Exploring complex storytelling through wayfinding design

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ABSTRACT

Designing wayfinding systems in the built environment presents multifaceted challenges. Designers must navigate not only physical spaces but also the intricate social and symbolic dynamics. In the context of developing a new wayfinding and navigation design brief and project framework for the Royal Botanic Gardens Victoria, Australia (RBGV), another layer of complexity is critical: Australia's (post)colonial history, and the particular colonial inscriptions that mark the botanical institution. The research team started to address the given project through the Stanford University Design Thinking (DT) 5-Step method while simultaneously questioning the appropriateness of western-centric design methodologies. Integration of the Australian Indigenous Design Charter (AIDC) and the International Indigenous Design Charters (IIDC) alongside the DT method emerged as a promising approach. How these two approaches would interplay together became a key concern. What emerged was the critical need for sharing stories and deep listening as ways toward a shared empathetic pathway between DT and AIDC. The work culminated in the integration of Australian Indigenous Cultural Knowledge[1] into the wayfinding and navigation project for the RBGV.

Keywords: Australian Indigenous Design Charter, empathy, wayfinding, storytelling, deep listening, design thinking.

Published by

SCHOOL OF THE ARTS
UNIVERSITY OF PRETORIA
FACULTY OF HUMANITIES

Original research

Stories Worth Telling - crafting stories through the art of design

DOI: http://dx.doi.org/10.17159/2617-3255/2024/n38a17

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Introduction

> We cannot change the past 250 years of science in Australia or the legacy of approaches that dismissed Indigenous Knowledge and contribution. However, we can adopt a new approach that incorporates this knowledge and perspective in a meaningful manner that can result in a more effective way in which our ecosystems are respected and managed (Summerell 2022).

> Every sign – and the height of every sign – every colour, every single design choice is a signal to people and has the opportunity to resonate with people and says something about who is welcome there (Greenwald 2021).

First Australians' wayfinding framework

First Australians understand that navigating country is about story (Neale 2020). Historically, Indigenous people have navigated the land and seas through myths and stories, enabling their ability to live on the land.[2] In Australia, Aboriginal people experience the land as a richly symbolic and spiritual landscape rather than merely a physical environment where provincial boundaries are fixed and validated by the Dreaming creation stories (Working with Indigenous Australians 2018). Aboriginal people have resided in Australia for between 50 000 and 120 000 years. As Sless (2022:141) explains:

> The ancient first Australians' "song lines" are successfully used to this day to "story" all kinds of knowledge about myths, customs, crafts, agriculture, science, resources, animals, plants, landscapes features and navigation through the vast land … first Australians created and sustained a system providing successive generations with access to a vast and sophisticated body of knowledge for which they had developed a beautifully functional wayfinding system.

Australian Indigenous Cultural Knowledge continuously develops, and it is embedded in the land and shared through generations through oral histories and creation stories. This sharing and telling of story comes with another dimension: listening. Listening comes with ethical imperatives that, as Waller (2018:228) describes, are about 'learning through listening with an intention to act, and a responsibility learned from listening'. Additionally, listening 'emphasises the importance of relationships – with self, with family and community, as well as the environment' (Waller 2018:228). Not only is this a complex practice of respect, ethics, epistemology, and more, but it has also been recognised as an ethics of approach when conducting research

with Indigenous Australians (Atkinson 2002; Waller 2018; West, Stewart, Foster & Usher 2012).

When undertaking participatory work with Indigenous people, it 'requires reflexive and critical reimaging of how design researchers engage with places, cultures, and communities' (St John & Akama 2021:16). A good starting point for researchers working with Indigenous Australians might be to consider Uncle Charles Moran, Uncle Greg Harrington and Norm Sheehan's (2018:71) advice in *On Country Learning:*

> [F]rom an Indigenous Knowledge perspective, decolonising social design commences with interactions that result from building relationships outside the human mind, because Knowledge lives in Country and has partnered with human designers since the beginning.

Australian Indigenous Cultural Knowledge systems, as referenced in the land and sky, have been passed on as oral histories and stories through generations. Design, expressed through songlines,[3] message sticks, tree markings, rock paintings, and celestial sky referencing, has performed wayfinding and communication roles for millennia. In *Design, Building on Country,* Page and Memmott (2001:17-18) write that:

> The framework of Indigenous Culture is not just a collection of songs, stories and myths from the 'noble savage', what we know now, through our genuine engagement and deep listening, is that beyond the dots in the paintings and the etymology of the languages is a network of symbols that reveal traditional knowledges – knowledges that have allowed Indigenous people to survive successfully despite major changes in climate, with a culture that is responsive to and coherent with nature. If the stories are rooted in cultural values that reinforce our relationship to nature and compel us to care for it, then this will ultimately become our collective identity.

The authors posit that this collective identity has already been serendipitously expressed through Indigenous star map/wayfinding.[4] Fuller (2016) observes that when the star map routes were overlaid over the modern road map, there was a significant overlap with major roads in use today. The first explorers in this region, such as Thomas Mitchell, who explored Australia in 1845-1846, were likely given directions by local Aboriginal people, who these explorers engaged as guides and interpreters. These directions would no doubt reflect the easiest routes to traverse and were probably routes already established as songlines. Drovers and settlers coming into the region would have used the same routes, and eventually, these became tracks and, finally, highways.

In a sense, the Aboriginal people of Australia played a large part in the layout of the modern Australian road network. In some cases, such as the Kamilaroi Highway running from the Hunter Valley to Bourke in New South Wales, recognition is given to this effect in its name (Fuller 2016). This reference to songlines is relevant to the Royal Botanic Gardens Victoria (RBGV) project's multi-level informational wayfinding aspirations and objectives. In Aboriginal culture, a songline is a story imprinted with knowledge from the past that travels over the landscape.

The concept of wayfinding, or as Mollerup (2005) describes it, as 'wayshowing', is also evident in other Indigenous cultures (Fernandez-Velasco & Spiers 2024). North America, or as First Nation peoples prefer to refer to it, *Turtle Island*, has examples of this, including the Inukshuk system used by groups in the far north of the continent. An Inukshuk is an arrangement of stones, often resembling the shape of a human. The Inukshuk is used as a navigational aid, as a marker for hunting grounds, to store food or supplies, and as a way to mark sacred ground. These stone cairns embody strong spiritual and ancestral connections and have been erected by Inuit on the Arctic tundra for many generations (Girard 2005:14).[5]

In Canada, concern has been expressed that Inukshuks's original role and use have been iconised and that media representations of it have been used out of context. The claim is that 'by iconising and corporatising the Inukshuk, it has distorted its story and symbolic narrative' (Ruhl 2008:18). This call for authentic application and cultural integrity highlights the need for designers to respect Indigenous Knowledge systems, follow design protocols and take time to learn and understand the meaning and appropriate application of cultural tropes.[6]

Knowledge management may be one way that future leaders may conquer the many challenges confronting their organisations (Girard 2005:16). However, to ensure return on their knowledge investment, applying the enablers of knowledge management is worthwhile. The Inukshuk knowledge model, which includes the enablers of technology, leadership, culture, process, and measurement, may go some way in ensuring organisations derive maximum benefit (Girard 2005:16). An example of this is the Canadian Knowledge Management Model, which argues for the need for cultural engagement protocols such as those developed in the Indigenous Design Charters (both the Australian and International versions).

How many have understood wayfinding

Some western intellectual traditions are interested in the relationship between humans and the places they inhabit, and the place of 'story' or narrative in this co-creation (Ingold 2000; Massey 2005). Wayfinding is a complex problem-solving behaviour that requires multiple cognitive resources (Vadenberg 2016:17). As such, wayfinding is not just an exercise in determining where you are going, or locating a predetermined destination. Wayfinding is also about placemaking and story-making as a perambulatory practice. This is a creative practice, a practice that involves "listening in the making".

Whilst the authors come from different historical, cultural and geographic spaces, it is fairly easy to observe some shared resonances between Indigenous and contemporary scholarly conceptualisations of these relationships between narrative, navigation, and care for land. However, how contemporary projects attend to the complex interrelationships between these dimensions of place and story is less evident. We recognise "listening" as a deficit through how many projects are structured. Porter, Matunga, Viswanathan, Patrick, Walker, Sandercock, and Morales (2017) support this perspective, stating there is 'little opportunity to "derive an indigenous world view" in placemaking'. Akbar, Edelenbos and Caputo (2020), who research "place" as a social process, argue for the importance of considering the interplays among the roles of actors (stakeholders) along with physical-spatial elements of places:

> [I]t is here, where these factors should be acknowledged in combination with others, rather than being treated as unidimensional. All this results in positive social impacts with local empowerment and enhancing social ties, reinforcing place identity, and increasing quality of life.

To work with many worldviews requires all stakeholders to employ deep listening. The risk of not taking this on as a serious and critical part of one's research methodology is 'that decisions determining the past and future or our cultural landscape are made by distant "experts" within mainstream practices' (Blundell 2020:sp). This results in what Nejad, Walker, and Newhouse (2019:sp) describe as the 'design and programming of the built environment of settler cities [which] has contributed to the invisibility of Indigenous peoples which minimises their cultural influences'.

In the discipline of design, environmental graphic design stands as one of the oldest professions, where the fields of communication design and architecture intersect,

resonating through intricate social and cultural networks to shape the fabric of our world in stories, histories, and celebrations (Calori & Vanden-Eyndem 2015:2; Gibson 2009:12). At its core, successful communication design, of which wayfinding is a key field, centres on storytelling, forging deep connections with audiences, defining the composition, components, and intended audience of a project.

Extending this frame, Hunter, Anderson, and Belza (2016:3) define wayfinding as 'a process by which people use environmental information to locate themselves and find the way from place to place'. They extend the concept to include wayfaring, the traversal between structures, or across vast expanses, utilising various modes of transport (Hunter *et al.* 2016:3). However, Mollerup (2005) prefaces this to articulate the concept of "wayshowing", which encompasses the collaborative efforts of architects and graphic designers to facilitate wayfinding. Environmental physiologists emphasise the role of mental mapping in navigation, underscoring the symbiotic relationship between physical movement and cognitive processing (Vandenberg 2016:17). The notion of mental mapping is exemplified through Indigenous Australians' tradition of "songlines", revealing how vast territories are navigated and ancestral routes preserved through oral tradition across generations.

The design brief for the Royal Botanic Gardens Victoria (RBGV)

Our research team was tasked with a project that required a way of working which drew on these various traditions of thought and practice. We were invited to develop a wayfinding and signage strategy design brief for the RBGV to go to industry for tender. This involved research, scoping and desktop review, cultural and stakeholder mapping and management, workshop deliverables, writing the wayfinding design brief, and shortlisting candidates for the tender. This project aimed to develop a wayfinding system that provided an integrated approach connecting 65,000+ years[7] of history to a contemporary, digitally connected wayfinding and interpretation system. The project's complexity was not only in the challenge of helping people get from A to B, but also in telling the rich, narrative history of the Gardens along the way – a story that is not singular and is still always evolving. Thus, we had to integrate practical wayfinding information with considerations of placemaking and digital interpretation in the design brief to help rejuvenate the Gardens' experience for a new generation of visitors.

There were numerous project aspects that the research team needed to consider in the scope of the design brief. We had to do the following: incorporate the RBGV

values – ‘Creative, Brave, Open and Remarkable’– and the RBGV vision of ‘safe-guarding plants for the wellbeing of people and the planet’; highlight the RBGV pillars – ‘People, Place, Plants, Planet’; underline the organisation’s commitment to providing evidence-based social, scientific, educational, cultural and economic benefit; and exemplify aspirational branding (RBGV:2024). In addition, we reviewed wayfinding projects from “sister gardens” worldwide and engaged with research literature on botanic gardens history. The RBGV was significantly advanced in working with local Traditional Owners across many aspects of the Gardens’ functions. Therefore, we could extend and continue with the trust and respect already fostered with Cultural groups.

The diverse stakeholders in this project represented the concerns of many different communities. These included those internal to the organisation, the executive committees, long-term staff across all aspects of the organisation, as well as stakeholders external to the business, including the Indigenous groups upon whose land the gardens rest (Woiwurrung/Wurundjeri and Boonwurrung),[8] residents who live near to the sites, international visitors, repeat and frequent visitors, and the many bilingual visitors. Each stakeholder had their own stories about the sites and brought a rich set of influences to the project.

Botanic gardens are sites of particular narratives around place, belonging, and human and environment relationships. The first early modern botanical gardens, the Padua Botanic Gardens in Venice, Italy, founded in 1545, were created with these ideals in mind (Terwen-Dionisus 1994:213). These Gardens were established to represent science and its exchange, and to foster understanding of the relationship between nature and culture. As early as 1915, AW Hill identified botanical gardens to have traditionally served economic, aesthetic, and medicinal purposes, as well as social and cultural values. More recently, botanic gardens have also been highlighted for their role in conservation and biodiversity (Terwen-Dionisus 1994:213). Whilst our understanding of these various functions of botanic gardens has been documented, the cultural complexity, particularly how botanic gardens functioned in colonial spaces and how this history is still embedded in post-colonial contexts, is yet to be fully explored. Exploring decolonisation of nature in South Africa, Cocks & Shackleton (2020:120) suggest that there is a need to:

> unlock alternative ways of interacting with nature which are held in stories, knowledge systems and experiences for living with nature … (to) facilitate transformative ways in which urban natures are conceptualised and experienced, there is a need to acknowledge that there is a diversity of ways of being in nature …no attempts have been made by local authorities to re-imagine what local urban natures should comprise by incorporating local interpretations, meanings, needs and values.

RBGV in Melbourne, Australia, was founded by European Ferdinand von Meuller in 1846. It is located on the ancestral lands of the Kulin Nation and is recognised as an iconic and historically significant site within the city. The Gardens now occupy over 400 hectares of land on two sites – the Melbourne Gardens and the Cranbourne Gardens. The collective ideals of science, economy, culture, and sustainability are also embedded in Aboriginal culture and their relationship to land and water. This way of life was practised at the Botanical Gardens site in Naarm (Melbourne) before white settlement. RBGV rests on land that, for many generations, was a traditional and highly significant camping and meeting place for the local custodians of the area – the Boonwurrung and Woiwurrung of the Kulin people. This site was an important place for clan gatherings, and clans were responsible for maintaining the ecological health of the lands. The first attempt by the English to settle this region of New Holland was in 1803, but it was not until John Batman arrived in 1835 at Port Phillip Bay that Kulin life changed significantly. The site of the now Royal Botanic Gardens Melbourne, was chosen partly because of its diversity and richness in flora and fauna.

Indigenous Design Charter meets design thinking

In the first instance, we applied Stanford University's Design Thinking (DT) 5-Step method in this task, given the general familiarity and flexibility of this working method to the broad range of stakeholders involved in this project. The design thinking method is a collaborative, human-centred approach to problem-solving that helps people and organisations become more innovative and creative. The method entails five steps: empathy, define, ideate, prototype, and test (Design Thinking 2024). These steps are not always conducted linearly and can occur in any order or simultaneously. This flexibility is particularly useful for our research team, given the stakeholder influences involved and the fact that the project requires that we work on various parts simultaneously.

Owing to the project's particular (post)colonial context, we considered that selecting specific design methods, approaches, or tools over others enabled and constrained which voices in design would be heard and how, or even whether they would be heard at all (Barham 2023). Sensitivity to the various design methodologies is an important aspect of both preventing design from collapsing into neo-colonialism and helping bring into being worlds that are respectful and welcoming of difference and interconnectedness.

Design Thinking (DT) emerges from a distinctly western design tradition that is notable for preferring the 'hegemonic paradigm of innovation in terms of its framing of who generates innovation, its values, and who benefits' (Tunstall 2023:236). Due to its commercialisation, DT is now a fundamental business literacy that has entered the business vernacular (Tracey & Baaki 2022). This provided a tangible connection with our initial processes for the multiple stakeholders on the RBGV project as they became aware of the value of this approach. As Tunstall (2023:236) states, 'values of design thinking draw from a progressive narrative of global salvation that ignores non-western ways of thinking rooted in craft practices that predate yet live alongside modern manufacturing techniques'.

The Indigenous Design Charter

The researchers sought to probe rather than ignore this position, which involved looking at concepts outside the design field to understand how we could innovate early in the design process. To do so, we interrogated this premise by applying the Australian Indigenous Design Charter (AIDC). The AIDC is a best practice guide presenting a concise, workable set of protocols for communication designers. The focus is on the design practitioner's role in developing respectful communication, consultation, and collaboration processes whenever Australian Indigenous culture is referenced in commercial applications (Kennedy & Kelly 2017).

Deakin University developed the AIDC in response to the growing demand for designers to better understand their ethical responsibilities when working on projects representing Aboriginal and Torres Strait Island cultures. An International Indigenous Design Charter (IIDC) document was also produced by Deakin University, involving an extensive research programme involving Indigenous communities, universities, and design associations around the world. The researchers' approach to the project was to overlay the AIDC with the DT process.

The ten points of the International Indigenous Design Charter (Kennedy, Kelly, Martin & Greenaway 2018) are as follows:

> 1) Indigenous led. Ensure Indigenous stakeholders oversee creative development and the design process. 2) Self-determined. Respect for the rights of Indigenous peoples to determine the application of traditional knowledge and representation of their culture in design practice. 3) Ensure respect for the diversity of Indigenous culture by acknowledging and following regional cultural understandings. 4) Deep listening. Ensure respectful, culturally specific, personal engagement behaviours for effective communication and courteous interaction. Make sure to be

> inclusive and ensure that recognised custodians are actively involved and consulted. 5) Indigenous knowledge. Acknowledge and respect the rich cultural history of Indigenous knowledge including designs, stories, sustainability and land management, with the understanding that ownership of knowledge must remain with the Indigenous custodians. 6) Shared knowledge (collaboration, co-creation, procurement). Cultivate respectful, culturally specific, personal engagement behaviours for effective communication. This involves courteous interactions to encourage the transmission of shared knowledge by developing a cultural competency framework to remain aware of Indigenous cultural realities. 7) Shared benefits. Ensure Indigenous people share in the benefits from the uses of their cultural knowledge, especially where it is being commercially applied. 8) Impact of design. Consider the reception and implications of all designs so that they protect the environment, are sustainable, and remain respectful of Indigenous cultures over deep time: past, present and future. 9) Legal and moral. Demonstrate respect and honour cultural ownership and intellectual property rights, including moral rights, by obtaining appropriate permissions where required. 10) Charter implementation. Ask the question if there is an aspect of the project, in relation to any design brief, that maybe improved with Indigenous knowledge. Use the Charter to safeguard Indigenous design integrity and to help build the cultural awareness of your clients and associated stakeholders.

For the researchers, a key interest was considering how the Charter could be implemented in the process, along with DT, as part of the methodology. In the first instance, we observed point 1 of the Charter – Indigenous Led – and, in doing so, secured Indigenous Australian architect Jefa Greenaway (Wailwan/Kamilaroi) as a lead researcher to continue the implementation of the AIDC within a DT methodology.

An important feature of both the DT method and the AIDC is *empathy*. In any design project, empathy is a vital part of the design process, as it allows designers to truly understand their users' needs, perspectives, and experiences. Zingoni (2019:353) states, 'in design, empathy is the intention behind the creative act, and without it there is no good design'. Empathy has been a well-explored rhetorical device in design for over 40 years (Frascara & Ebrary 2022; Tracey & Baaki 2022). For example, Mattelmäki, Vaajakallio and Koskinen (2013) refer to a shift in the late 1990s when designers and design researchers began examining emotions and moods, seeking connections to design solutions. This shift facilitated new design approaches capable of addressing ambiguous topics such as experiences, meaningful everyday practices, and emotions, leading to innovative solutions (2013:67). According to Tracey and Baaki (2022), empathy in design involves the ability to fully embody the perspective of others while retaining one's authenticity. However, in our experience with this project, we encountered another level of complexity during the empathy

stage: the absence of end users. Consequently, deliberation arose not only about the intended recipients of the design but also about whose views were significant to the narrative along the entire journey.

One of the ways we drew on external stakeholder knowledge was via desk research, where, coupled with previously commissioned visitor findings (Monkii 2019), we scanned sites such as Trip Advisor, Yelp, and Google to identify themes that may not have been previously elevated. This highlighted informal feedback, including that the use of scientific language on signage was seen as divisive for those not on guided tours, that a lack of bi-lingual signage increased inaccessibility for international visitors, that Cranbourne Garden site was more accessible, compared to the Melbourne Gardens owing to the visible presence of staff, and that the seasonal aspects throughout the year were not considered in the current wayfinding, meaning that visitors were not sure how to tailor their visits around seasonal programming. Comments such as one from Angela on Yelp confirmed the need for our project: 'a 1.8km walk turned into a 5.5km walk as many paths are not signposted and appear in a state of disrepair'; to Oscar who states, 'this is a nice spot, but be sure to hit the bricks before the sun goes down. I wasn't the only one stuck inside ... I jumped the gates and got this nifty hole in my trousers; the gates spikes are a bit sharp on my cheekies [*sic*] … the place could use some maps'.

This informal research authenticated the researchers' approach in the many mentions of inadequate signposting, digital presence, and omissions on site maps.

Storytelling and deep listening

We maintain that storytelling and deep listening are means of embedding empathy, which is how we proceeded to structure the research process. After the desk review, we actioned this by developing one-on-one semi-structured interviews as Dialogues and Storytelling sessions with Gardens' staff who held front-facing customer roles. Moreover, we developed and hosted a Knowledge Discovery session involving managers and executive staff and had an Indigenous Cultural Knowledge session with this same group. The Dialogues and Storytelling sessions allowed sharing of information in a one-on-one format with internal stakeholders on the project, resulting in five 25-minute sessions.

The internal project leads identified the participants – staff who had a significant personal investment in the project, but were not part of the project team, or decision-makers in the organisation. These participants' investment resulted from several

capacities, such as length of service and job roles. We used video conferencing and telephone conversations and met with staff, for example, at the RBGV Cranbourne and the Melbourne site, who had been in their roles for over 20 years and those who were relatively new to their roles. A semi-structured interview format guided these Dialogues and Storytelling sessions. We set out with four initial questions: identifying what the individual's role comprised; what the role included and excluded; how the participants considered their professional and personal experiences of wayfinding at the gardens; and participants' experiences of the practical and symbolic function of the navigation on site. We developed a rapport by listening, taking the time to hear responses, and posing additional queries. With only a short set of questions, participants were encouraged to raise issues specific to their experiences.

Listening to these perspectives was invaluable in gaining a "temperature" reading of how the current wayfinding operated from the employees' perspective. We explored various ways that stakeholders sought to interpret and understand the functions of the wayfinding to be improved, the tensions they experienced in their roles working with the other stakeholders – both internal and external – and with the variety of physical wayfinding assets across the site. For example, we listened to accounts of staff keeping antiquated signage hardware in a hidden shed on-site and stories of shared journeys with visitors to locate garden sites, resulting in delight and fleeting companionship. Fostering strong connections and sharing dialogue with individuals at various levels of the organisation we were designing for was critical in addressing the various perspectives and insights held by stakeholders, and we frame this as vital to our empathetic approach to this project.

An overarching theme that emerged from these sessions was that regardless of their role or the depth of associations with the two Gardens, individuals experienced a deep and sometimes emotional connection to the sites. Being empathetic and deeply considerate of how various stakeholders were invested in this project contributed to structuring the activities that followed. From here, we initiated two workshops, one focused on a Knowledge Discovery Session involving many key staff, and the second on Indigenous Cultural Knowledge led by Greenaway (Wailwan/Kamilaroi), who came on board for the life of the project. Where we would leave the project at the tender stage, Greenaway would continue working with the incumbent organisations to continue as the Indigenous lead, thus following the Australian and International Indigenous Design Charter guidelines. The second workshop comprised individuals in executive roles with the RBGV – the executive director and heads of departments in areas including interpretation, placemaking, scientific, financial, and people management.

This Knowledge Discovery Session was critical in addressing various perspectives in a group context. This allowed for collaborative ideation, and the breakout sessions permitted unguarded individualised responses should staff feel uncomfortable voicing contested positions in a large group with line managers. What was noted in this session was that the Gardens precinct needs to be interactive, hands-on, and attractive. Furthermore, static (signage) displays with lots of text and that First Nations representation should be a priority. Participants considered translations and consistency across all wayfinding, increased accessibility for visitors and updated information on plants vital.

Indigenous Cultural Knowledge workshop

The Indigenous Cultural Knowledge workshop, which Greenaway led, resulted in a 'truth-telling' session. Here, Greenaway shared the unique perspectives and generational histories drawn from his family's lived and Cultural Knowledge. In this session, it was not only the researchers who were deep listening and practising empathy, as all participants noted that this session became a new source of knowledge, fostering a deep admiration from those who attended. Tim Entwisle (2021), director and CEO of the RBGV, communicated the following to us:

> I'm really pleased to be working with you on this significant project for the Botanic Gardens, and I hope for our First Peoples. Jefa, I got a lot from your presentation, and I'll be fascinated to see how we can interpret this place as a botanic garden and as part of Country. I'm sure it's going to test and expand my own perspectives. Which is a good thing! - Thanks again for a stimulating and challenging presentation.

Via these participatory events, including the participatory events and the Dialogues and Storytelling sessions, and by being included and having their voices heard during the project, the staff articulated that the empathetic approach we pursued made them feel like their inputs were really valued, and that this 'value' had not occurred for them in this kind of project before. This feedback strengthened our understanding of the suitability of our approach.

Deliverables

The project's deliverables were to assist in developing the capacity in the organisation of the project, producing a cohesive research "insights" report to accompany the design brief, a design brief, inclusion and onboarding of Greenaway Architects to

the intention of the project, networking with Australian design companies for their interest in the tender, and then collaboratively shortlisting and awarding the tender. The tender was secured in 2021 by the consortium of Studio Binocular, Aspect Studios, and Greenaway Architects. In March 2024, three years after we commenced the project, the *Royal Botanic Gardens Victoria, Wayfinding & Navigation Project* was awarded best in the highly competitive Communication Design category at the Victorian Premier's Design Award, a national accolade of the highest calibre.[9]

Émer Harrington (2022), the project lead at the RBGV, offered:

> The process of respectfully imbedding Indigenous knowledge into a new environmental and wayfinding signage at the Melbourne and Cranbourne sites of Royal Botanic Gardens Victoria was complex. It involved a detailed strategic process of Indigenous led, cultural consultation underpinned by the adherence to established cultural design protocols. The project was both exciting and challenging, and the result was well worth it. We believe it will act as a benchmark for other gardens around the world. It must be said that the process of following the best practice guidelines of the IIDC did add time, and with that additional cost but most importantly it added undeniable value to the project. The installation is currently rolling out and so far, the results are nothing short of outstanding. It is certainly shaping up to be a strong case study of how to achieve sensitively considered Indigenous consultation and design as a core foundation of a project through the theory and process of design practice.



FIGURE Nº 1

Ben King, *Outcome of environmental and wayfinding signage: Melbourne Royal Botanic Gardens by Studio Binocular, Aspect Studios & Greenaway Architects*, 2023. Digital Photograph. Copyright Ben King. Courtesy of the artist.

Impact and reception

This design challenge was centred on the built environment and added to the long history of the field. Contemporary wayfinding needs to be more meaningful than a conglomerate of signs. It is fundamentally an act of storytelling; taking audiences on a journey to a destination is a vital part of the navigation of any physical or digital site. Storytelling through wayfinding is a practical way to understand and demarcate these boundaries. Locating distinct markers of the stories of place in the landscape is a process of identifying clear, functional, practical, and attractive indicators that also allow for individual creative play.



FIGURE **Nº 2**

Ben King, *Outcome of environmental and wayfinding signage: Melbourne Royal Botanic Gardens by Studio Binocular, Aspect Studios & Greenaway Architects*, 2023. Digital Photograph. Copyright Ben King. Courtesy of the artist.

The intention behind implementing a design thinking that meets the AIDC approach was to understand stakeholders' multifaceted and, at times, interlinked concerns in this project. This required the researchers to find flexible, expansive, and inclusive ways to accommodate diversity. Our approach to handling these influences was through storytelling and deep listening to cultivate empathy for others' perspectives, needs, and perceptions of what the future of the Gardens might comprise. This

endeavour aimed to reshape the dissemination and construction of knowledge within this specific context, diverging from Euro-centric design methodologies to integrate diverse knowledge centres, particularly Indigenous Cultural Knowledge, enriching both the process and outcomes of our engagement. Embracing a human-centred approach to knowledge construction, we aimed to shift power dynamics beyond merely developing a design brief, aspiring instead to illuminate a path for practitioners in colonised territories, advocating for a more inclusive and respectful approach to design practice where narrative, story, and listening are key factors. The interplay between the design brief and the resulting design outcomes is a rich area for discussion in future papers with an indication of the reception of the brief provided by Greenaway (2024), who offered his experiences of working with us on this project:

> The relationship with Deakin University in defining the RGBV wayfinding brief, simply set up the project for success and added a richness to the design response. This was done whilst anchoring in the importance of the cultural sensitivities required of the project, viscerally connected to the relationality with Country. The framework of the Indigenous Design Charter became a mechanism to benchmark best practice, towards culturally responsive design practice.



FIGURE **Nº 14**

Ben King, *Outcome of environmental and wayfinding signage: Melbourne Royal Botanic Gardens by Studio Binocular, Aspect Studios & Greenaway Architects*, 2023. Digital Photograph. Copyright Ben King. Courtesy of the artist.

Akama, Hagen, and Whaanga-Schollum (2019:59) state, 'designing among Indigenous and non-indigenous people is turbulent because we are all working with differing legacies of colonialism and entrenched systems of othering'. What we learnt was that in these explicit projects, the AIDC meets the more general design thinking methodology well, which shares *empathy* as a key pillar. Central to cultivating empathy was storytelling – out of individual stories, we create shared narratives, we make room for multiple possibilities, for unified as well as singular voices. This process extends to the final outcomes for audience experiences that receive a story, are guided along certain established paths, and are encouraged to meander and create their own pathways through the gardens and their rich history. Greenaway (2024) extends:

> In my experience, the brief had a depth and cultural integrity rarely seen in a project of this scale and type. The explicit alignment to the Indigenous Design Charter gave both structure and focus on the necessary cultural alignments, which elevated the importance to the client of the various complex layers required of the project. On reflection, the brief as defined, galvanised the entire design team towards the collective effort to create a design response befitting the nature of the design challenges required to be solved.

In support of this, the lead communication designer established through the tender, Laura Cornhill (2024), Creative Director of Studio Binocular, states:

> The brief was certainly more professional and well considered than many of the briefs we receive – and I think it reflected the considerable work which Deakin and the Gardens team had put into the project before it even reached our inbox. It reflected a client who was well established in thinking about the impact and importance of design, and it reflected a sense of integrity in the design process required for the delivery of a successful result.
>
> In particular, the detailed thinking around signage processes and sign typologies was further advanced than we'd usually see, and – as mentioned above – the inclusion of precedent examples was helpful to set the standard and 'design ambition' for the project. The inclusion of established best practice thinking and references throughout the brief also reflected the ambition for a world-leading signage system which was underpinned by academic rigour, user-centred design principles and strong strategic thinking.
>
> Overall, the brief gave the sense that the project would be driven by a commitment to deliver an innovative, world-class system steeped in local identity – and that certainly made it a very appealing project from our perspective!

Under the guidance of the AIDC, the Indigenous-led design process aimed to honour, consult, and integrate the viewpoints of Traditional Owners. This exemplifies adhering to the AIDC while engaging with relevant traditional owners, tailored to the project's location, objectives, and duration. The research revealed multifaceted insights, showcasing the effectiveness of an empathetic engagement process. Reflecting on this, the case study emerged as a valuable legacy for future endeavours, facilitating the creation of a robust design brief that improved acknowledgement and celebration of First Peoples' culture and their enduring connection to the land at RBGV sites.



FIGURE Nº 4

Ben King, *Outcome of environmental and wayfinding signage: Melbourne Royal Botanic Gardens by Studio Binocular, Aspect Studios & Greenaway Architects*, 2023. Digital Photograph. Copyright Ben King. Courtesy of the artist.

Challenges and opportunities

In complex design briefs in the built environment, it's common for projects to originate from institutions, businesses, or corporations, often lacking substantial input from community or grassroots stakeholders. This approach reflects a "top-down" dynamic, where goals are predetermined, and subsequent work aims to fulfil these objectives. Challenges arise when this method fails to adequately

represent the target market or demographic. Our contribution to this project was sought to circumvent this dynamic and involved reframing this approach, shifting towards a "bottom-up" paradigm characterised by a horizontal power dynamic. This necessitated a re-evaluation of the project brief and parameters, emphasising relationship-building with stakeholders. Central to this strategy was incorporating Indigenous Cultural Knowledge into the project's initial stages and ongoing work. Reflecting on our utilisation of the design thinking method's empathy stage, we discerned its impact on project success and its potential applicability, alongside the AIDC, in guiding others navigating similar complex projects. This approach underscores the importance of recognising that critical knowledge often resides within marginalised voices, urging designers to acknowledge their limitations and invite diverse perspectives into their projects. By integrating stakeholder perspectives, particularly Indigenous Cultural engagement, we identified omissions and expanded the known parameters, fostering a pluralistic consciousness in complex project design.

Fostering empathy amongst stakeholders through storytelling, we shifted the focus in this project from primarily solving the business problem (the design brief in the strict sense) to designing collaboratively with a critical lens to acknowledge multiple value systems and identify the hegemonic powers in force. This relational shift allows for a nuanced approach that was culturally sensitive to the project, where we prioritised dialogue, consultation, and respect, and the co-creation of our work with our diverse stakeholders. Through this process, alongside our client, we repositioned the approach to invite cultural stakeholders into the process and on the journey. We also see a mirroring of this emergent process in the outcomes for RBGV visitors. It is anticipated that this research may be a valuable resource for scholars and practitioners navigating similar challenges in design, offering insights into meaningful integration of the AIDC and fostering meaningful connections to place within the built environment.

The research process demonstrated a practice-based, Indigenous-led approach grounded in AIDC principles, all supported by making space for an exchange of story. It also emphasised effective collaboration with Traditional Owner consultants to shape system development and produce outcomes that resonate with a diverse audience visiting RBGV sites. Storytelling and deep listening not only allow a space for honouring Indigenous perspectives and protocols but also support the AIDC and design thinking stage of "empathy", which serves the design outcomes and works along the path of reconciliation in post-colonial spaces.

Notes

1. In Australia, we apply and use respectful content and language with reference to Indigenous Australians, First Peoples, Cultural Knowledge, and Traditional Owners, and we apply uppercase letters for these terms as a sign of respect. For more information regarding the use of an uppercase letter in an Australian Indigenous context, there are a few firm rules for capitalisation. Read more about this here: https://www.stylemanual.gov.au/accessible-and-inclusive-content/inclusive-language/aboriginal-and-torres-strait-islander-peoples

2. For further reading about Australia's First People, the following offer a good introduction: https://dreamtime.net.au/ https://www.indigenous.gov.au/. The Koorie Heritage Trust in Naarm/Melbourne is another excellent place to start your research (https://kht.org.au/), as is the Aboriginal Victoria Government site (https://www.firstpeoplesrelations.vic.gov.au/).

3. Further reading about "songlines" is offered here: https://deadlystory.com/page/culture/Life_Lore/Songlines, as well as in Neale, M. 2020. Songlines : the power and promise.

4. The following provides an excellent introduction to these traditions: https://theconversation.com/aboriginal-traditions-describe-the-complex-motions-of-planets-the-wandering-stars-of-the-sky-97938.

5. Further reading of the Inukshuk: The Inukshuk: A Canadian Knowledge Management Model (https://www.researchgate.net/publication/255606796_The_Inukshuk_A_Canadian_Knowledge_Management_Model) ; as well as Ruhl (2008); and Gibbons, JA. 1992. The North and Native Symbols: Landscape as Universe, in A Few Acres of Snow: Literary and Artistic Images of Canada, p.99.

6. An important site that recentres Indigenous perspectives on the field of Indigenous history is Shekon Neechie: an Indigenous history Site established by seven Indigenous scholars (https://shekonneechie.ca/).

7. For further reading: David, Mullett, Wright et al. 2024. Archaeological evidence of an ethnographically documented Australian Aboriginal ritual dated to the last ice age. Nature Human Behaviour (2024). https://doi.org/10.1038/s41562-024-01912-w.

8. For more information regarding Indigenous Australian language groups, please visit The Australian Institute of Aboriginal and Torres Strait Islander Studies website (https://aiatsis.gov.au/).

9. The Victorian Premiers Design Award. https://premiersdesignawards.vic.gov.au/entries/2023/communication-design/royal-botanic-gardens-melbourne-wayfinding-design

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