ida) Breed* is a registered professional landscape architect and Associate professor at the Department of Architecture at the University of Pretoria. Her applied research spans her practice and academic experience and unites concepts of ecosystem services with human values. She contributes to the limited body of work focusing on landscape designers as actors in social-ecological systems through green infrastructure planning and design. She is a rated researcher through the National Research Foundation and has been collaborating in internationally funded green infrastructure research projects in the City of Tshwane, since 2021. Her projects aim to build greater capacity in young graduates, within communities, and across sectors, to mobilise urban socio-ecological well-being.

## ORCID

Dayle L. Shand  <http://orcid.org/0000-0002-8440-3493>

Christina A. Breed  <http://orcid.org/0000-0003-2185-8367>

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