



victoria square/tarntanyangga

esd .06

victoria square / tarntanyangga esd .07

This booklet documents the environmental and sustainable design
initiatives for victoria square/tarntanyangga

dedicated to Kevin Taylor, 1953 - 2011

'his greatest and most challenging project to date'



About TiCkLe

Tickle is **Taylor Cullity Lethlean**'s vehicle for research, discourse, collaboration and innovation.

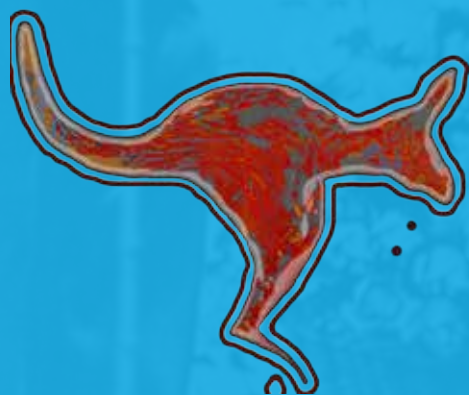
Tickle aims to challenge, generate, capture, disseminate and archive, through a wide range of media and sources research investigations, manifestos, exhibitions, lectures and symposiums and other such investigations and events undertaken by Tickle.

Tickle will generate a discourse that informs the practice's work and creates a dialogue between Tickle and the broader design disciplines.

Tickle is to be facilitated through a culture of staff involvement, shared discourse and formed alliances.

Tickle is to be facilitated through the identification and establishment of project / research relationships.

Tickle will speculate on the future of landscape architecture and emerging practice, and how TCL may continue to contribute meaningfully and challenge existing paradigms.



TARTANYANGGA

Dreaming place of the red kangaroo.

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Introduction

Victoria Square / Tarntanyangga (hereafter referred to as VST) is situated in the very centre of the city of Adelaide on the ancestral land of the Kaurna people. It is approximately at the midpoint between the gulf and beaches to the west and the foothills and ranges to the east. From its slight knoll, the Square looks down a gentle slope north to the Torrens River valley, while to the south the Mount Lofty Ranges arc around to the coast providing a distant view of hills and escarpments.

The 2009-2011 re-design for VST by Taylor Cullity Lethlean (TCL) and their consultant team for this highly symbolic site brings together the many disparate forces which have traditionally competed for the space.

This publication details the environmental strategy and its components, crossing key discipline areas pertinent to the sustainability of the square. It is current to the completion of the developed design stage in mid 2011.

The Victoria Square / Tarntanyangga project provides a unique opportunity to realise an internationally significant urban redevelopment. VST would allow Adelaide City Council (ACC), The State Government and other stakeholders to educate the community and promote sustainability in an innovative and interactive new approach to civic space. This approach strengthens the aspirations of the Square to become the primary recreational, cultural and community hub of Adelaide.

Through extensive consultation and design exploration, the environmental strategy encompasses social and environmental dimensions and processes that are unified through a cohesive design outcome (Chapter 6). The result is an optimistic design that aims to both tell and create stories of cultural and environmental significance that are relevant to place and future users of the space.

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Victoria Square 1887
View facing north showing civic buildings.

1.1 History

Victoria Square was conceived by Colonel William Light as the central square in a system of five squares and encircling parkland forming a comprehensive open space system for the portion of Adelaide south of the Torrens River.

The Post Office, Town Hall, principal government offices and law courts were grouped around the Square, quickly establishing it as the civic heart of the city and colony. This 'civicness' was defined principally by the functions in the institutions around rather than within the Square. The Square itself was used predominately for recreation once it was established in the 1850's.

Two wide main streets of Adelaide run north-south (King William Street) and east-west (Grote-Wakefield Street) through the Square. The long views to hills and horizons afforded by these streets reinforce the sense that the Square is at the centre of not only the city but the larger plain on which it sits.

The physical form of the Square has changed at 30-40 year intervals from 1836. The first major intervention was the extension of King William Street through the Square in 1883 creating four quadrants. Significant changes to path layouts and plantings have occurred more frequently at 10-20 year intervals e.g. 1910-11, 1930-31, 1945-46 and 1965-69¹.

The last redevelopment in 1965-69 was a radical departure from previous arrangements. Largely in response to car movement efficiencies the formerly rectilinear shape of the Square was modified to a diamond which allowed vehicles to easily move in a north-south direction around two large internal spaces created in the north and south. Small triangular remnants were created in each corner.

This configuration still exists 40 years later. In the ensuing period the Square has been maintained but not upgraded resulting in the gradual decline of trees, pavement and furniture resulting in an overall appearance of decline and malaise.

Since 1967, numerous schemes have been produced to transform the Square, some commissioned by Adelaide City Council, others volunteered by architects and urban designers keen to see this important site developed in a contemporary manner. The last such effort was in 2000-02 when a multi-disciplinary team lead by KBR prepared a complete redevelopment plan after considerable consultation. This scheme proposed the closure of the east-west road through the Square which resulted in the politicisation of the design and its subsequent abandonment after the 2002 Council elections (the newly elected Lord Mayor had made the retention of the road and the dilution of the plan a significant part of his platform).

The legacy of vehicular domination of VST continues to present day, at the expense of quality civic space for the public, pedestrians and visitors. This unsustainable vehicular dominance is proving to be difficult to shift. There has been increased pressure from the public through community consultation to close the Grote-Wakefield thoroughfare to traffic but this sentiment has not been reciprocated by key stakeholders.

More a park than a square, Victoria Square / Tarntanyangga is approximately 6 hectares (Ha) in size, significantly larger than Federation Square in Melbourne (3.5 Ha - entire block including buildings) but less than half the size of Hyde Park in Sydney (16 hectares). It currently offers neither the civic destination and excitement of the former nor the amenity and respite of the latter.

By positioning Victoria Square / Tarntanyangga within a holistic picture of the city, the project team sought to create a paradigm in which multiple initiatives could be appreciated for their combined value to the city over a longer period of time.



figure

Victoria Square C1911

Hand tinted postcard.



Victoria Square C1929

View facing south before the commencement of the 1930 renovation and tree felling works. ACC Archives HP1170.

1.2 Embedded Culture

Victoria Square / Tarntanyangga is very significant to the Kurna people. Ivaritji the last Kurna person to speak the language fluently is quoted in 1927 as saying that Victoria Square was the location of the Kurna people's central camp. Aboriginal cultural bearer and member of the TCL team working on the Victoria Square / Tarntanyangga redevelopment, Karl Telfer, describes Tarntanyangga as being '... the dreaming place of the red kangaroo... the sacred heart beat of the Dhanda-anya Kurna people'².

The Kurna people believe that Light was aware of the significant Kurna places in the Adelaide region and in fact sited and laid out the city partly in response to this knowledge. Karl Telfer states that '...the first seed of light planted by William (1836) has grown over time and has opened up a new pathway toward a respected symbolic layering of the Hunter / Gatherer and the Farmer / City Dweller to share in the collective memory of story and place'.



Johny WARANGULA
Bushfire Dreaming



Alexander SCHRAMM 1850
Adelaide, a tribe of natives on the banks of the
river Torrens.



Victoria Square in context



Scale Comparison
Victoria Square (white)
compared to Federation
Square in Melbourne
(left) and Hyde Park in
Sydney (right).

1.3 Principle 13

Adelaide City Council published its Vision and Guiding Principles for Victoria Square / Tarntanyangga in October 2008. Containing sixteen Principles, Principle thirteen (adjacent) addressed the Council's sustainability agenda, which formed the sustainability brief for the design team.

It was the goal of the Taylor Cullity Lethlean team to encapsulate all sixteen guiding principles in an over-arching and integrated approach to sustainability at VST; not to pursue a 'silo' environmental agenda in isolation, nor to spruik greenwashing claims that exaggerated the reality of the project. This holistic and grounded approach required constant inspiration, vigilance, commitment and considerable ongoing consultation and coordination with the twenty-three members of the design team, the client and stakeholders, and the community at large.

In the spirit of Principle thirteen, the key sustainability proposals for the desired 'green heart' for VST are exactly that: initiatives that rely upon the spirit of the community to enact ongoing activities in the square that create sustainable practices in and beyond the site. Innovative outcomes are focused through a 'new civic' paradigm that enables and encourages public participation in the space, builds social and environmental capital and creates educational activities that stem from these initiatives.

World's best practice environmental initiatives were investigated and heavily lobbied throughout the design process and have been proposed and retained wherever technical, budgetary and stakeholder willingness allowed. This publication details these strategies, particularly chapters four and five.

The inevitable watering-down of sustainability initiatives throughout cost planning and stakeholder consultation processes required development of innovation outside of high-budget proposals and best practice sustainability rhetoric. This manifested in a four-fold sustainability approach as outlined in the proceeding chapters of this publication: sustaining beauty; sustaining the civic; sustaining systems and sustaining infrastructure. Chapter six presents an overview of the overall design for the square.

2.0 Sustaining Beauty

2.1 More Than Just Looking Good

Elizabeth Meyer's essay 'Sustaining Beauty: The Performance of Appearance. A Manifesto in Three Parts' emphasises an essential link between beauty and sustainability and provides an invitation to explore the nexus between the two. Do we 'exploit' the aesthetic experiences of landscape to encourage people towards cultural, social and environmental ideals? Do we create somatic, sensory experiences of place that lead to new awareness of how one's 'actions affect the environment, and to care enough to make changes'? Are we involved and preoccupied in the 'role of aesthetic environmental experiences, such as beauty, (in) re-centering human consciousness from an egocentric to a more bio centric perspective'³.

Both Myer and Baird provide definitions of sustainability from American and world organization with Carol Franklin in an ASLA paper entitled 'Designing as if the Earth Really Mattered'.

'We need a broader and more pro-active definition of sustainable design and this is why it may be preferable to call the new paradigm "Ecological Design". This a design approach that should go beyond the modest goal of minimizing site destruction to facilitating community recovery by reestablishing the processes necessary to sustain natural, social and cultural systems'⁴.

Australian writer and academic David Tacey in *Edge of the Sacred* talks of our metaphorical need to sustain the environment. 'We cannot psychically and physically abuse nature on a grand scale and expect it to nurture and protect us'⁵. Robert Harrison Pogue speaks of our need to care for the environment and humanity by looking within and in relation to one another. He quotes Voltaire's famous words 'Il faut cultiver notre Jardin'. 'Notre jardin is never a garden of merely private concerns into which one escapes from the real; it is that plot of soil on the earth, within the self, or amid the social collective, where the cultural, ethical, and civic virtues that save reality from its own worst impulses are cultivated'⁶.

'Beauty is truth, truth
beauty - that is all ye
know on earth, and all
ye need to know'

Keats



'Humans are not rational, but poetic. For this reason, the world we have inherited is a vast texture of overlaid and overlapping poetics'

(Les A. Murray)

2.2 Beauty - Somatic, Visceral And Metaphysical

Beauty is an elusive and multi-layered term to try and define and by attempting to capture it, somehow its full resonance may be diminished, but it's worth a try. By beauty I mean the all-encompassing somatic, visceral or even metaphysical kind, rather than the purely visual. For me beauty is about an intuitive rightness or 'fit', a soulful quality that resonates a deeper appreciation, not so much intellectually, although my intellect can inform an understanding, but more in a right brained, emotive response that evokes a physical and felt sensation. The beauty of a thing is not just the thing in itself, but the association it conveys and the subsequent emotive resonance gained from the correlation.

I am interested in how other designers and writers understand beauty, particularly in relation to landscape. Edmund Burke who formulated a theory of aesthetics, beauty and the sublime states beauty creates an "energy of the mind",¹¹ that "seizing upon

the senses and imagination, captivate(s) the soul before the understanding is ready."¹² Burke believed that it was the less didactic, somatic and suggestive experiences of beauty that could provide the most resonance, particularly in relation to his notions of the sublime; the sublime being experiences of the grandeur, awe and vastness of 'nature', as well as a fear of its destructive power.¹³ This is a sensibility that resonates from my experience of working in powerful elemental landscapes such as Uluru-Kata Tjuta National Park and Flinders Ranges and other National Parks in South Australia. Sensing the sublime elicits a response of wanting to protect the purity of these magnificent environments, as well as encouraging others to do the same.

Landscape architectural academic Susan Herrington states the philosopher David Hume's argument "that it is our visceral interactions with the world that form our ideas about it. ...like other art forms,

landscapes don't always carry literal messages, but can trigger sensations. This can be both their appeal and their power."¹⁴ Ian North an art critic on beauty writes "Can one contemplate a rounded piece of granite without awareness of age, or deep time? Can one look at a ...Petyarre (aboriginal painter) without thinking of cultures? ...All of these things ...can contribute to a beautiful object's symbolic value, to the qualities that let us regards them as beautiful... Many things can build beauty, its bounty leaks." North also quotes Elaine Scarry's poetic expression of beauty as "always carrying greetings from other worlds within."¹⁵ John Armstrong concludes in his book *The Secret Power of Beauty* that the power of beauty lies in somatic perceptions of the material world eliciting a metaphysical or moral experience. "To be human is to experience life under two guises: physical and spiritual.... Thus the experience of beauty is a reflection, as it were, of what it is to be human."¹⁶

2.3 Care

On examining beauty I realised there was a nexus between a striving for beauty and a preoccupation with care and cultivation. That the two are, for me, intertwined and in concert with one another and that it is perhaps this coupling that produces a sense of 'soul'.

I like to care for both the animate and inanimate and as I've grown older I realise I may seem to actively care more than many others. I don't think it's necessarily because I embody goodness but more that it makes me intuitively and somatically feel connected to my-self and a greater whole; it makes my small pursuits feel worthwhile. I cultivate and care about our garden, my immediate surrounds, my projects, TCL's projects, the minutia of them, the environments I experience, my loved ones and family, fellow 'TCLers' and colleagues, my clients, my house, my clothes and shoes, the list goes on.

Artist Pip Stoke's recent PhD, *A Poetics of Care: Mourning, Consolation, Healing* postulates that "artworks themselves produce Care," how the making and viewing of an artwork can "evoke a state of transition such as renewal and transformation" from one of degradation, destruction, grief and mourning. That caring is a form of stewardship. In exploring care she examines what it is to be the opposite, to be care-less.¹⁷ Richard Sennett views the creative impulse about caring beyond art practice and states "To care about what one sees in the world leads to mobilising one's creative powers. In the modern city, these creative powers ought to take on a particular and humane form, turning people outwards." He sees the artist's creative role as producing an "art of exposure, an art that enables the city's inhabitants to learn(ing) from



complexity and have an understanding of the balance required within oneself as well as in the outer world."¹⁸

The art of landscape architecture and urban design demands a learning and understanding of complexity and interconnection. At its best it's a collaborative pursuit with other disciplines that involves a meaningful examination of what one knows and doesn't know and how to co-opt others in order to move forward with the knowledge that all parameters of a place and its people have been considered in an intellectual, cross disciplinary, sensory and visionary manner. My late husband, muse and business partner Kevin Taylor often spoke to me of R.D. Laing's statement "If I don't know I don't know, I think I know. If I don't know I know, I think I don't know."¹⁹ In order to meaningfully care this essential knowing and not knowing is paramount. In essence it's a pursuit towards a gathering of wisdom about one's self and one's craft

as well as the others we collaborate with. The following sections elaborating the various projects, explores the importance of collaboration in TCL's work.

Our practice approach talks of an understanding of the poetics of the Australian landscape from desert walking trails (such as Uluru-Kata Tjuta Aboriginal Cultural Centre) to waterfronts (Geelong Waterfront in Victoria or Auckland Waterfront in New Zealand). For me when TCL talks of mining our relationship to a particular project, it is through the conduit of care that we distil the essential poetics of the place, people, history and conceive a possible future vision. Richard Sennett talks of how eliciting our creative energies in the pursuit of caring is a form of desire and that "The Greeks called this desire 'poiesis', from which we derive the English work 'poetry'."²⁰

Above: Kate Cullity sweeping paving in North Terrace in preparation of the area being photographed.



Above: Adam and Eve being expelled from the Garden of Eden for being 'Careless'

Das Paradies, L. Cranach, painting, 1530, accessed 02/08/2013 <http://www.abcgallery.com/C/cranach/cranach54.jpg>,

In order to understand notions of care in more depth I found it was useful to look at the mythology of 'Cura' –the Goddess of Care and how this myth and the story of the expulsion of Adam and Eve from the Garden of Eden give us a poetic connection to the imperative of sustainability. In the Ancient Greek parable the Goddess Cura fashions a shape from clay. The God Jupiter then bestows the name 'homo' to the form as it is from the humus or earth.²¹ The myth of Care tells us as 'homo' is of the earth it is befitting that human kind care for its creator. As Cura (Care) fashioned humankind from her labour and diligence Pogue Harrison postulates that it is through labour, tending and cultivation that humans signify the 'mark of Cura'. He also talks of how Adam and Eve did not wittingly understand the importance of what had been given by being in the Garden of Eden, that they were 'careless' and so were forced out. It was only through their act of labour, cultivation and care, that Adam and Eve understood that to be fully human is to know "when things matter". They had a choice to "live in moral oblivion within its limits or gain a sense of reality at the cost of being thrown out". By being banished from a passive existence, albeit one in a paradise, they learnt how to actively care and take responsibility both for humanity and the earth. Harrison Pogue therefore argues that both stories talk of the need to be actively connected to caring.²²

There is also a link between care and fragility. The philosopher Immanuel Kant wrote of this connection, he "suspected that the beauty of a bird's song derived not just from pure aural sensation, but also for feelings of compassion for the tiny creature."²³ The desire to care for juvenile creatures and other endearing things is well known, however, in many other instances it

is only through cultivating knowledge that we realise that something or some situation is fragile. The Australian environment with its severity of elemental forces and immensity of space belies the fact that it is indeed fragile and if tampered with is easily susceptible to damage and imbalance. This was most evident when Kevin Taylor and I worked at the Flinders Ranges in northern South Australia. The national park had previously been subject to extensive damage through grazing and was now threatened by the very people who came to marvel at its beauty. I am often struck by the immense amount of work required to mend the environment or a broken cultural situation. How do we assist Australian Aboriginals retain their connection to place, to one another and to their spiritual world while they straddle the immensity of the contemporary world? I often find myself saying in regard to this 'once something is broken it's hard to fix it' there are so many small and large 'deaths' in the dismantling. The strength of the feeling realm of care provides an important conduit in mending, reassembling, protecting, redeveloping and creating the material world with environmental, social and cultural ideals. This interrelationship between care and fragility will be further explored in the section on the Uluru-Kata Tjuta Aboriginal Cultural Centre, a landscape and cultural situation where an understanding of the nexus between these concepts is fundamental.

2.4 Artistic Practice and the Beauty of Constructing Detail

In 1999 I started studying Visual Arts and as I had been wired somehow inherently into notions of beauty, I found the discourse in contemporary art theory, that art ideals privileged thinking, innovation and subversion over other forms of art, especially expressions of beauty, rather mystifying. As beauty had been linked to more traditional and classical forms of art it was viewed as unnecessary baggage and as such was a limiting factor in the progression of art. I began to question the validity of our practice, whether TCL were approaching the 'artistic practice' of landscape architecture with an over-emphasis on beauty. Was our precept fundamentally flawed and outdated?

I did however find art theory and history gave me a new conduit into landscape. I could explore landscape design and visual arts through the lens of art history. I continued to produce works that to me contained ideas about beauty, 'nature' and the human condition and attempted to link these to a greater extent to conceptualist ideas. I gravitated towards artists who explored this nexus. For example, Australian artists such as Rosalie Gascoigne, whose



art from the discarded with it's spare, spliced ordered and repetitive elements speak lyrically and suggestively of the Australian environment, and Hossein Valamanesh, an immigrant from Iran whose work (often fashioned from natural elements) portrays a sense of a quiet reverence and metaphysical connection.

An exhibition at that time entitled The Return to Beauty (held during the 2000 Adelaide Festival of the Arts) resonated as it heralded a return to the importance of beauty in art. Margo Osbourne the curator stated that many artists in fact had not rejected beauty, but had reinvented its expression through modernist abstraction, minimalism and later conceptualism. The exhibition's aim was to exhibit Australian artists that examined the connection between art, nature and tradition while seeking to "transcend tradition's limitations." The exhibition sought to bring to attention diverse works from ornamental to the minimalist in order to recognise that "beauty is multi-faceted and fed by culturally diverse traditions."²⁴



My artwork has been influenced by artists such as Hossein Valamanesh and Rosalie Gascoigne who are preoccupied with expressing notions of beauty in relation to landscape.

Right: Monaro, R. Gascoigne (1997) accessed 010813

<http://www.flickr.com/photos/1000/3343901150/>

Above: Longing Belonging, Hossein Valamanesh (1997).

A Survey, The Art Gallery of South Australia, Adelaide, 4



My art and design sensibility has been influenced by the Japanese aesthetics of Wabi-Sabi.

Far Left: Wabi-Sabi bowl, accessed 010813, <http://thespacesinbetween.org/2011/11/29/wabi-sabi/>

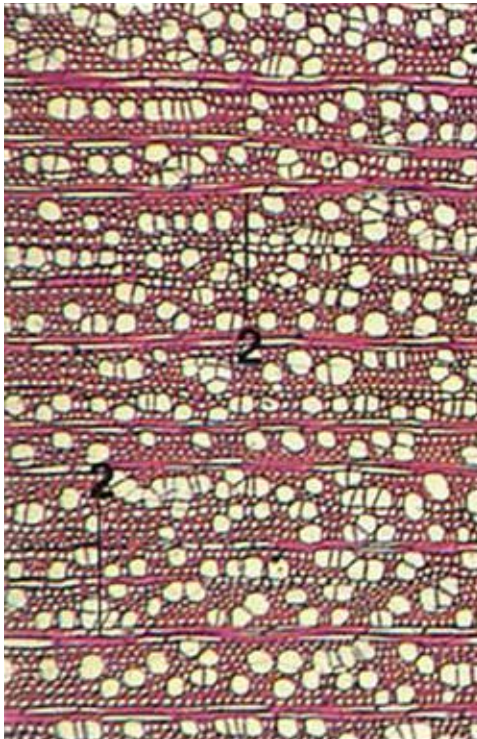
Left: Stone wall and hole, accessed 010813, <http://seekeronline.info/journals/y2002/oct02.html>

My design sensibility and art practice has also been influenced by a Japanese aesthetic known as Wabi-Sabi. I was introduced to this aesthetic during a trip to Japan in 1998. Wabi-Sabi recognizes and appreciates beauty in the imperfect, transient and incomplete. It often uses materials that are rough-hewn, humble and unconventional. It is an aesthetic whose origins are aligned to the philosophical tenants of Zen Buddhism and is often referred to as 'the Zen of things'. It is an artistic appreciation that grew out of the reaction to the embellished, glorified richness and finessing of Chinese arts of the 16th century and earlier. As with more contemporary western concepts of beauty, in the end its definition retains an air of elusive mystery and ineffability, a condition that has a soul or metaphysical quality expressing an alchemy that is larger than the sum of its parts. TCL's fascination with rusted steel's earthy mutable patina could be our most overt expression of this

aesthetic. Leonard Koren in Wabi-Sabi for Artists, Designers, Poets and Philosophers compares and contrasts Wabi-Sabi and Modernism. He found similarities in the use of abstraction, form following function and a distaste for ornamentation and embellishment. He noted that Wabi-Sabi and Modernism differ through modernism's principles of domination over nature and its preoccupation with geometric technological organisation and precision.²⁵

A TCL project that explores the aesthetic and material sensibility of Wabi-Sabi is Fire Stories, an installation for the 2004 Chaumont sur Loire International Garden Festival in France. In this project I worked as both artist and designer, living in the nearby village for three weeks constructing the installation on site. Fire Stories examines and abstractly narrates how the seemingly chaotic and destructive elemental force of fire orders and replenishes the Australian landscape. The design is composed of a number of interrelated elements, each expressing different stories in relation to fire. The materials selected reinforce the raw elemental quality of effects of fire.





Above: A microscopic image of a cross section of plant material.



Above Right: A laser cut gate at the Taylor and Cullity Garden inspired by the microscopic plant image.

Other artistic influences include a background in biological science, particularly an intrigue of the scientific world as seen through the lens of a microscopic, the abstraction of elemental landscapes, and the pull and fascination towards repetition, patterns and multiples. As my art practice is primarily a personal pursuit and in contrast to the public life of a landscape architect, my own personal life and the events which have shaped it are reflected in the artwork produced. In 2009 I exhibited artworks in a group show entitled *Matter*, at Light Square Gallery, Adelaide (as part of SALA -South Australian Living Artists). As the title suggests it was about elemental matter and 'what matters'. Along with the aforementioned preoccupations the three works were centered on a 'Memento Mori' of my inability to have children. This mourning aspect of the work was not in the accompanying brochure and is not necessarily information essential to accessing and appreciating the works, in fact it was not in my consciousness when

Left: *Fire Stories*, International Chaumont-sur-Loire Garden (2004) The installation explores the destructive quality of fire and the way it orders the Australian landscape. This is expressed through the threads of material presence and narrative.

1. Kate Cullity working on site blackening branches.

2. The scale of the tall eucalypt forest is conveyed via charred poles (approximately six metres in height). Visitors are marked by charcoal upon touching the scarred surface.

3. At the base of the poles lines of eucalypt seedlings appear, a monoculture of plants,

abstractly representing the regeneration that occurs after a forest fire.

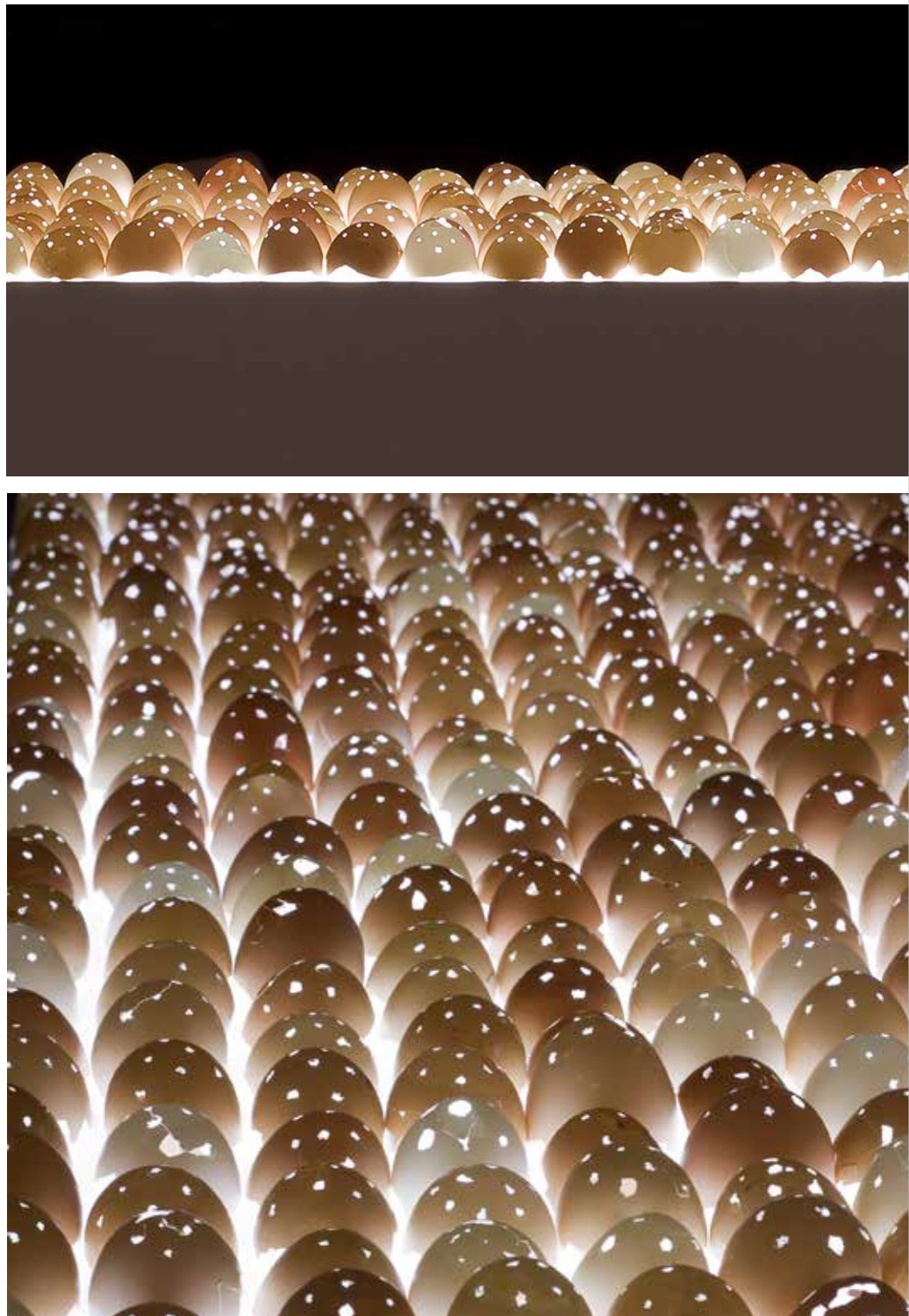
4. The ends of the lines contain embedded and illuminated cases that house sculptural installations of Australian plant material that express the varied effects of fire both culturally and environmentally.

5. This 'forest clearing' is encircled by an elliptical form composed from a tracery of blackened branches. The outer section represents the luxuriant proliferation of plants after fire. A continuous ground plane of crushed and compacted red brick simulates the fiery red sands of central Australia.

I first started making a smaller version of the work entitled *Broken* in 2000. It was not until the work was complete that its meaning came to consciousness. Somehow the care and time taken to pierce the eggs, compose them into exacting lines and illuminate them had a transformative effect. Viewing them as an abstraction of my personal memory of loss, as well as a creation of an otherness, perhaps a metaphoric glowing metropolis or an undulating parched landscape was somehow rejuvenating. The care of composing the work provided consolation. The use of light as a metaphor for 'momento mori' comes from an appreciation of a body of work by French artist Christian Boltanski. In the 1980s Boltanski produced a series of installations of photographs of Jewish schoolchildren taken into concentration camps during WW2. The portraits are interconnected by wires with each portrait lit with a naked small bulb. This illuminated shrine speaks not so much of their death but more of their precious short lives.

Right: *Reproductive Series; Broken*, Kate Cullity, 2009, Matter Exhibition, Light Square Gallery, Adelaide.

The work is influenced by my attraction to the power of multiples and the transformative effect of illumination.



A photographic artwork entitled *P Stops* (approx. 1995 - ongoing) recognises my fascination with, and attention to the detail of viewing ground planes, particularly those in dry and desert landscapes. While travelling by car in these landscapes I am struck by the immediate shift of focus that occurs when getting out of the car during long drives to have a 'pee'. How the grandeur of the landscape as witnessed from the car is transformed into one of observing the intimacy and minutia of a particular ground surface. Squatting close to the ground and being physiologically predisposed allows a meditative revelry for what is immediately at close range in-front of me. The scenes somehow present like a scientific quadrat or perhaps a *wunderkammer*; a precious, perfectly placed installation of found curios. I have been photographing these vignettes for many years and there is always a quiet magnificence and rightness to the scenes, as though I have discovered and unearthed a truth, somehow everything is in its place. Similarly, Laurel McSherry's essay *Attention to Objects* describes her experience of 'walking a line' – a transect, as part of a group examining archaeological artefacts in a landscape on the outskirts of Rome. She expresses a similar attention to detail and how this enables one to "see that certain coherence that is landscape." For McSherry, "line walking was a first step, enabling me to contact a world exuberant with detail and alive with individualities. To look on scenes with the intent of grasping wholeness, to wonder how the simple becomes the extraordinary as a result of its context.... Paying attention – remaining open minded – is exhausting. But.... observing keeps me mindful of the potential qualities laying just beyond surfaces, and the possibilities of one day glimpsing a world outside customary generalizations, prejudices and schemes."²⁶



P-Stops, Kate Cullity 1995-ongoing

Above: A close up 'meditative' view of the ground plain while squatting to have a 'pee' while out in elemental landscapes.

2.6 The Mosaic Garden : A Garden In The City

Tarntanyangga/Victoria Square

'Whether they are situated at its centre or at its margins, gardens have their proper locus in the polis, which for Arendt serves as a stage for human action.... They never exist independently of a world shaped by human action'²².

The current Victoria Square has gone from a place of prominence, parterres and promenading in the 19th century to a degraded large unglorified round about , a rather 'care-less' symbolic centre of the city. TCL have consciously imbued the design with a sense of care; one of rejuvenation and connection to sustainable ideals. Our aim through the inclusive design process with client, the community and the team of consultants, as well as the design itself is to transform the square into the real heart of the city.

The focus of Victoria Square and its connection to notions of beauty and sustainability is concentrated on the southern garden and the art projects located within this garden.

The square within the perimeter roads is contained by a Perimeter Garden of a loose copse of majestic, tall, and ghostly Lemon Scented Gums with an under planting of Cycads ; a reference to the square's Victorian past. SueAnne Ware writes that while these edge plantings in form acknowledge a colonial history, the planting palette of quintessentially Australian gums 'challenges the squares gardenesque legacy and offers a contemporary, post -colonial take on Australian public gardens. The garden sits centrally in the southern space embraced by the two arched permeable arbours. These prominent armatures take their cues from the distinctive horizontal geographical character of Adelaide; the experience of parallel hills, plains and coast'²³

Once it was decided to include a substantially sized garden within Victoria Square (a large garden was not a given in the brief from the client) we looked for precedents of similar sized gardens that were within cities not including botanic gardens. We found very few, with Kathryn Gustafson's Laurie Garden within Millennium Park being the most relevant. Many parks, squares or gardens had within them planted areas but not a garden as such.

In the Masterplan Report we talked of a Garden Haven, an engaging respite in the city. The following is a description from the report.

- A garden that captures the essence of the Adelaide and South Australian landscape through the use of indigenous and native plants.
- A new experience of urban sustainable living through appropriate use of water, recycled materials and planting.
- A garden of respite and escape
- A new immersive urban garden experience that captures the imagination
- Gardens offering , beauty, sculpture and a variety of artistic expressions
- A rejuvenating place to go for lunch or just relax

Conceptually our starting point was looking at the patterns created by the aboriginal practice of mosaic burning or fire stick farming. An artwork from the South Australian Museum by Johnny Warangula Jupurrurla (a Papanya artist) reinforced this notion. The metaphor of the burning patterns speaks of ecological connection, a 'mosaic' of habitat and microclimates, both within the garden and radiating out to the broader landscape.

'The Mosaic Garden is a vibrant and artistically interpretive mosaic of the plants and associated landforms of Southern Australia...'

The following description of the garden is from the Masterplan Report. 'The Mosaic Garden is a vibrant and artistically interpretive mosaic of the plants and associated landforms of Southern Australia. Plants indigenous to the Adelaide Plains and hills region radiate out from the Kaurua Centre of Culture (renamed in Detail Design as Mullabakka meaning shield) reinforcing the site's connection to its place of origin. Meandering pathways are reminiscent of the branching tracery of creek systems common to South Australia. 'Garden Clearings' are carved out of the native garden; a reminder of the history of land clearing for productive farming. In contrast to the unsustainable practice of previous generations these 'clearings' support and sustain both the community and the land are host to a number of activities. A number of spaces contain 'follies' or small structures while others demonstrate environmentally sustainable practices as well as relating to the nearby markets. The southern end of the garden is given over to the purification of water collected from the square and the surrounding area'²⁴.

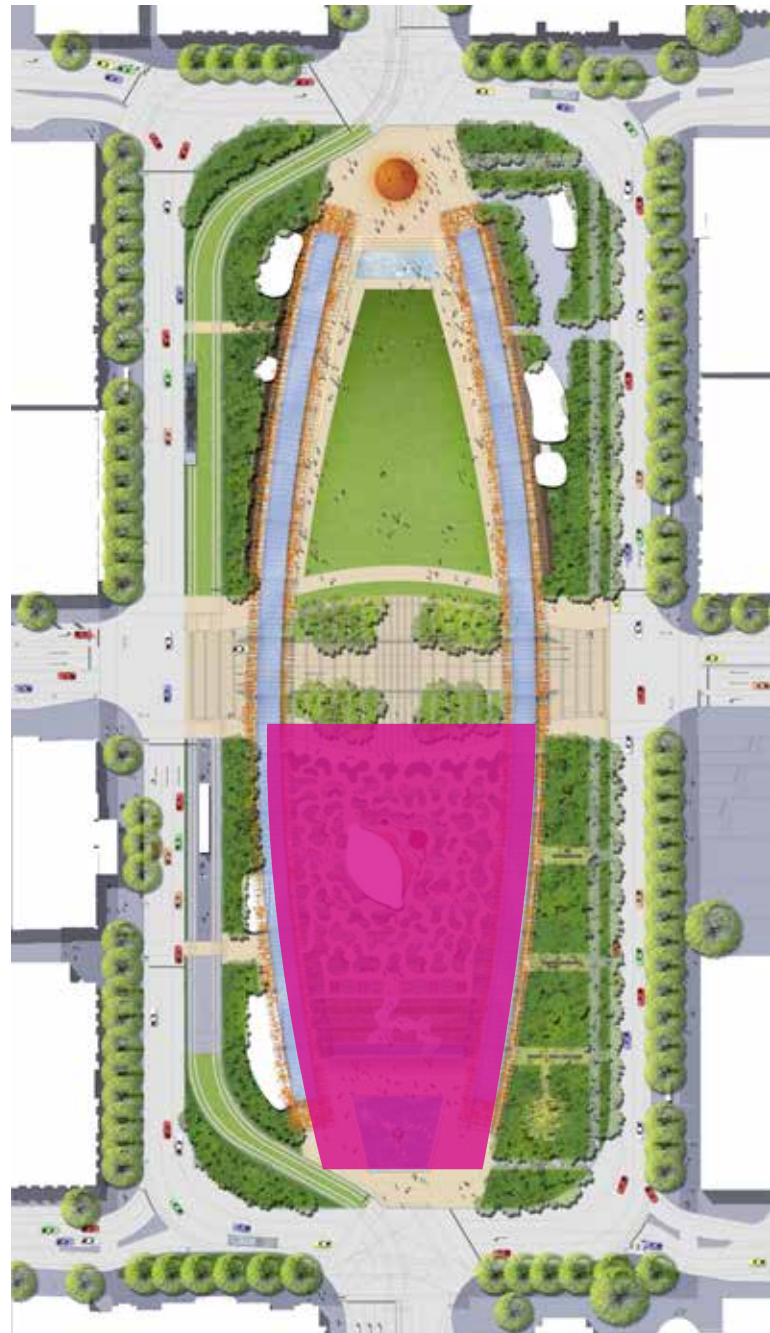
The landforms and planting design in loose swaths of varied colours, textures, moods and seasonal interest is not 'naturalistic' and deliberately shows the care and

cultivation of the human hand. Ron Jones quoted Pogue Harrison's observation that gardens 'give order to our relation to nature'. The objective in this garden is to be immersed in a particular abstracted beauty. A rejuvenating experience that will hopefully allow those who experience it to find reverberation in the sustainable ideals that underpin the design; that is a garden that 'orders nature' in a sustaining way. For as Pogue Harrison goes on to say 'It is our relation to nature that defines the tension at the centre of which stands not only the garden but the human polis as such'²⁵.

During sketch design the garden sank on an even grade 1.5 metres from north to south to reinforce the experience of being nestled into the earth. For the Adelaideans who live on the flat plains even a slight change in level provides an 'otherness' and the unexpected. 'It is a fold in Adelaide's flatness'²⁶. To further emphasise a sense of being earthed. The ground plain of Kanmantoo Setts (a local bluestone whose exposed surface glistens with metallic colours) is laid with slight undulations which rise at the garden bed edges.

We revisited the idea of mosaic and realised it to be a morphed form of parterre. Canadian Landscape architect and academic Phillippe Poullaouec-Gonidec believes 'the parterre proposes an experience, that of another thicknessin which the earthbound gaze gets lost in the infinite meandering of its compositions'.

The parterres in the 16th to the 18th Century were formal, hierarchical, directional and limiting in the behaviours and activities they supported. By gradually morphing this tight geometry into a set of amorphous shapes we arrived at a pattern which has greater special variety, allows multiple journeys and supports more flexible open programmatic options. These characteristics fit with the aspirations of the 'New Civic'; a public



The Garden
Highlighted pink.

space which has a flexibility, spontaneity and unpredictability. The 'New Civic' allows for diversity and encourages the meeting and interaction of difference, as well as supporting and being supported by changes in mobility due to new technologies of communication. The multiple egalitarian pathways carved out of the amorphic voids also speak of an aboriginal way of moving through landscape, one which moves around and between vegetation, particularly in dryer regions where plants are spaced apart and 'sit in their own shadows'. This way of navigating provides the opportunity for endless journeys in both time and space. It allows for wandering rather than a direct destination. The exaggeration of distance and space creates an immersive timelessness, a feeling of being a little lost. It creates an inner sense of time one which allows for reverie, imagination, and contemplation. By being lost in time and space we are able to find new ways of perceiving. Franco La Cecla is quoted by Francesco Careri as stating that 'In primitive cultures... if someone never gets lost he never grows up'²⁷.

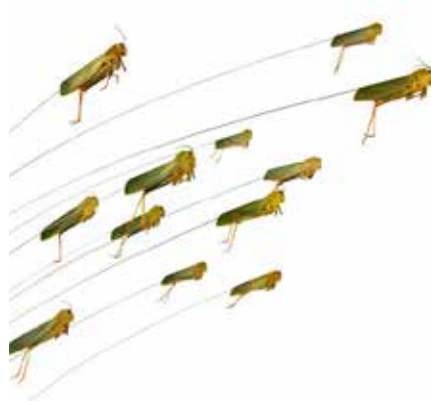
In the sketch design stage we also reassessed our conceptual underpinning for the design and wrestled with the size, form, elements and materials present in the garden. The design was in a constant state of flux. One by one various elements were removed until the design came to what was believed to be the essence on this site; that of an immersive garden experience within a city. While conceptually the 'Follies' in the 'Clearings' felt strong and provided for various programming, the number required to make their inclusion resonate, along with the enlargement of Mullabakka, resulted in a squeezing the immersive garden experience. At one stage the amorphic shapes straddled the arbours and extended into the perimeter garden, but this weakened the square's edge. Other

iterations included shaping the bio-retention and productive gardens in the same amorphic garden bed shapes as the overall native garden. We settled on locating both at the southern end in a more agricultural linear pattern befitting their functional tasks. This provided a balance and tension between the immersion of the mosaic parterre native garden and the more open linear structure of the other two garden types. A serpentine steel bridge across the bio-retention and wetlands provided a strong calligraphic gesture. Another intervention that was attempted was to carve a waterway in a straight line through the garden. This was received by Karl Telfer (a Kurna consultant) and a number of others as a violent European slash through the site. It was removed.

The balance of elements that was sought was akin to the 18th century painter William Hogarth's expression of beauty. John Armstrong in *The Secrets of Beauty* states that in Hogarth's quest for beauty it was found to be in elements that 'reward our desire for variety and respect our need for uniformity – perfectly balancing stimulation and repose, excitement and security 'The experience of beauty is the mid- point between boredom and exhaustion'⁵⁴. Our struggle was about finding that balance to allow immersive experience not as an end in itself but also to enable the sustainable ideals of 'recognition, empathy, love, respect, and care' to have a greater amplitude and reverberation²⁸.



James Darling And Leslie Forwood



Maria Fernanda Cardoso



Rob Kessler



Julie Blyfield

2.8 Ecological Interventions

Within the Southern Native Garden and possibly the Perimeter Garden there is the possibility for a number of 'scenarios or insertions' which experience this place as habitat. A number of possible artists and works are as follows:

- The woven Mallee root sculptures of James Darling and Leslie Forwood would work wonderfully in a garden filled with living mallee trees. The works could be woven within and through the garden or be constructed as part of the Productive Garden structures where the nature of this work could suggest vast containers or baskets of edible food or indigenous seedlings.
- An insect garden could be created that amplifies the presence of insects and creates sounds of their presence in evocative and surprising ways, for example through fine filaments, the ends of which emit sounds with tall moving, reed-like LED lights on the end for night-time movement. Artist Maria Fernanda Cardoso who works with insects and their worlds has agreed to be involved in such a work.
- An audio visual component set in a treed areas of the site could also creatively make visible and present birds of the garden's

habitat.

- A Pollen Garden, for example stems with tiny screens likened to flowers revealing pollen from electron microscopic images.
- A type of seed bank or collection of seeds of plants within the garden to enable an experiential knowledge of the immense variety of seeds and their forms. The structure to house the seeds would be some form of glass containers evolved in collaboration with local and internationally recognised glass artist Gabriella Bisetto who has agreed to work in collaboration with artist Janet Laurence and other members of the project team. The seed bank would be a space one could enter, made up of either tall transparent wands gathered closely together or a series of planar layered glass walls housing the seeds. It would function as an informing immersive botanical space, one of spatial experience and botanical discovery.

These inserted works amplify aspects of the garden, they educate non- didactically and communicate and reveal usually hidden scientific knowledge. They enable art to explore and reveal the invisible life force we are within. All of these insertions could offer local artists and designers, opportunities to

realise these works, not as isolated artworks but as integrated and collaborative works within an ecological theme.

3.0 Sustaining the Civic

The significance and symbolism of the Square The significance and symbolism of the Square resonates with the Adelaide community and stems from the echoes still heard from the 19th Century and early 20th Century importance of the Square as the centre of governance, law and order, and communication. It is also due to the Square's location in the geographic centre of the central city. Even though the main activity precinct of Adelaide is in the north east, the notion of the 'city centre' still evokes Victoria Square / Tarntanyangga as much as the more popular retail, entertainment and commercial zone centred on Rundle and Grenfell Streets.

In undertaking the master planning and subsequent detailed design of the Square, TCL questioned who constituted the community of interest in this project and how we could gain access to their thoughts on the site's future. Some clues as to the broader community's aspirations for the Square were gained from the extensive consultation undertaken as part of the previous master planning process in 2002. In addition, Council had undertaken a community design competition for the site in 2009 which had resulted in a large number of ideas for possible changes to the Square.

During the early stages of the master plan, Council commissioned a market research process to make contact with a

representative sample of Square users and non-users to ascertain their attitude and preferences regarding both the existing Square and a redeveloped space. This proved a valuable exercise in providing a rich array of information useable by the design team.

Rich layers of histories and imaginings to the collective stories and memories of Victoria Square / Tarntanyangga were gathered, creating a rich and complex picture of the Square which was more than the official history of the place. This provided fertile ground for conceptualising the future of the site.

This web of information about the site which contains facts and speculations about the past and current uses, both large spectacles and the everyday interactions of community members pre and post settlement, was an important contributor to ideas concerning the Square's future form and program. The coalescence of stories, memories, dreams, imagination and facts are an important moment in TCL's design process. A diversity of stories and memories, and a champion of dreaming are important ingredients in complimenting the facts and feeding the imagination of TCL's designers, particularly in large civic and symbolic projects such as Victoria Square / Tarntanyangga where functional requirements are only one part of the brief and solution.

The New Civic' describes an experience of public space in which exchange, interaction and acceptance of diversity and difference are the defining characteristics.

3.2 The New Civic

The term civic implies a quality beyond 'public' i.e. of special significance in the life of the citizens of a particular city. These are spaces which are often of symbolic importance, representing the history and future aspirations of the community. Civic spaces house both everyday functions and have a wider role as the venue of community expression through festivals, markets, performance, celebration and victory, mourning of death or defeat, and protest against government decisions. The meaning of these places is therefore multi-layered and complex. Their story is written in both newspaper headlines and the casual text message of a passer-by. The physical form, overall appearance and use of civic spaces is often an indication of the health of their cities, such is the strength of their symbolism.

Research into civic design for Victoria Square / Tarntanyangga unearthed a body of investigation termed 'The New Civic'. This describes an experience of public space in which exchange, interaction and acceptance of diversity and difference are the defining characteristics. These are places defined by the experiences they facilitate, as much as their spatial form²⁹.

The 'new civic' is a fresh approach to the concept of a public domain created by informal people experience rather than formal urban planning. It is a simple and profound proposition that people make place from space.

The 'new civic' shifts the paradigm of urban culture from grand city symbols, strategies and master-narratives to many stories about personal and collective memory of its citizens, interpreting place through spatial experience and interaction with others. Place becomes experience and not thing. We ask not what is this place but what is taking place here?



Victoria Square 27 November 1906

Postcard showing the unveiling of the Colonel Light statue by state Governor Le Hunte.

The new civic privileges story-telling and memory over official histories, seeking a multi-layered starting point for design thinking. The everyday interaction is as, or more important than the spectacle. Interaction with others and a diversity of publics is favoured over fragmentation of space.

American urban sociologist, Richard Sennett, in discussing the potential benefits of interaction, exchange and diversity in public spaces, encourages places which facilitate '...an engagement with difference, an acceptance of impermanence and chance'³⁰. To Sennett, such places provide the full benefit of modern urban life by turning people outward and offering them '...in the presence of difference...the possibility to step outside themselves'³¹.

Relating this approach directly to landscape architecture and urban design, Hajer and Reijndorp in their book 'In Search of the New Public Domain', define public domain as those places where an exchange takes place rather than a meeting. Such places '...facilitate 'cultural mobility'; places where people can have new experiences, where a change of perspective is possible'³². They describe public domain as places with multiple and incongruent meanings, where a shift in perspective through the experience of otherness is possible. Such spaces have overlapping social realms and contested borders, as described by Sennett in his phrase 'The social centre is at the physical edge'³³.

De Certeau, in his book 'The Practice of Everyday Life' describes the opposing forces which shape our experience of urban spaces. Institutions commission and

control such spaces and adopt 'strategies' which seek to normalise and homogenise behaviour, while citizens employ 'tactics' to subvert this predictable band of experiences to create their own spontaneous journey³⁴.

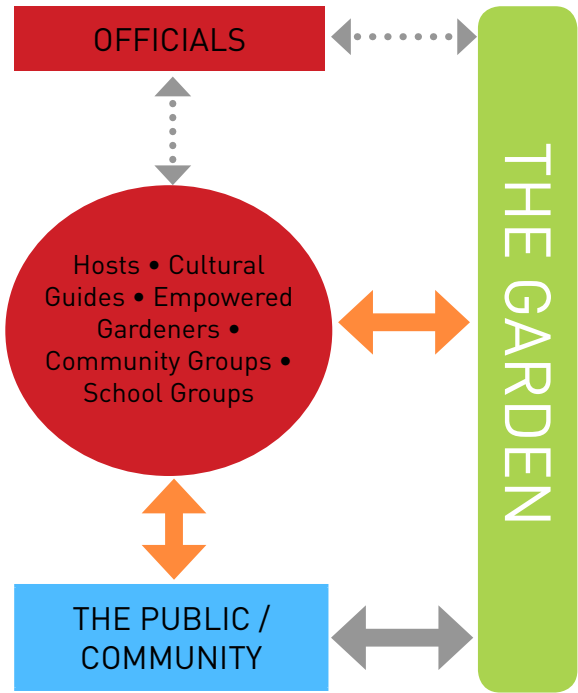
Boyer, de Certeau, Sennett and Hajer and Reigndorp are all calling for a public domain in which individuals experience the intense reality of the city through personal interaction with others. Along with philosophers such as Paul Virillio who has written on the cultural and sociological implications of digital technologies, they are responding to the trend throughout the 20th and early 21st Centuries of rapid urbanisation thrusting more and more people into close proximity with 'strangers'.

Notions of ideal public spaces based on the old squares of Europe are not necessarily relevant in new cities and their suburbs. This is especially true in societies where traditions such as passeggiata do not exist and public space is not experienced as a place of regular social interaction. This situation is further exacerbated by the now ubiquitous mobile phone which encourages communication beyond the present place. While this communication can assist in spontaneously bringing people together in ways previously not possible, it can also result in greater isolation from the immediate presence of the person or tree immediately alongside us.

The experience of the New Civic is therefore an affirmation of the existence and worth of the 'public' in all its dimensions. It is an attempt to redefine public behaviour and by implication public space in response to contemporary tendencies toward individualism and social isolation.



What? When? 1850
FDJBHGFHDGD;FSAH.



The Populated Garden
a diagram showing the relationship between official, ambiguous and pulbic response in the Garden.



3.3 Ambiguous Presences

Each of the subspaces within the Garden present opportunities for interaction between not only acquaintances, but with strangers. The entire garden, but particularly its subspaces is a rich source of sensory stimuli, and layers of information; about Aboriginal culture, food production and water recycling in urban environments, native plants and biodiversity in cities.

The challenge is how to exploit the inquisitive urge of visitors to create real social interaction rather than passive reading of signs or brochures, or alternatively turning the gardens into non-participatory spectacles. It was felt that while the physical environment would encourage interaction, there was an opportunity to introduce a third genre of person into the Garden. Neither a member of the 'public' or an 'authorised' employee of Council these individuals would have an ambiguous presence – empowered gardeners, cultural hosts. They inhabit the Garden and undertake a wide range of tasks, some expected [gardening or guiding

a school group] others surprising, a little unsettling (starting a conversation with a stranger, singing, offering free food from the Productive Garden). They are briefed with opening the possibility for the unexpected and spontaneous, with creating an environment where strangers might engage. Not to create a spectacle to be passively observed, but rather to encourage direct participation in the life of the Square and its community of users.

Discussions with Council volunteers and volunteer organisations (such as Conservation Volunteers Australia) regarding this proposal have been met with excitement and enthusiasm. Similarly, the education unit of the adjacent Water SA building are equally enthusiastic to bring their students into the Garden to engage with Mullabakka (Karna Centre of Culture) and the Productive and Bio retention gardens.

The prospect of school goers (both young children and adolescents) mixing with lunch-time workers, tourists, resting shoppers, the many older users of the adjacent Central Market, and Aboriginal people attracted by Mullabakka makes for a mix ripe with potential for experiences of cultural mobility where there is an opportunity to see things differently and accept the challenge to relate to others. The ambiguous others – the empowered gardeners or cultural hosts are there to stir the mix just enough to make the experience more enriching and memorable.



Mullabakka
Kurna cultural centre.

3.4 Kurna - Mullabakka - Living Kultja

The 'Kurna Centre of Culture' have been developed to realise a more holistic and multifaceted place of 'Mullabakka' - a unique place for the living kultja of the Kurna people as hosts to all Aboriginal people and people of other cultures.

It is important not to see Mullabakka in isolation but in the broader context of Tarntanyangga/Victoria Square as a whole. Mullabakka is the nerve centre of a web of Aboriginal presence across Tarndanyanga/ Victoria Square and in close conversation with all other cultural interpretation and experiences.

What is Mullabakka?

Mullabakka means 'dry shield' in Kurna language.

The Kurna shield is one of the most powerful symbols from the old world and has layered meanings from settlement to the present day. There were three different types of Mullabakkas used by the Kurna.

The Mullabakka was used to defend country from invading and uninvited tribes. The Mullabakka is also a symbol of authority and protection. The powerful symbolism of a giant Kurna shield in the centre of Adelaide emerging from the landscape will have a profound effect for Kurna, other Aboriginal groups and the City of Adelaide. Mullabakka is the ideal name for this unique place for defending and renewing Kurna kultja.



What is Living Kultja?

The people are the Living Kultja. The Kurna people are the knowledge brokers, transferers and activators for the coming generations.

This living kultja - the knowledge of country, ritual, story, song, custom, memory, place and belonging. It is also the dynamic cultural tourism that will emanate from Mullabakka. Through appropriate protocol and guidelines of respect, we will ensure Aboriginal people are the guides to country. This has been acknowledged in many other regions of Australia but is not yet appreciated in South Australia.

Aboriginal introduction to the unique South Australian country - coast, plains, hills, ranges, outback, desert is integral to the overall experience and provides an opportunity to begin to learn how to live

within country, not upon it.

Mullabakka will be the cultural/spiritual base for the Kurna people of the Adelaide plains. They will be hosts to peoples from all over South Australia, Australia and the world.

Mullabakka is an experience and not the name of a building!! Like the shield - it's not the thing itself but the experience of using it.

Mullabakka proposes exploration of various forms of medium and message - what are the types of stories and the best ways to tell them in Mullabakka? Some of these include:

- A Spirit wall - to tell big stories of

landscape, journeys and spirituality;

- Storypds for people telling stories - eyeball to eyeball, the intimate connection with a person talking to you;

- Cultural mapping - interaction with country - songlines and journey cycles;

- Performance with multiple projection of imagery.



Old Kurna shield 1800s Mullabakka - recreation 2000 wood & ochre Mullabakka - recreation 2000 stainless steel Mullabakka - 2010s steel roof

3.5 The Spirit Of Place

The Spirit of Place of Tarntanyangga/Victoria Square is expressed through the symbols of Earth, Fire, Water, Air, Light. These natural forces provide a confluence for the many ecological and cultural meanings for Aboriginal and other cultures.

Mullabakka is unique because it starts from the local with Kurna, the specific spirit of place in the centre of Adelaide - the very spot where Kurna people brought the spirit fire to for Kurna Palti Meyunna the ceremonial mound and meeting place. This local focus is important - rather than a generalised and 'tourist' image of Aboriginal culture of dot painting from the Central desert. From the specific of central Adelaide Kurna place Tarntanyangga - stories will radiate out to explore Country of greater Adelaide, the plains, hills and journeys throughout Australia.

Integral to the sustainability of the square is expressing the sense of 'place' (genius loci).

The expression of place and in particular, southern Australia and the Adelaide plains, is intended to aid the understanding and appreciation of the local environment of Adelaide and South Australia in an otherwise urban environment. It is intended that this approach to landscape will form an informative and educational story and experience and this approach is particularly evident in the southern garden of VST. Spaces that specifically respond to this approach include:

- water sensitive urban design (WSUD) wetlands & reedbeds;
- Xanthorrea edges to bioretention;
- Mallee trees;
- Kurna 'useful' plant species;
- bush foods;
- agriculture/production;
- vines.

Victoria Square / Tarntanyangga is located in the heart of the city. It is surrounded by some of the leading sustainable buildings in Australia (VS1, the SA Water headquarters is a 6 star rated building) and is central to many of Adelaide's cultural attractions (Central markets, Gouger and Grote Streets). The design captures these opportunities such as the connection with market plaza. Consultation with SA Water's education program has confirmed their desire to utilise the square in their existing program (which partners with the Department of Education and Children's Services (DECS)).

3.6 Interpretive And Interactive Projects

These three projects share a particular focus on the pervasive theme of the 'new civic'. Each explores ways to create situations to respond to the spatial practices of the people engaging with the place itself. They are also multimedia in the broadest sense possible - from historic texts engraved on metal panels or amplified in sprechstimme, people's stories spoken around a blazing fire or projected in digital graffiti.

Arbour text fragments

Discrete texts from the historic record about the right for people to be or not to be in this civic space.

Arcadian grove

An evocative urban landscape installation featuring the dismantled historic statues and pedestals in a commissioned soundscape as performance on civic rights.

Digital interactions

A series of real-time interactive projects to pulse the choreography of people making Victoria Square their own place of interaction.

3.7 Application For Sustainability

This new civic approach has been seamlessly integrated with the sustainability goals of VST as ultimately, all sustainability is reliant upon upon global and local communities uniting in a spirit of collective participation to resolve global environmental crises.

The design of VST's environmental systems are based on social exchange, created through social and spatial strategies generated by the design team. While it is not intended that all visitors to VST will be involved or engaged in sustainability activities, it is intended to bring these occurrences and exchanges to the fore to demonstrate, advocate and invite participation in more sustainable practices and awareness.

In the background of social sustainability exchanges is a series of green infrastructure systems that underpin the water and energy supply, materials selection, transport strategies and so on. The day-to-day visibility of these environmental features is important. Considerable consultation that encourages education programs and research around these ongoing activities has been generated and is discussed in more detail in Chapters four and five. Similarly, the care and maintenance of these activities will form a visible component of the life in the square through the garden host volunteers.

Ngankitta yerta -
living in balance.

4.0 Sustaining Systems

4.1 Opportunities

The environmental design systems and initiatives proposed for VST are intended to act as prompts and catalysts for social interaction, education, and the transfer of knowledge, skills and enthusiasm. These initiatives are intended as an optimistic contemporary expression of a more sustainable urban culture and direction. It is anticipated that this may stimulate a heightened experience, generating interest, networks and inspiration to enact wider sustainability practices outside of the square.

The over-arching sustainability approach for VST involves a precinct-based strategy that focuses on generating community engagement through direct and ongoing participation in the square (this section), while also embedding sustainability in the infrastructure-based environmental systems (section five). People are integral to sustainability and the design approach aims to engage the local and wider community in a new civic paradigm (section three) that involves direct participation in the square (such as gardening and its associated activities, education programs and school groups). Environmental systems are embedded into the infrastructure for VST and are proposed based on their ability to contribute environmental services

to the square and beyond (such as the WSUD and energy systems - see section 5). This systems thinking (as opposed to a silo model) has driven the sustainability approach at VST, in addition to the standard approach to sustainability that consists of practices such as avoidance, reduction and improved efficiency.

The following headings summarise the key sustainability outcomes at completion of design development:



Sustainability
Conceptual approach of 'closing the loop' and possible sustainability elements.

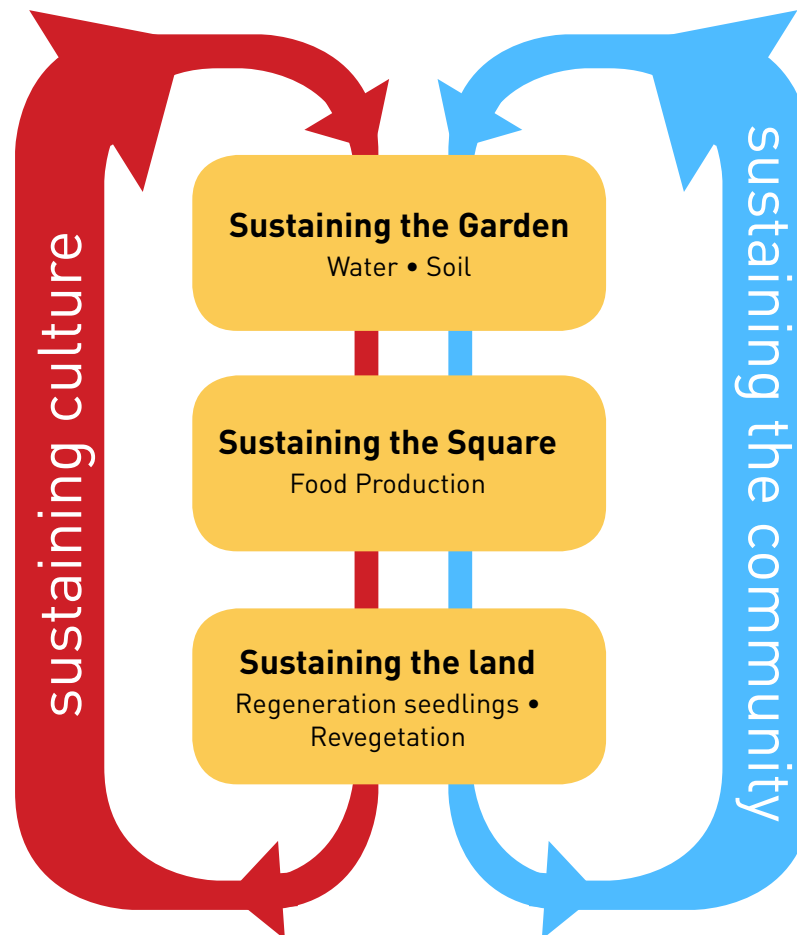
4.2 Culture

Throughout the design development phase, Taylor Cullity Lethlean (TCL) and our team have continued to canvass public input from a range of community stakeholders for the square. TCL and our team have continued consultation with possible collaborators for the proposed interactive environmental initiatives. The proposed interactive environmental and cultural initiatives and the 'new civic' approach to sustainability participation in the square are expressed in the adjacent images and diagrams.

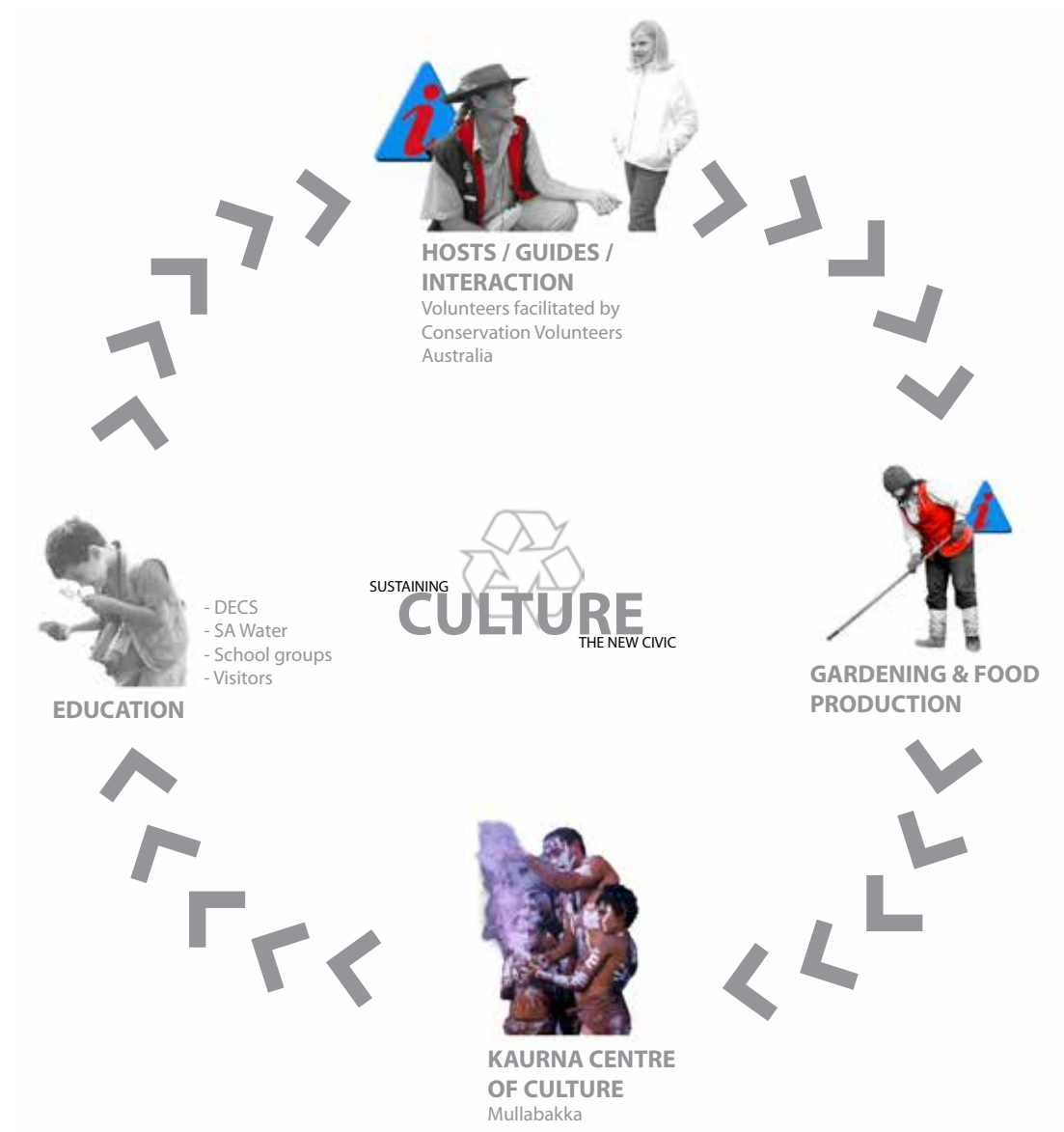
A key example are the volunteer 'hosts', who will be trained as cultural guides and gardeners. These hosts will inhabit the square, providing visitor information and interaction when desired, while also acting as 'empowered gardeners' and maintenance staff for the square and garden spaces. These hosts/guides could be an expansion of the existing ACC volunteer program or from a separate new program, and could be targeted to attract volunteers with these skills and interests. Conservation Volunteers Australia have confirmed their commitment to facilitation of this program.

The Kaurna Centre of Culture (Mullabakka) is central to the interactive sustainability agenda, with local representatives acting as a conduit for transferrel of millennia of wisdom from the local and wider Australian landscape. It is anticipated that through a range of active and passive strategies, Mullabakka representatives will educate and interact with visitors at VST.

People are integral to sustainability and the design approach aims to engage the community in a new civic paradigm that involves direct participation in the square.



Sustaining The Community
Conceptual approach.





Water In South Australia
Ephemeral water like arteries.

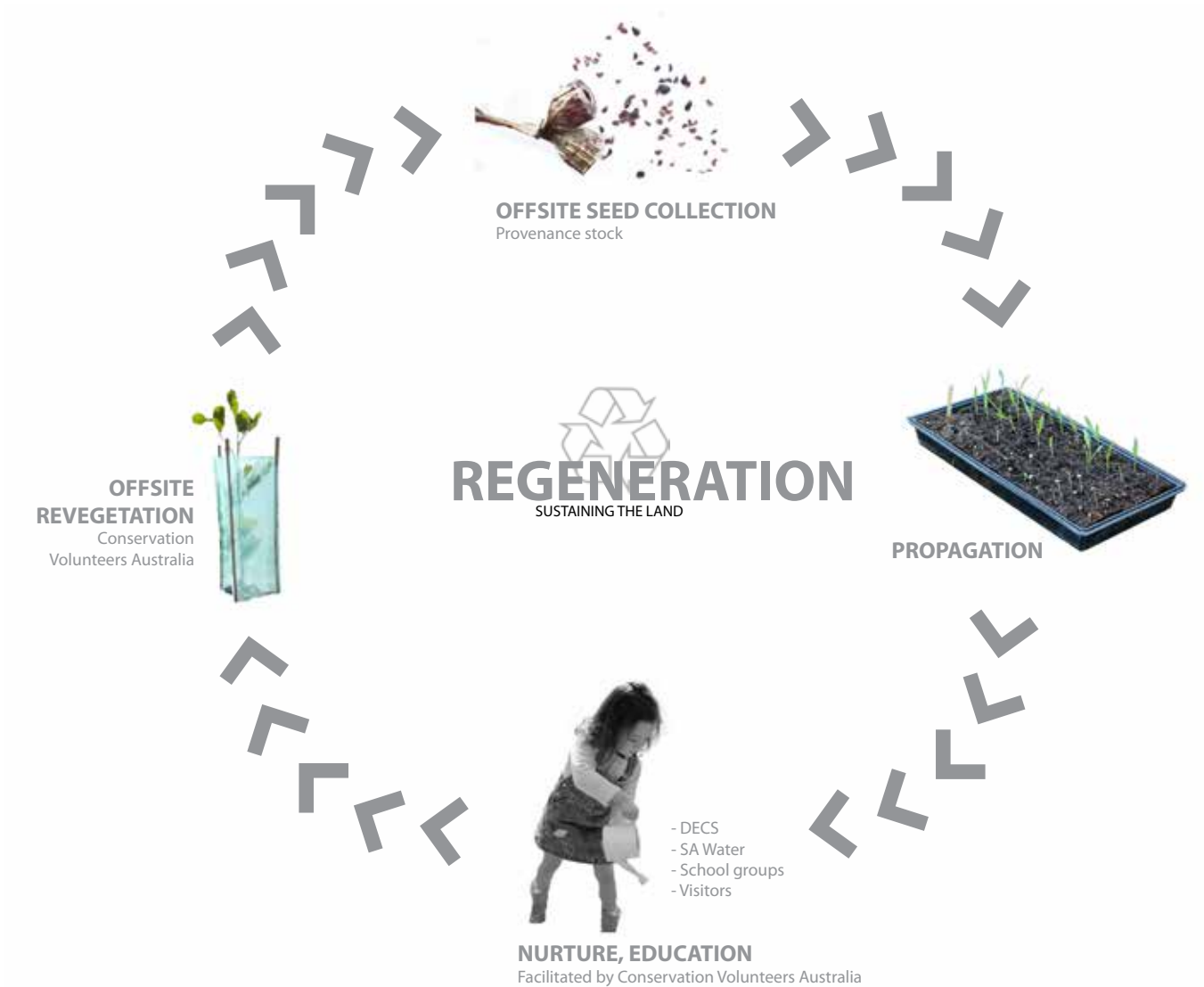
4.3 Biodiversity Regeneration

The approach taken to Biodiversity at VST follows the 'place-making' agenda, being that parts of the square are an expression of its pre-European genius loci. Thus, these parts of the square act as a designed interpretation of place and regionality: its landscape, ecology and associated biodiversity. VST, being the geographical centre of Adelaide, is currently an urban traffic island, and limited biodiversity can thrive in this environment, although micro-habitat will be created through suitable plant species and water sensitive urban design (WSUD). This will attract local birds and animals into the Square, which in turn attracts visitors. Thus, the biodiversity agenda is that interpretative design can act

as a prompt, an educational tool and catalyst to convey a wider story of biodiversity for the Tandanya bioregion and beyond. An example of this approach is the 'Regeneration' component of the square. An area within The Productive Garden is devoted to the ongoing propagation of seedlings. It is intended that Conservation Volunteers Australia would use this component of VST as a ongoing conservation project and demonstration, providing the necessary volunteers to nurture seedlings until they have reached suitable growth to be used for revegetation projects suited to their provenance (eg within the Adelaide parklands and beyond). Seedlings could be provided externally, for example by Trees For Life. This can be

an ongoing and participatory cycle, and is expressed in the adjacent diagram.

In addition, this regeneration system sequesters carbon through the ongoing growth of the seedlings/trees which are planted beyond the square.





Urban Wetland & Biofiltration
Sydney University.

4.4 Water

Proposed water sensitive urban design (WSUD) initiatives that utilise spaces within the square to filter and re-use stormwater mean that VST provides ecosystem services to the local catchment while reducing water demand from external sources to the square. The Bio-retention Garden and wetland are the central feature of the WSUD system which is highly functional in its processing of stormwater, a place of beauty and spatial interest, and a venue for education and interpretation. The system will filter 20 million litres of stormwater runoff annually, with 6.5 million litres stored for re-use each year in underground tanks.

Excluding the square buildings and drinking fountains, there will be no potable water used in the square. Requirements not met by the stormwater re-use system will be supplemented by GAP recycled water.

The Hilton Hotel have expressed a desire to utilise recycled water within their building in a 3-5 year time frame. Allowing for their connection to GAP water should be integrated into the squares water infrastructure.

SA Water have expressed their desire to utilise the square in their existing education program (which partners with the Department of Education and Children's Services (DECS)). Consultation is currently under-way to facilitate this opportunity.

Tree pits for street trees provide additional water cleansing for the local catchment. Rainwater from the roofs of buildings in the square and the harbour will be captured in the underground tank and reuse system.



Flinders Ranges, S.A.
Ephemeral water.





Agriculture
Patchwork in the Adelaide Hills and plains interface.

4.5 Production And Waste

The cycle of production and waste is an exciting concept for VST and closely linked with the Culture section of this chapter. The Productive Garden in the southern garden will provide structured plots for food production using edible plants to demonstrate the importance of food production in urban environments. This also references the historic legacy of food production on the fertile Adelaide Plains. The Productive Garden will be a highly designed and detailed environment that uses suitable edible species for both aesthetic appeal as well as food production. Ongoing volunteer input into the space will ensure continual maintenance and visual appeal.

From consultation with local stakeholders, there is significant interest and positive feedback for participation in productive garden spaces. It is proposed that volunteers (facilitated through the administration of Conservation Volunteers Australia) will tend

these 'productive' spaces to provide for their ongoing care and maintenance.

Local greenwaste (such as suitable organic matter & cardboard) is available from a variety of possible local sources such as the cafe and kiosk in the square, The Central Market, Gouger Street, the Hilton Hotel and other surrounding buildings and organisations. A worm farm is proposed (capable of processing 350kg of waste per week) and it is subtly incorporated within one of the enclosed productive garden spaces, that is, screened from view. This composting process will provide soil and essential fertiliser that can be utilised within the productive garden for increased fertility and yields. Furthermore, this model can be used as an interactive and educational tool within VST. The productive areas will provide herbs and produce for a range of possible uses such as the cafe/restaurant within the square, for social welfare programs, for

workers in the garden, for visitors and for produce swap programs. This system in VST embodies the 'closing the loop' cycle that is central to sustainable practice. It is intended to demonstrate that public space can be productive and aesthetically appealing. A technical specification for suitable 'worm food' is available.

It is noteworthy in terms of contemporary sustainability, that the 1854 colonial government published specifications "for the fencing and planting the public squares &c" principally identifying Victoria Square. It detailed that 3,000 specimens would be planted across Adelaide's five squares, including edible specimens of almond (*Prunus dulcis*) and olive amongst a range of ornamental species. It is clear that the contemporary bias that excludes productive species from the usual mix of plant species was not prevalent in times past in Adelaide.



PRODUCTION AND WASTE
Sustaining the square.





Productive Garden
Precedents.



4.6 Planting

In addition to the use of productive species, the planting at VST will provide environmental benefits. These include respite from the surrounding urban hardscapes; improved microclimates through reduction of wind; increased shade and amenity; improvement of air quality; and reduced noise. The theme of the garden space as southern Australian and Adelaide Plains allows for the use of provenance stock from local species if available and desired.

The connection to the Kurna Centre of Culture (Mullabakka) will be further explored through indigenous plant knowledge and species that are indicators of seasons, themes and stories and also having productive uses such as basket weaving, honey and firewood.

5.0 Sustaining Infrastructure

5.1 Background

It was the goal of the TCL team to integrate world's best practice environmental initiatives and these were investigated and heavily lobbied throughout the design process. They have been proposed and retained wherever technical, budgetary and stakeholder willingness allowed.



Tram Intersection



Victoria Square 1910
Tramline construction works . ACC Archives HP0907.

5.2 Transport

The proposed design for Victoria Square / Tarntanyangga accommodates a healthy mix of transport modes. The design attempts to accommodate the pedestrian as the most important user of the space. Current vehicular dominance has been carefully re-designed to give prominence to more public uses of the space. Lanes have been removed and reduced to increase the civic sense of place and to encourage more sustainable transport options, and acoustic design has been improved for users of the public space. The bicycle hub provides a notable central location to accommodate bicycle users needs.

Public transport options include tram and bus and both include free options within the city. Combined, these transport options can potentially reduce transport-related greenhouse gas emissions.



Victoria Square 1874
Street lantern, as captured by Captain Sweet. ACC Archive H1805.

5.2 Energy

Generating energy within the square is a major component in the design of VST. A Federal Government grant for installation of photovoltaic panels (PV) has enabled renewable energy production in the square. The PV panels have been incorporated into the design of the harbour structures. The energy generated by the PV panels is anticipated to exceed the day-to-day energy requirements for lighting of the square. Additional energy will contribute to the running of the buildings in the square and lighting for events. The PV system will be grid interactive.

A possible source of energy generation for VST buildings are fuel cells, which generate high efficiency electricity from natural gas. ACC has recently installed a test unit into the Central Market and further use is dependent upon the outcomes of this trial.

Proposed energy generators will be grid-interactive and contribute to the resilience of energy supply through providing a range of energy production means for VST.

Targeting energy efficiency will reduce the environmental impact of Victoria Square / Tarntanyangga through reduction of associated greenhouse gas emissions with the economic benefit of abating the resultant power bill. Energy savings will be achieved through the design of more energy efficient lighting and reducing the demand of energy from buildings in the square.

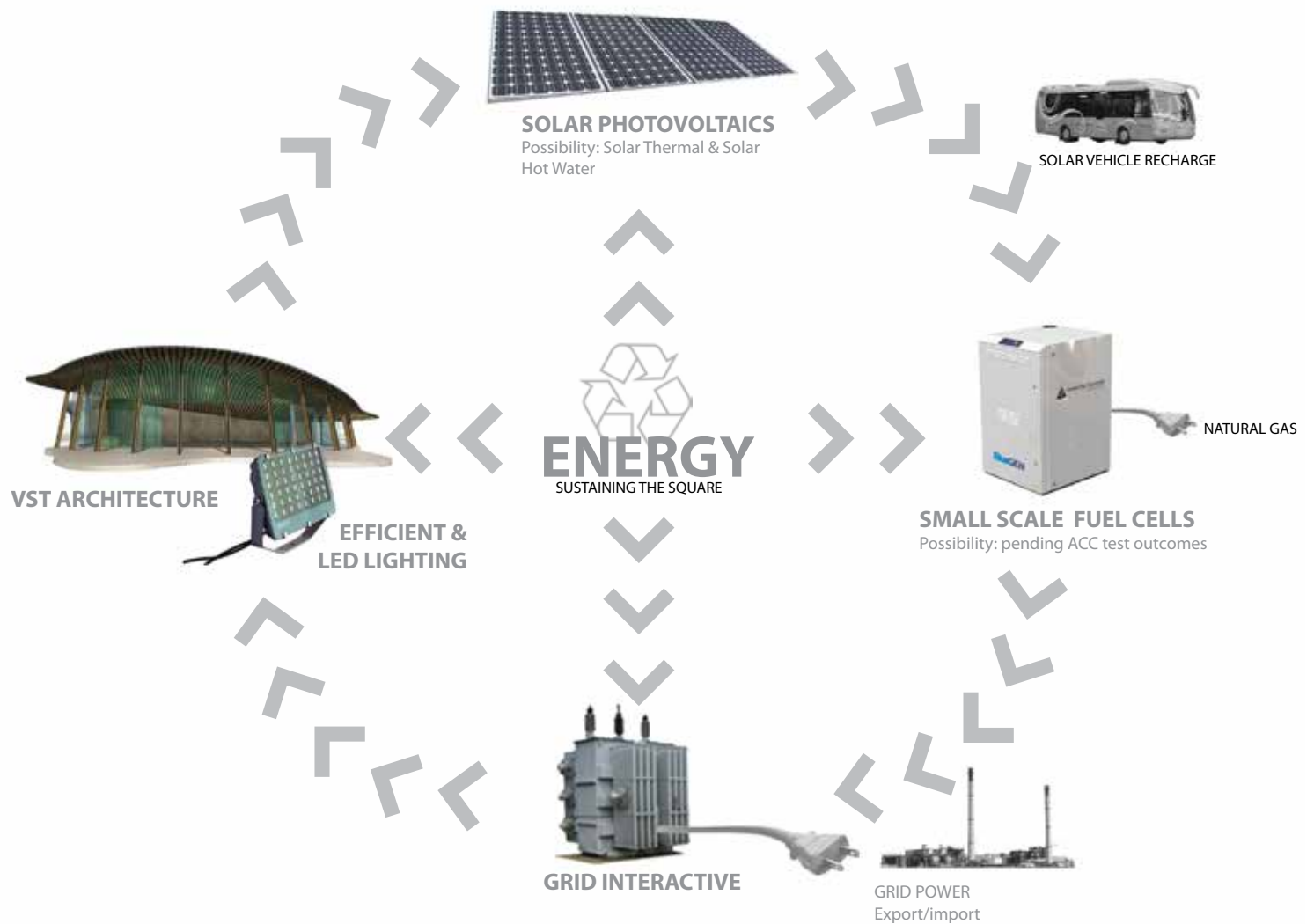
The usage of energy efficient and LED lighting for the square is proposed to maximise efficiency of energy use.

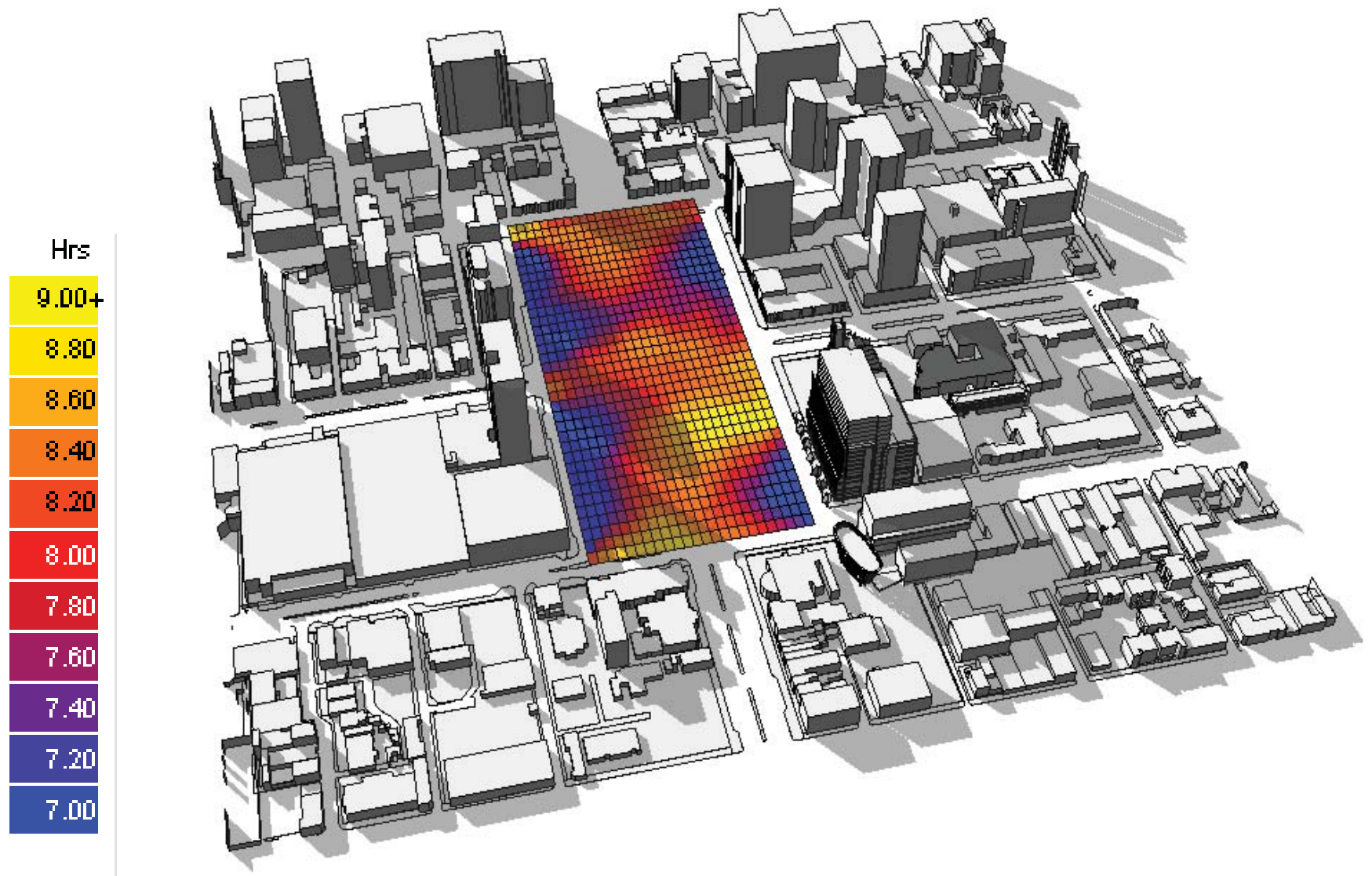
It is proposed that ACC's solar bus, 'Tindo', will form a visible connection and demonstration of renewable energy through linking the PV panels on the harbours and a charging location within VST.

Building performance dictates a significant component of energy use for VST.

Ground source heat pumps and trigeneration were explored with the aim of using areas within the square to locate and provide more efficient energy supply for large buildings that surround the square. Unfortunately, due to unsuitable timing and questions regarding ownership and maintenance of infrastructure, the team could not secure commitment from government and non-government occupiers of surrounding buildings.

World's best practice
environmental initiatives were
investigated and heavily lobbied
throughout the design process





Site Solar Access
Average Daily Sunlight Exposure 7am: 6pm. Recommended to locate PV array where direct access to sunlight exceeds 7 hr/day.
IMAGE: Cundall

5.2 Materials

The challenge of responsible materials choice while creating aesthetic design is paramount to the success of VST. Materials selection has a significant impact on the environment through the direct consumption of resources and an associated indirect impact via energy consumption and related waste product.

Material selection for VST has been a process of balancing initial cost with longevity and durability. Some of the sustainability criteria for selection of materials is as follows: lifecycle; longevity; durability; embodied energy/carbon, transport energy/carbon; maintenance; and contribution to comfort/microclimates/urban heat island effect. Ultimately, cost is the determining factor. Materials that are locally sourced and from salvaged and recycled sources are desirable although surprisingly, often attract a cost premium. Salvaged materials from demolition of the existing square will be explored when appropriate.

Demolition regarding sustainability is as follows:

Ensure asphalt, concrete, rubble & all possible material is diverted for recycling;

Trees – chipped for mulch at ACC depot;

Site fill – captured for recycling where not contaminated.

Materials choice regarding sustainability for VST is as follows:

- Timber – recycled for urban lounge (or FSC certified as a minimum)
- Aggregates/sub-bases – recycled throughout, from local supplier
- Recycled asphalt - currently exploring possible use pending further research

- In-situ concrete - 'greenstar rated concrete' product containing maximum recycled content - currently pending further research

- Precast – recycled content – needs further investigation to ensure desired finish is achieved and structural requirements are met

- Soils & mulches should be recycled
greenwaste products not virgin

Irrigation pipe: recycled plastic

5.2 Project Rating

After extensive research and consultation, TCL and Cundall have determined that there are no existing suitable or worthwhile rating tools commercially available for rating an urban public domain project. Upon project completion, TCL will explore graphic representation that explains the environmental and sustainability outcomes in an easily accessible manner for possible communication to the public.

... there are no existing suitable or worthwhile rating tools commercially available for rating an urban public domain project.

6.0 The Design

6.1 From Idea To Form

The process of developing a design for Victoria Square / Tarntanyangga was a circuitous route of exploration, trial and error, ducking and weaving involving the examination of many options. It was a collaborative process with Peter Tonkin of Tonkin Zulaikha Greer and contributions from a team of twenty three specialist consultants.

Six principles were established early in the investigations. These were:

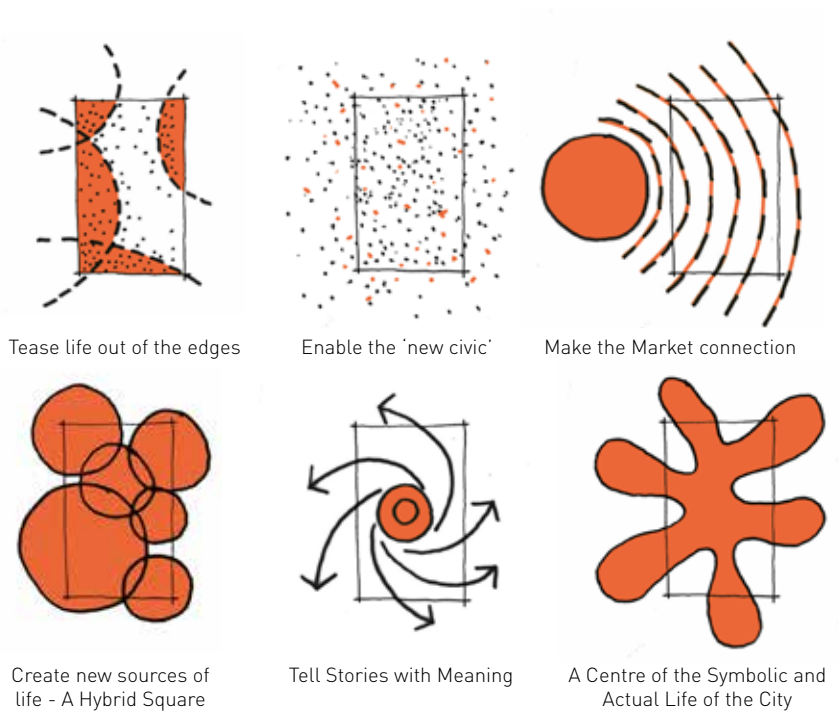
- 1. Tease Life out of the Edges: attract adjacent workers into the Square
- 2. Enable the New Civic: create a space which facilitates socialisation and exchange

- 3. Make the Market Connection: link with the life of the adjacent Central Market
- 4. Create New Sources of Life – A Hybrid Square: Develop a mix of uses which together create a vibrant and unified Square
- 5. Tell Stories with Meaning: Embed into the experience of the Square an appreciation of the cultural significance of the place
- 6. A Centre for the Symbolic and Actual Life of the City: Transform the Square into a rich centre of activity

These principles were complimented by six layers of experience which were developed from the market research and extensive discussion with stakeholders:

- Theatre of the City: Make the Square Adelaide’s premier outdoor space.
- A Garden Haven: A sustainable garden respite in the city.
- Market Square: A place to savour the best of South Australia’s food, wine and outdoor lifestyle.
- A Curated Square: An integrated approach which brings together all cultural experiences within the Square.
- A Connection Focus: The establishment of a bustling public transport hub in the centre of the city.

Victoria Square - Six principles.



The manifestation of the principles and layers of experience on the site were facilitated by six spatial moves:

- Maximise the central space
- Link from north to south
- Facilitate access from the edges
- Create multiple destinations
- Integrate east-west movement
- Make the centre the main attraction

The combinations of principle – layers of experience – spatial moves that were most influential in setting up the overall form of the Square were:

- Enable the New Civic / A Curated Square / Link North to South

- Create a Hybrid Square / Theatre of the City and Garden Haven / Create Multiple Destinations

- Tell Stories with Meaning / A Place of Cultural Exchange / Make the Centre the Main Attraction

The primary outcome of Combination One was the establishment of two large scale arbours and their associated promenades running the full length of the Square on both the east and west sides. These spatially frame the inner square and provide a strong physical link from north to south over the central roadway. The arbours house

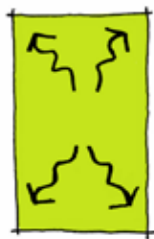
a number of destinational buildings and spaces and provide a series of long edges ideal for elaboration and creation of public domain and new civic experiences.

Combination Two posits two different but complimentary spaces and uses in the north and south sectors of the inner space framed by the arbours. To the north is a large grassed event space serviced with state of the art infrastructure. In the south is a city garden; a respite from the noise of the city, an exemplar of urban sustainability, a living place of rich colours and textures.

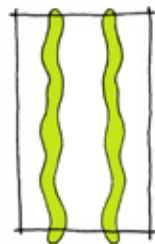
Combination Three locates Mullabakka, the Aboriginal place of culture in the city garden. This unique performative space will be the cultural / spiritual base for the Kaurna people of the Adelaide plains and a place to be shared with people of other cultures.

Within the framework of these elements a mosaic of finer grain spaces weave their way throughout the Garden, along the edges of the Event Space and Arbour Promenade and around the outer edges of the Square.

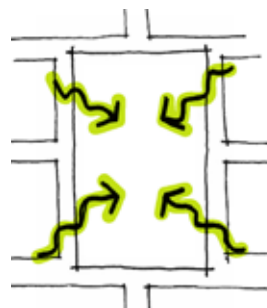
Victoria Square – Six spatial moves.



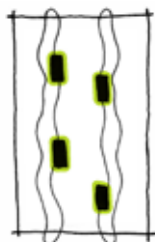
Maximise the central space



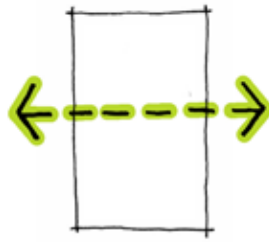
Link from North to South



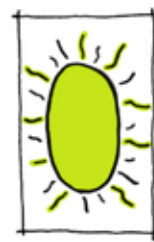
Facilitate access from the edges



Create multiple destinations



Integrate E-W movement



Make the centre the main attraction



Theatre of the City



A Place of Cultural Exchange



A Garden Haven

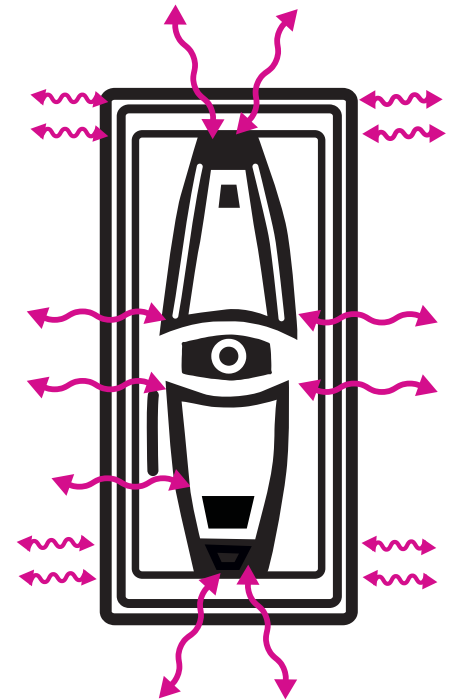
6.2 Mosaic - The Continuous Edge

A distinguishing feature of Victoria Square / Tarntanyangga is the paucity of active edges on the perimeter of the Square. In all but the north west sector, long lengths of predominately heritage facades present walls to the street with few doors and even fewer windows which allow any visible connection between indoor activities and the adjacent street. This was a serious issue in the redevelopment of the Square as active edges are considered an important contributor to the life of squares and plazas in most contexts.

In order to generate new opportunities for edge conditions the proposed design creates sequences of concentric and overlapping edges. These are described by Sue Anne Ware in her essay 'Making Victoria Square / Tarntanyangga' as '...a series of permeable enclosures. Like Russian nesting dolls, successive layers of permeable edges culminate with a unifying set of bowed arbours'.

The principle 'edge' within the Square is the double sided arbour promenades. Running north-south beneath and adjacent the arbours the promenades are linear terraces stretched along the length of the arbours, opening into the plazas at each end of the Square and edging the central plaza. The arbour promenades create a public space that maximises the edge. In fact the entire space is defined as much by its relationship to its edges as by its internal width and linearity.

The edges of the promenade are thickened to create social friction. They are habitable, permeable spaces for lingering, watching, playing, resting and meeting. They encourage the promenade to pause, stop, engage with others and/or the activities of the adjacent garden, café or Event Lawn.



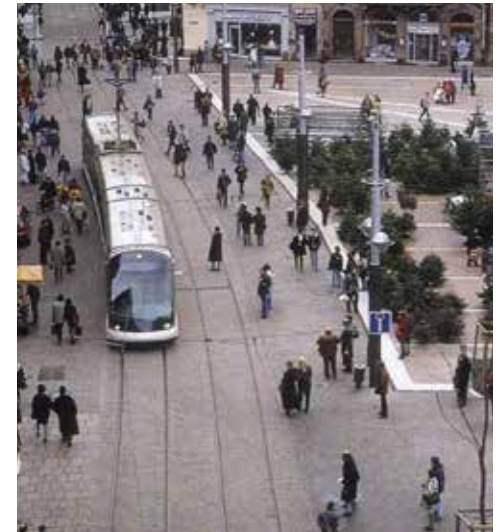
Victoria Square
Layers of permeable
edges.



Market Square



A Curated Square



A Connection Focus

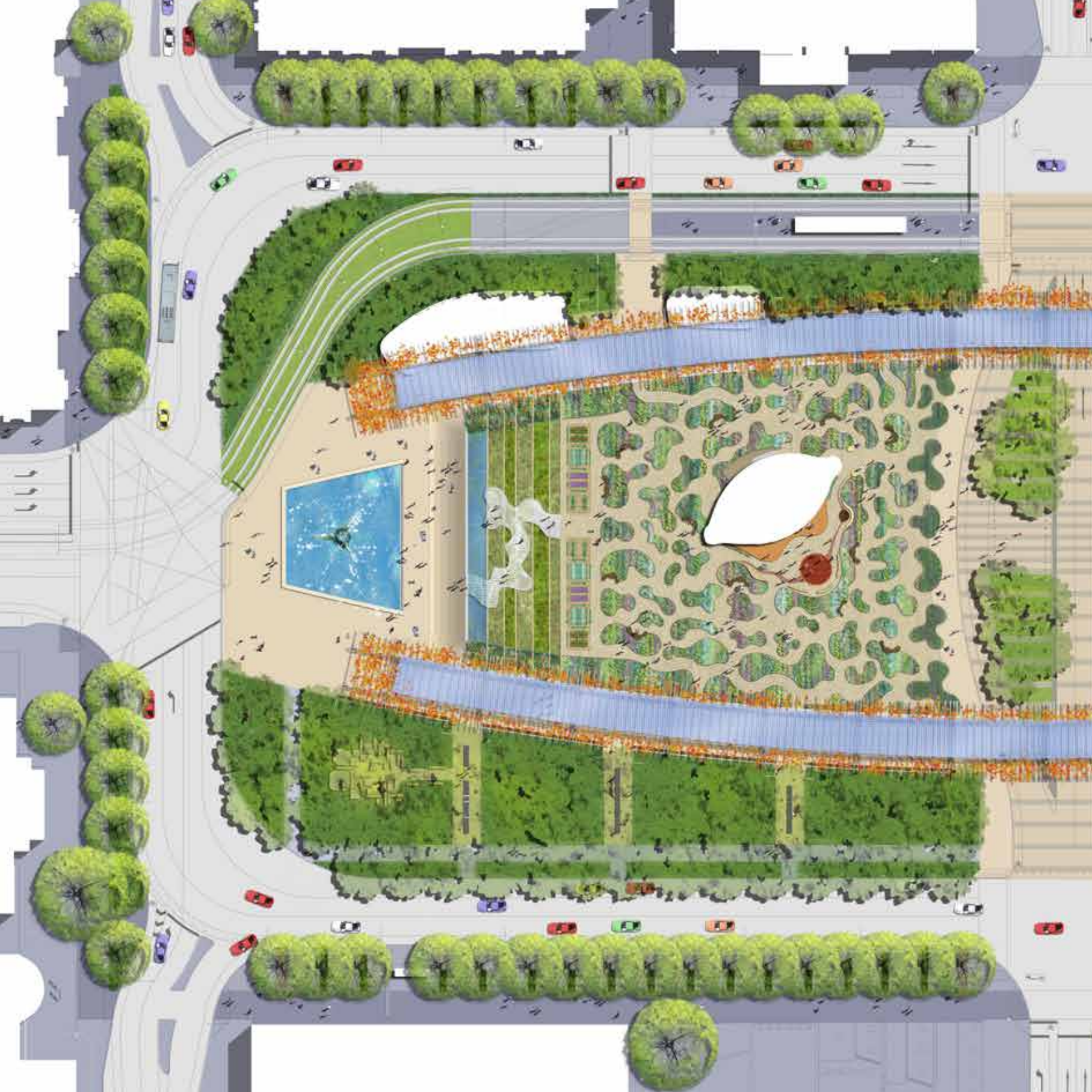
The edge between the promenade and the Event Lawn is a series of terraced seat/steps leading down onto the lawn. The outer promenade edge in the northern portion of the Square houses the Urban Lounge, a slightly raised terrace spatially separate but continuously accessible from the promenade where promenaders can engage in a range of social activities while watching the passing parade.

The cafes, bicycle hub, visitor information centre and public toilets are located along the outer edge of the harbour promenade to further enhance the offerings which encourage a diversity of activities along its length.

The margins between the north and south plazas and the Event Lawn and Garden respectively are also thickened through the use of terraced seat / steps to encourage occupation and increase the likelihood of social exchange.

Within the Garden there are multiple permeable borders between sub spaces such as Mullabakka, the Productive Garden and the Bio retention Garden. Each one of these interludes are destinations which cause people to pause and engage with the view and those who are 'employed' in these spaces.

People are integral to sustainability and the design approach aims to engage the community in a new civic paradigm that involves direct participation in the square.



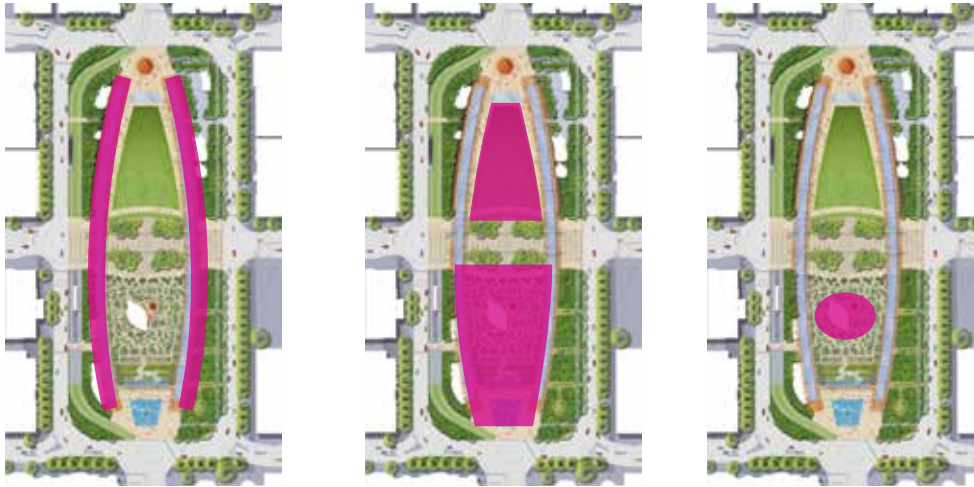




View along the vine-covered Arbour Promenade
adjacent to the Event Lawn and Café.



The partially sunken Mosaic Garden with a myriad of amorphous beds filled with plants from Southern Australia with particular emphasis on local and South Australian species.



Victoria Square
Combinations L-R:
Maximise the central
space; link from north to
south; facilitate access
from the edges.

6.3 Strategies And Tactics In The Square

Ware, in her examination of Victoria Square / Tarntanyangga, describes the attempt to balance overall structure with an open program at a more detailed level:

'By spatially juxtaposing various publics and their needs rather than trying to ameliorate or placate their differences, the design enables a productive friction between users and the numerous roles required of this civic realm'³⁵.

Ron Jones also refers to TCL's ability to pull the scene and the action together so that the observer and the observed occupy the same location. He is here referring to the urban lounge at Victoria Square where the promenade steps up to become a venue for resting, thereby placing promenading and sitting/socialising in the same space³⁶.

The Victoria Square / Tarntanyangga design reflects a conscious effort to privilege the everyday tactics of the individual over institutional planning and programming strategies. Devices used to achieve this include:

- The creation of multiple edges which house a wide range of potential activities;
- Thick edges which become places of habitation while maintaining their connection to the building, promenade or path of which they are a part;
- The creation of layers of places each of which is a source of activity e.g. the sub spaces within the Garden, i.e. Mullabakka, The Bio retention Garden and The Productive Garden;
- The proposal to include empowered gardeners and cultural hosts etc. throughout the Garden to facilitate interaction;
- The creation of multiple spaces capable of housing a diverse program from community spectacles to everyday activities;
- A focus on the experiences which take place within places equally with the physical design of spaces;

- Acknowledgement of the legitimacy of everyday collective experience and memory of place in balance with the civic history and symbolism of the Square.

The tactics of the everyday are supported within a strong and unifying physical form. The structure of the perimeter roads and the arbours responds to the formal symmetry of the history of the Square, while the open mosaic field embedded within and around this symmetry responds to the tactics of surprise, friction, difference and exchange. Thus, the Square attempts to be self-regenerating, building an ongoing field of experiences, dialogues and memories which will create an evolving contemporary civic more powerful than the static civic residues flowing from the Square's 19th Century and early 20th Century history.





The Garden
East-west section through the garden looking south.



The Garden
North-south section through the garden looking west.

6.4 The Garden

The proposed design for the southern garden knits into the fabric of the precinct creating a green oasis that will become the new heart of the city. It contains four principal components:

- A garden of native plants from Southern Australia arranged in a mosaic pattern with multiple paths throughout.
- Mullabakka, a Kurna place of culture comprising a multi-use building and surrounding landscape spaces.
- The Productive Garden which showcases edible urban ecologies.
- The Bio-retention Garden which processes stormwater from the city drainage system and creates enough water to irrigate the entire Garden.

6.4.1 Character

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- The Productive Garden which showcases edible urban ecologies.
- The Bio-retention Garden which processes stormwater from the city drainage system and creates enough water to irrigate the entire Garden.

6.4.2 Animation

The entire garden is animated by the colours and textures of the plants which are the primary focus of this space.

The Mullabakka building provides a venue for a wide variety of activities throughout the year.

The Productive Garden will be the focus of volunteers who will activate this portion of the garden.

The Bio-retention Garden will attract school groups to view a functioning urban bio-retention system.

The southern terrace will be a popular viewing point across the Garden.

The South Plaza houses the relocated Three Rivers Fountain which will be rejuvenated with a broad edge plinth to encourage greater interaction with the water.



6.4.3 Uses

Native Garden - Relaxing and strolling

Mullabakka - Ceremony, education and demonstration

Productive Garden - Gardening and demonstration

Bio-retention Garden - Education and interpretation

The Garden responds to the requirement for a quiet respite within the Square. In addition, the space is intended to showcase new opportunities for engagement with the environment and community in an urban location. The sloping landform of the Garden is important in achieving a quiet space which feels separate from the surrounding streets. The lowest portion of the Garden at the south end is of sufficient depth to tap into the adjacent stormwater pipes in Angus Street, thereby providing a water source for the bio-filtration system.

The 1.5m change of level at the south end also allows for the inclusion of north facing seat-terraces which will be a popular gathering spot within the Square.

The Native Garden is the fabric which flows throughout the Garden framing the other smaller plantings. Its organic garden beds have a mosaic character with a multitude of paths allowing many possible journeys through the Garden.

The plant species are from Southern Australia with emphasis on those from the Adelaide region and South Australia.

All plantings are 1.2m in height or below to allow clear sight-lines across the garden. Shade is provided by groupings of trees with canopies high enough to also allow clear sight-lines.

The Garden is designed to produce an exceptional display of textures and colours showcasing the plants of Southern Australia and providing a destination for both locals and visitors.



The Garden
Looking south to fountain.

6.4.4 The Native Garden

The Native Garden is the fabric which flows throughout the Garden framing the other smaller plantings. Its organic garden beds have a mosaic character with a multitude of paths allowing many possible journeys through the Garden.

- · The plant species are from Southern Australia with emphasis on those from the Adelaide region and South Australia.
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- · The Garden is designed to produce an exceptional display of textures and colours showcasing the plants of Southern Australia and providing a destination for both locals and visitors.



Urban Lounge And Southern Garden
View of urban lounge, promenade and southern garden.



The Mullabakka Garden

6.4.5 Mullabakka Garden

The Mullabakka Garden will accommodate a range of special activities associated with the adjacent Mullabakka building.

The entry to the building and garden space is marked by two large vertical stones sourced from the Adelaide Hills. These are located within a grove of Casuarinas.

The garden consists of a low terrace at building level which is honed in-situ concrete matching the building floor. The edge of this terrace provides seating.

The space is semi-enclosed by a series of low limestone walls which reduce in height to form seats topped with red-gum slats in places.

A sinuous line of special concrete pavement forms a continuous thread which encircles the fire place and ceremonial / performance circle.

The outer edges of the Garden inter-mingle with the organic planting beds of the Native Garden.

Kanmantoo paving of the Native Garden winds through Mullabakka providing a hard-wearing surface for large gatherings.

The outer edges of the Garden inter-mingle with the organic planting beds of the Native Garden.

6.4.6 Productive Garden

Nine 4m x 4m garden plots run east-west between the Native and Bio-retention Gardens.

These beds house a range of plantings and support activities which demonstrate the importance of food production and revegetation in urban environments.

- · A series of vertical screens define each plot, variously enclosing or allowing them to remain open to the elements. This arrangement thus creates a variety of micro-climates for plant growth.
- · Three plots are fully enclosed and lockable. These accommodate a tool and implement storage space, a commercial scale worm farm, and a seedling nursery for indigenous revegetation plants.
- · It is envisaged that the worm farm will process selected waste from the Square's

cafe and kiosk as well as market stalls. Resulting fertiliser will be available for use in the Productive Garden plots with excess utilised by Council for other areas.

- · The seedling nursery will be supplied with seedlings by a contracted indigenous plant grower such as Trees for Life. Seedlings will be grown on and then utilised as tube-stock for re-vegetation projects either by ACC or by Conservation Volunteers Australia programs.
- · The remaining six gardens will grow hardy herbs and vegetables. These will be managed by an organisation such as Conservation Volunteers Australia. Volunteers from CVA and other groups interested in urban food production will contribute to the maintenance of these gardens. Produce will be available to the Square cafe and kiosk with excess distributed to homeless shelters in the city.

· · The screens which form the structure of the Productive Garden will be constructed from stainless steel framing and mesh crafted and finely detailed as befitting their prominent location.

· · Screens will support hardy productive vines and espalier fruit trees, further increasing the production of the garden.



Productive Garden
View of edible garden, raised beds and green screens.



The Garden
View across biofiltration looking south.

6.4.8 Bio-Retention Garden

The Bio-retention Garden is a unique space which is highly functional in its processing of stormwater, a place of beauty and spatial interest, and a venue for education and interpretation.

A stainless steel grated boardwalk allows access across the bio-retention beds and wetland.

The east and west banks of the bio-retention garden are planted with *Xanthorrea* species, providing a striking edge.

Discussion with SA Water has indicated that the Bio-retention Garden will be a destination for school groups visiting the adjacent SA Water Education Centre.

The south side of the Garden adjoins the terraces which lead up to the South Plaza. These are envisaged as a popular resting and relaxing venue facing the north sun and with views across the Garden and along King William Street.



1. Bio-retention plants



Banksia paludosa 1.0x0.8m *Callistemon splendens x pallidus* 'Hot Pink' 1.2x1m *Callistemon viminalis* 0.9x0.8m *Melaleuca gibbosa* [dwarf] 0.7x0.8m with *Goodenia* ssp or *Scaevola* ssp


2. Wetland plants



Eleocharis sphacelata *Triglochin procera* *Eleocharis acuta* and *Villarsia* ssp or *Nymphoides* ssp or *Marsilea mutica* ssp *villarsia*

Biofiltration
Selected plant species.





Graphic Design: Sandra Elms Design, Adelaide
Production: Joshua Zeunert and Lucas Dean

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