Glitterosophy: The Good, the Bad and the Ugly

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Urban renewal projects in Australia are increasingly favouring the creation of new, sleek and conform design outcomes. With few exceptions, most projects approach sites as 'terra nova': they eliminate pre-existing ecological and cultural conditions and replace unappreciated features with generic but generally appreciated solutions. This paper criticises these developments and argues that the destruction of interstitial qualities purges cities of ecological, architectural and cultural conditions that could be built upon to generate more diverse urban landscapes. Recent theories in urban design, art and culture have started to express a growing interest in the concept of the *other* and the marginalised. Most notable in this discussion is French landscape architect Gilles Clément's concept of the 'third landscape', which aims to redefine the aesthetic value of interstitial environments.

This paper uses Clément's framework as a starting point to explore alternative approaches to issues of contemporary urban renewal and the potential of remnant vegetation as a counterbalance to the increasingly homogenised urban landscape. Through the lens of weeds, issues of aesthetics and otherness are explored across two case study projects: Fishermans Bend in Melbourne and Sullivans Creek in Canberra.

The exploration is based on a design research methodology that includes composite mapping and testing of a speculative design proposal. The findings suggest that invasive plant species are imperative constituents of contemporary urban space and have value in their own right. By shifting the design perspective to acknowledge the presence of interstitial ecologies in the built form, a foundation is provided from which a progressive landscape aesthetic supporting diversity over homogeneity can evolve.

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Australian landscape architecture's traditional design language is one of restorative beauty and ornamentation, which evolved from the formative years of the profession and focused on the distinct qualities of the Australian landscape (Saniga, 2009). Although local architecture has endeavoured to shed its fascination with the beautification of structures, landscape architecture continues to align itself with the ornamentation of public spaces through highly synthetic representations of nature. Contemporary design theory challenges this perspective and suggests that human beings, in conjunction with landscape processes, continually rework their environments (Solnit, 2007). The resulting issue is that what we perceive as 'natural' often stands in opposition to how environments evolve and is based entirely on what a culture determines as beautiful and ugly, worthy and worthless (ibid, p 278).

While contemporary urban environments in Australia consist predominantly of green lawns and mature elms, traces of the *otherness* are also visible; these are the landscape components that sit outside the normal perceptions of space.

REFLECTION

Otherness is used in this paper to describe the following landscape features: pioneer plant species, redundant architecture, infrastructural landscapes and minority cultures. The paper asks if the practice of engaging with otherness through design can provide an opportunity for challenging traditionalist perspectives of landscape aesthetics in the city. The question is based on the studies of French landscape architect Gilles Clément who explores otherness in the landscape through a design philosophy that he defines as the 'third landscape' (cited in Rocca, 2008, p 27):

> It includes leftover territory, both rural and urban, and untilled zones: the edges of roads and fields. Of industrial areas and nature reserves. It is the space of indecision, and the living things that occupy it act freely. To see the third landscape as a biological necessity that influences the future of living things modifies our interpretation of territory, attributing value to the places that are normally neglected.

Clément's philosophy is based on two principles. The first acknowledges the ecological value of alternative urban space. The second reveals our own cultural perception of these spaces and aims to challenge the status quo of neglect. While *other* urban landscapes are often defined as ecologically subordinate when compared with naturally evolved landscape artefacts (Katz, 1993), Clément reveals their innate beauty by designing alongside them complex environmental systems. This design move allows the landscape to transcend its visual aesthetic by celebrating interstitial ecologies as one component in a larger dynamic process.

Theories on contemporary landscape aesthetics argue it is this dynamic process – and not visual character alone – that should inform our landscape sensibilities. Saito (2007), for example, suggests that urban spaces of insignificance should establish a progressive aesthetic value in relation to ecology and culture. Berleant (2005, p 14) continues that experiencing these spaces:

> ... enables us to grasp the environment as a setting of dynamic forces, a field of forces that engages both the perceiver and perceived in dynamic unity. What is important are not physical traits but perceptual ones, not how things are but how they are experienced.

As such, Berleant (2005) outlines a methodological framework that expands the perception of the *other* in urban landscapes into a tangible and adaptable form. This may be regarded as a leap forward from traditional landscape aesthetics (Carlson, 2010).

These conceptual advances have moved into a range of international landscape design projects that challenge the traditional aesthetics of urban landscapes. New York's High Line (opened in 2009), for instance, uses existing 'weedy' seed stock for development through planting schemes. Another example is HuaXin City (developed in 2004) in the Shanghai metropolitan region where German ecological engineer specialists Janisch and Schulz converted the city's existing labyrinth-like canal system into a linear wetland. Primarily designed as a wastewater management facility, the canals also act as open space and valuable plant and animal habitat.

By demonstrating the dynamism of landscape processes, these projects have become an educational tool that advocates the value of otherness in the urban

realm (Stokman, 2008). It is their specific aesthetic language, however, that has exposed limitations. In the High Line project, the Dutch planting designer Piet Oudolf imposed a certain design aesthetic by strategically limiting the application of self-seeders in the landscape (Pearson, 2013) and thus eliminating process-based succession and alterations to the design. Moreover, the HuaXin City canal system reconstituted biocentric ecologies to beautify the aesthetic from the anthropocentric perspective. As such, the potential of otherness is superseded by a specific representation of urban nature rather than being used as an inherent component in the urban landscape.

In comparison with these projects, in Australian landscape architecture the engagement with pioneer ecologies is largely absent, as demonstrated in recent publications on the domestic profession (Raxworthy & Ware, 2011). Likewise, Saniga's recently published history of Australian landscape architecture examines landscapes that were mostly restored through the reproduction of naturalness (2012, pp 201–206). The only exception was the Brick Pit at Millennium Parklands in Sydney from 2005.

In Australia, intensive measures are applied to restrict the use of pioneer plants. The Australian Weeds Committee (2013) documents a list of state and territory legislation that dictates the forced removal of and control measures for invasive species across the nation. The Australian Weeds Strategy (Natural Resource Management Ministerial Council, 2007) provides an updated framework to prevent the incursion of invasive plants in Australia. The annual Australasian Weeds Conference is dedicated to enhancing this perspective, highlighting the ecological damage that invasive plants inflict on the local and international landscape (Preston et al, 2006, p 1). Furthermore, national landscape groups such as Landcare Australia promote case studies in which other urban spaces have been successfully 'enhanced' through the removal of weeds (Landcare Australia, no date).

This paper explores the potential of the *other* as a catalyst for cultural change in Australian cities by recontexualising landscapes as systems of infrastructure. In regard to the application of pioneer species, the authors acknowledge that, in some situations, weeds are a threat to sensitive endemic ecologies that remain in the rural and urban wilderness areas of Australia. As such, the application of invasive plant species could also negatively impact on established fauna (Macfarlane & van den Ende, 1995). Furthermore, this paper recognises that the application of weed-based design may result in homogeneous (although adaptable) urban ecologies similar to those the authors set out to question in the beginning. It is not the authors' intention to replace current practices but rather to see the third landscape as an opportunity to enrich the diversity of urban landscapes. This paper argues that the application of *otherness*, specifically pioneer plant material, may be the missing link in Australian urban landscape architecture.

Theoretical positions and design precedents that argue for the inclusion and mediation of alternative space are discussed first in this paper, before two case study projects are examined that engage with the issues through the method of design research. It has been argued that design research is a contemporary scholarly method of creating knowledge (Ellison & Eatman, 2008) that combines methods and techniques with 'rational problem solving' or 'intuitive aesthetic'

acts (Salomon, 2011). In addition, design research and the artefact go beyond a mere installation when applied as a method in creative research (Downton, 2003; Rust et al, 2000). Groat and Wang (2013) outline the basic structure for design research, which includes a problem, the future and generative aspects – all of which conclude in a proposal for an artefact(s).

Positioning the *other*: The good, the bad and the ugly

The *other*, when expressed as landscape infrastructure, is a complex system of varied components: pipes, rail and power lines, storm and sewage channels, power plants and structural debris. Similar to biology, the complexities of our built environment mimic a taxonomic hierarchy, with each component becoming increasingly dependent on the other. The allegoric relation to the biological world further extends into a cultural value system. Just as some plant species are classified as good or bad, indigenous or invasive, this bipolar value system is also assigned to types of landscape infrastructure. For example, a rehabilitated creek may be appreciated as ecologically sound, whereas an engineered stormwater channel may be evaluated as ecologically subjacent.

However, even the filthiest infrastructure – the site of the worst nuclear catastrophe on earth – has demonstrated a capacity to evolve in ecological complexity. Nowadays, the area within the Chernobyl Exclusion Zone is indistinguishable from the surrounding endemic landscape. Paradoxically, as Mycio (2005) argues, the nuclear fallout sustains an increasingly diverse ecosystem of plants and animals. In this instance, culture may define a toxic landscape as bad, yet the landscape process disregards this perspective and adaptation provides a potential opportunity. In nature, there is no dichotomy – no good or bad, worthy or worthless – only a series of evolutions that allows for plants and animals to adapt to new challenges as they are revealed in the urban form (Del Tredici, 2010).

The idea of landscape as infrastructure is not new in landscape architecture. The exploration of hybridised open space was discussed in 1996 when designers proposed the ongoing adaptation of technology, landscape and design as integral parts of the urban form (Strang, 1996). By proposing the combination of infrastructure and landscape, architects demonstrated the inseparable relationship between landscape processes and the built form.

A few designers have taken the intellectual leap to construct interventions that engage with existing conditions so despicably ugly that all cultural conventions of aesthetics and landscape are challenged. One example is the AMD&ART Park in Vintondale in Pennsylvania (developed 1994–2005). Created by a multidisciplinary team of sculptors, hydrologists and landscape architects, this project unpretentiously engages with the derelict and highly toxic post-industrial landscape. Rather than hiding the industrial sludge by transporting material off site, the designers actively engaged with the toxicity over a series of terraced wetlands. As the Pruned blogspot (2008) describes, 'this [project] isn't so much a restoration or a reclamation as it is redemption'. In describing the contaminated wetlands as 'technicolour poison', the authors further suggest a whole new meaning of beauty, naturalness and landscape infrastructure.

If local designers applied similar approaches on a broader scale, could our urban landscapes develop a greater degree of ecological complexity? This could only be achieved if the cultural perception of urban nature was to evolve, allowing a wider application of landscape types in the city. Australian landscape architect Richard Weller suggests this perspective is the next evolution in landscape design, 'an ecology free of romanticism and aesthetics' (2006, pp 79).

Creative researchers and landscape theorists continue to substantiate Weller's argument. Ignasi de Solà-Morales Rubió's *Terrain Vague* (1995) explores the concept of abandoned and obsolete landscapes, arguing that the fine arts have been more successful in exploring these spaces through practice. One contemporary example is the book of Edward Burtynsky's photographs *Manufactured Landscapes* (Pauli, 2003), which combines the toxicity of industry with a highly aestheticised visual narrative through photography. Burtynsky's compositions obtain a level of ambiguity and seductive otherness that make the extent of the industrial contamination more tangible, allowing for more than one meaning to be derived.

From the design perspective, landscape theorist Elizabeth Meyer (2008) suggests designers often enforce a specific programme on a site, eradicating its inherent otherness in the place of stylised form, whereas art reveals and argues for its continual existence. As such, Meyer advocates the recognition of art in landscape practice both conceptually and compositionally, arguing it is through the artistic lens that the discipline can grow.

How can landscape architects use design to challenge cultural perceptions of urban landscape and beauty on a broader scale? Through the application of the *other*, designed landscapes can be framed as powerful retaliators against the domineering aesthetic and cultural order (Meyer, 2008).

This material-scape is explored in the sections that follow. Primarily, the *weed* itself is examined as a tool by which to challenge conventional landscape aesthetics in Australian civic spaces. The two case studies propose alternative readings of the urban context. The first (Fishermans Bend in Melbourne) uses the composite mapping technique, which allows for the concurrent reading of historical and contemporary imagery, revealing aspects of a landscape that are otherwise hidden. The second (Sullivans Creek in Canberra) applies composite mapping as a way of generating physical form for engaging with larger-scale landscape processes.

Fishermans Bend, Melbourne

Fishermans Bend is a 200-hectare industrial park situated on the southern bank of the Yarra River in Melbourne. It is characterised by low- to medium-density industry, high-density housing and a vehicular-based transport system with *other* landscape materiality that includes a highly engineered and polluted river system (Melbourne Water, no date), toxic soils (Places Victoria, 2013, p 19) and an extensive list of invasive plant species (Australian Weeds Committee, 2013).

Hoping to limit Melbourne's rapid urban sprawl, the Victorian State Government identified the site, which is as large as Melbourne's central business district, as an area suitable for urban renewal with medium- to high-rise development to provide up to 15,000 new dwellings (Johanson, 2011). Before

renewal can start, Fishermans Bend will undergo environmental assessments and decontamination procedures. The master plan, released by the Victorian State Government in September 2013, has yet to specify what decontamination methods will be applied (Places Victoria, 2013, pp 19–27). This lack of information suggests the overhaul of the precinct will engage little with existing landscape features and will not understand Melbourne's open space network.

Referring to the heavily criticised Docklands development in Melbourne, Dovey (2005) states that previous large-scale urban developments in Melbourne have not successfully produced convincing urban design outcomes. Before its construction, Docklands, Australia's largest urban renewal project to date, faced similar challenges to those of Fishermans Bend. Since its inception in the 1990s, critics have considered the Docklands redevelopment as a badly missed opportunity for urban design (Dovey, 2005). While central Melbourne is praised as a city of intricacy because of its human-scale architectural interventions, the Lego-like architecture in Docklands creates a sterile entity of its own. Hopes that Fishermans Bend will depart from the developer-driven agenda seen in Docklands and provide an alternative approach to a renewal project of 'international significance' (Cook, 2013) are unlikely to be fulfilled. By rezoning the precinct from industrial to residential use in 2012, the government has, instead, set up the redevelopment to follow the path of Docklands (Shaw, 2012).

Mapping the hidden qualities of Fishermans Bend

How can landscape architecture reconceptualise the strategies for Fishermans Bend and allow design that will engage with the area's industrial past? If the theories discussed above are taken into consideration, how can the material-scape of the *other* be mediated? International precedents in landscape architecture offer valuable strategies and tactics that engage with all aspects of derelict sites regardless of their cultural or aesthetic predisposition.

In Germany, the Emscher Park network is an exemplary illustration of this approach, mediating the junction of nature and culture through sensitive design. The most celebrated example, Landscape Park Duisburg-Nord, designed by Latz and Partners in 1991, was envisioned in the same era as Docklands. In contrast to Docklands, this project develops a striking conceptual and aesthetic framework that appreciates the visual, experiential and ecological qualities of the post-industrial landscape. Here, the *other* components of the abandoned site (polluted soils, weeds and derelict infrastructure) are retained to preserve a sense of memory and identity. Moreover, instead of forcefully 'cleansing' toxic substrate, the phytoremediation method was applied allowing a process-based decontamination programme to mediate pollutants. Retaining architectural structures also became central to the intervention, showcasing the site's industrial heritage to future generations.

This design move in itself is not new and can be traced back to earlier projects such as the Gasworks Park in Seattle, designed by Richard Haag in 1975, or even Parc des Buttes Chaumont in Paris from 1867, designed by Jean-Charles Alphand. These projects have formed a body of work that demonstrates distinctively how industrial sites can be treated to promote alternative concepts of an industrialised nature and aesthetic.

By taking the premise that the renewal of Fishermans Bend must include the theoretical lineage to avoid becoming another market-driven intervention akin to Melbourne's Docklands, the following paragraphs outline the exploration and subsequent consequences of the distinct ecological and aesthetic value on the potential development of this precinct.

The design research method of composite mapping was applied to reveal the hidden qualities of the Bend's industrial landscape, by overlaying a range of different maps and spatial graphics (Figure 1). Data was sourced from the Fishermans Bend urban renewal draft released by Places Victoria (2013), and historical and contemporary ecological information was sourced from the Victorian State Government's Department of Environment and Primary Industries interactive map software (2013) and the State Library of Victoria digital map collection (2013).

In opposition to the belief promoted by the media that Fishermans Bend is a polluted and ecologically damaged precinct (McCauley, 2013), the mapping identified two unforeseen elements. First, it revealed an overlooked urban ecology comprising both noxious weeds and vulnerable species. This is a consummate example of the third landscape. The noxious weeds, cape weed (*Arctotheca calendula*), flax-leaf broom (*Genista linifolia)* and moth plant (*Araujia sericifera*), are thriving in the contaminated soil and support endemic fauna such as the Australian pied cormorant (*Phalacrocorax varius*), the eastern great egret (*Ardea modesta*) and vulnerable amphibians such as the growling grass frog (*Litoria raniformis*). This revelation supports the fact that industrial space can provide important habitat for urban wildlife (Niemelä, 2011). The discovery suggests Fishermans Bend sustains a series of complex ecological processes and should not be treated through large-scale engineering or decontamination solutions.

Secondly, the mapping identified that the precinct, despite its history of heavy disturbance, is still an active part of a larger wetland system. Because of the intensive manipulations of Melbourne's landscape in colonial times (Otto, 2005)

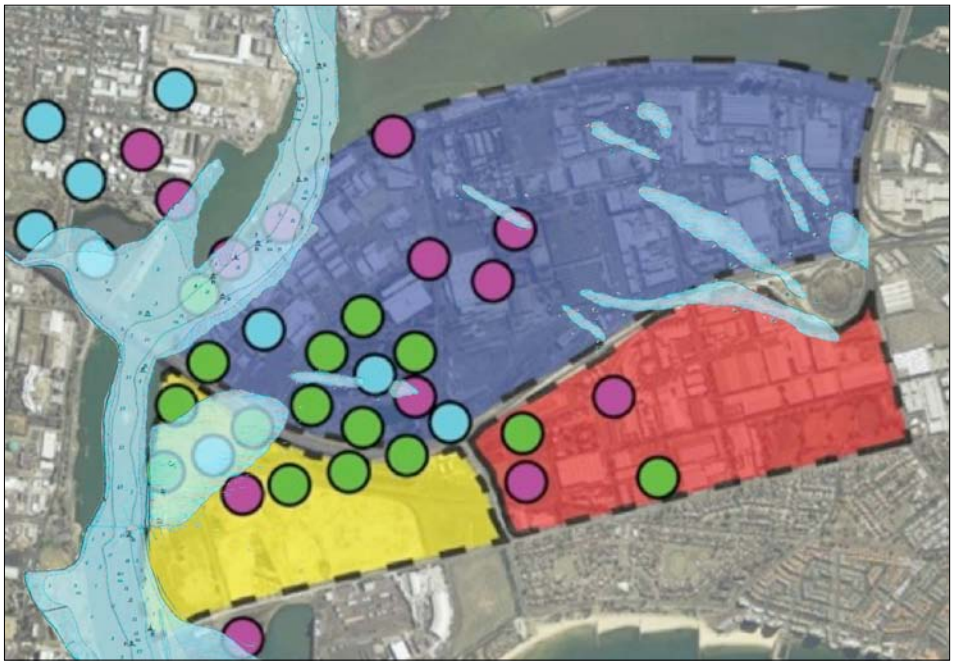

Figure 1: (2013) Fishermans Bend composite map. The circles indicate the location of various indigenous animal species and their relationship to the industrial landscape. The parcels of land marked in yellow and red are poised for redevelopment, with the original Yarra system and corresponding wetlands overlaid in blue.

– most notably the interference with the topography and natural water bodies – the wetland system only reveals itself when major areas are inundated in heavy storms. This phenomenon is likely to occur more frequently in future, based on climate change projections that imply extreme rainfall events in Melbourne will increase by 5.9 percent by 2070 (Australian Government Department of Climate Change, 2009, p 22).

The mapping observations suggest that the original hydrological connections have been retained and are still functioning. Considering the evolution of the Yarra River's physical form and reduction of water flow by up to 50 percent (Otto, 2005), this site's ability to inundate is testament to the reality of landscape processes in the urban form.

Awesome filth: Speculations about an alternative future

Taking these explorations into account, it appears Fishermans Bend has the potential to perform as a programmed space with landscape infrastructure that may include performative wetlands and bioswales. Lessons can again be learned from Docklands. There, a recently revealed proposal for a new park adjacent to the Yarra River and Moonee Ponds Creek by no means engages with the surrounding ecological systems. Instead, a purely programmatic approach is being taken in the design. Upon announcing the new park, Planning Minister Matthew Guy lauded the design as a 'fantastic new sporting and community hub' (Ainsworth, 2013) that will revitalise the precinct for future generations. However, one may question the Minister's decision to approve a new football oval with the 50,000-seat Etihad Stadium a mere 2 kilometres away.

This example suggests that, if the government is serious in its proposal to apply new strategic and design approaches in the development of Fishermans Bend, any proposed intervention should inspire design strategies that aim to celebrate – not reconstitute – the existing landscape character. An instructive environmental assessment could form the basis of subsequent design iterations, revealing what aspects of the Bend should remain untouched or protected and what could be reclaimed for development.

As mentioned, a scheme like this could unfold through various landscape typologies. However, all planned interventions should be accountable to the unique site conditions, which include two primary components: first, an endemic faunal ecology that has come to depend on exotic plant species and, second, the maintenance of a landscape susceptible to inundation by the Yarra River. In the first aspect, the weed lends itself to a range of spatial approaches. One option is to intervene 'actively' and establish supplementary pioneer plants that sustain endemic animals and increase their habitat. Ecological programmes can operate simultaneously with decontamination through the process of phytoremediation. This method has been proven successful through science (Fotiadis & Lolas, 2011) and is considered cheaper economically than alternative purification methods (Niemelä, 2011). In addition, peer-reviewed scientific research on Australian weeds, such as common ragweed (*Ambrosia artemisiifolia*), creeping thistle (*Cirsium arvense*) and curly dock (*Rumex crispus*), has demonstrated their ability to extract contaminants from polluted substrate in a disturbed landscape (Ficko et al, 2010).

The second consideration is the typology of the manipulated wetland, a landscape form that mediates inundation through landscape processes. Fishermans Bend, given its location on the Yarra River estuary, has flooded historically and will continue to do so in the future (Presland, 2009). Any intervention should mediate the landscape processes and allow for resilient forms that inundate, purify and illustrate the relationship between human habitats and environmental processes that occur concurrently (Stokman, 2008). Precedents suggest two possible approaches for this situation. In the first scenario, projects such as Erie Street Plaza in Milwaukee (designed by Stoss LU, in 2010) demonstrate that as flooding occurs the landscape can continue to function as open space as well as infrastructure.

The second approach applies a passive strategy whereby parcels of Fishermans Bend could be manipulated at a limited scale to continue functioning as a valued urban habitat. Similar to Olmsted's Emerald Necklace (Boston, 1860s), Melbourne's 'dirty necklace' could be designed as a series of wetland systems dispersed over the Bend's 200-hectare landscape. The exhibition of dirtiness, in this instance the mediation of polluted waterway systems through landscape infrastructure, would openly demonstrate the potential of *otherness* in urban ecological processes. These fluvial habitats have the potential to consolidate the development's aesthetic and retain existing architectural character while enhancing the habitat range of species living there.

As argued above, the inherent *otherness* of the site should be retained – a concept that should also be extended to the redundant architecture. The treatment of historical sheds at Docklands demonstrates that the government considered them of little or no cultural value. There, old sheds were either completely demolished or renovated to become private offices with limited public access. However, considering Melbourne's short industrial history, the shed is an important relic that demonstrates Melbourne's growth from an insignificant British colony to a highly urbanised city. Melbourne has already lost a significant stock of historical buildings through the Modernist period, which has devalued the city's story and identity (Dovey, 2005). Eliminating or forcefully gentrifying these structures will erase the industrial heritage of Melbourne's ports. Many of the industrial buildings in Fishermans Bend are more structurally sound than the old sheds removed in Docklands. While the current master plan does not specify how the new precinct will engage with the industrial (built) heritage (State Government of Victoria, 2013), other Australian examples, including Ballast Point Park (Sydney, 2009), suggest that interventions can retain architectural heritage and instil a sense of place and cultural reflection for the future generations (Maskit, 2009).

Sullivans Creek, Canberra

In 2011, the Australian Capital Territory (ACT) Government launched the international CAPIThetiCAL design ideas competition as part of the lead-up to the 2013 centenary of Canberra's inception. The competition was supported by the Australian Government and Australian Institute of Architects. It encouraged architects, landscape architects and urban designers to critically engage with the Burley Griffin Plan (the original concept plan for Canberra's design) to search for

new – and explicitly hypothetical – ideas to reimagine Canberra in light of the contemporary political, cultural and ecological challenges.

The following section discusses *Triffid City*. This is a speculative design proposal that uses components of the third landscape to investigate Canberra's landscape aesthetic as a response to its political and cultural agendas. Through the lens of weeds, the project explores how the concept of otherness can contribute to contemporary urban landscape and reflect a more diverse and democratic city.

Composite mapping was used to uncover spatial, political, cultural and ecological issues. Based on this exploration, design interventions were conducted at three sites to test how the integration of landscape processes could inform an alternative reading of the capital city. The mapping revealed that Canberra's post-colonial settlement pattern pushed the *other*, in this instance the Indigenous nations, from the central city, a landscape that includes Lake Burley Griffin and Parliament House (Figure 2).

As a colonial society, the Australian nation has a complex relationship in regard to landscape ownership, a perspective that differed markedly between Indigenous nations and European settlers and that continues in Australia's post-colonial cities today (McGraw et al, 2011). This tension is exacerbated by the fact that Australia is the only settler society not to have signed a treaty with Indigenous landowners, which in turn has established a landscape of 'disquietude' between 'the displaced and those who have displaced them' (Harris, 2003, p 71). Moreover, given that the 2011 Australian Indigenous population accounted for only 2.5 percent of the total population (Australian Bureau of Statistics, 2012), it could be argued that,

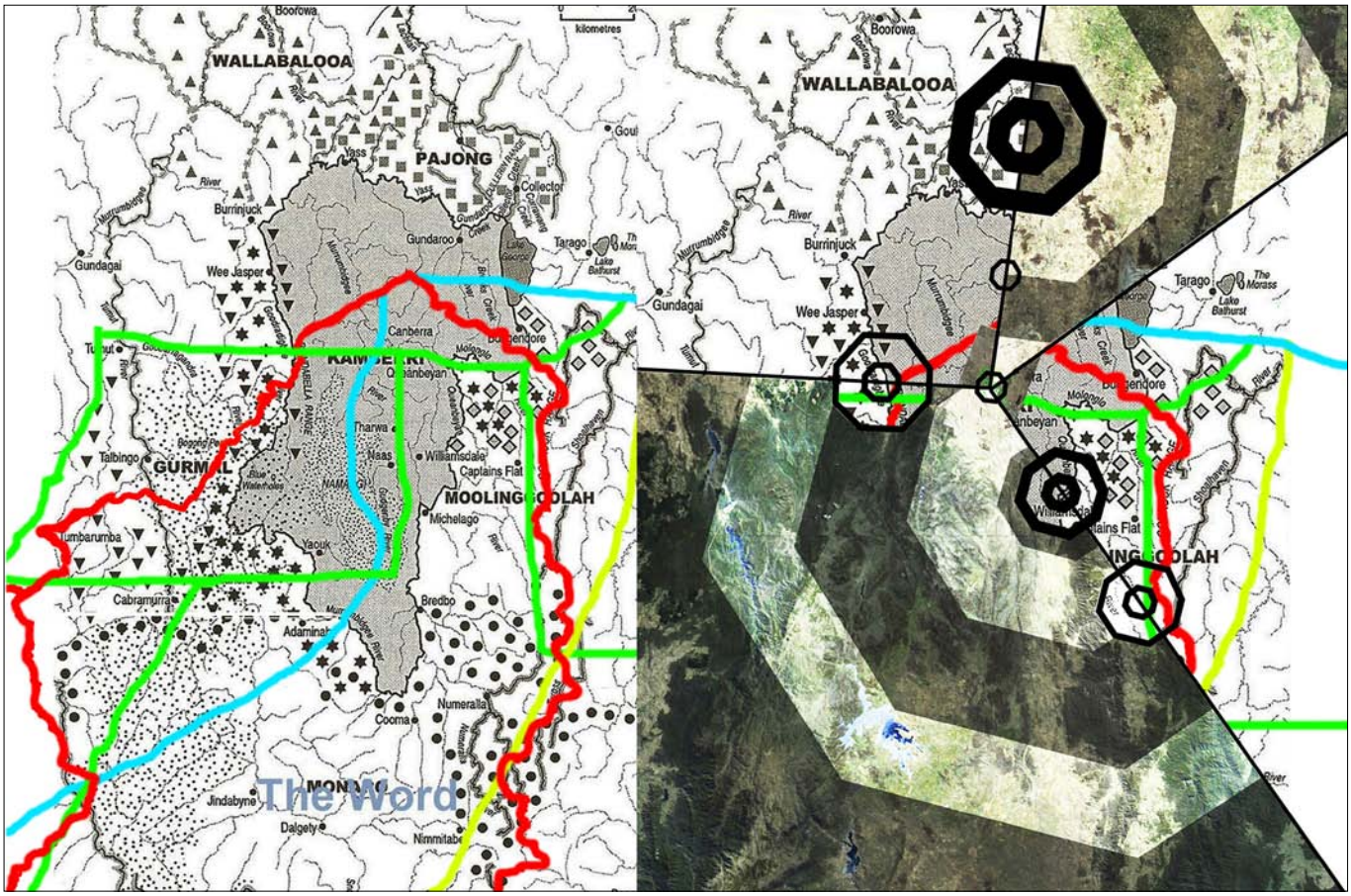

Figure 2: (2012) Canberra composite map demonstrating the traditional fluxing tribal boundaries (the red, blue, green and yellow lines) of the Indigenous nations of the ACT (left) and their subsequent interruption following the Burley Griffin design (right). The hexagonal graphic aims to represent Burley Griffin's impact on the broader landscape adjacent to central Canberra.

as a displaced minority, the Indigenous nations are still considered as the *other* in the contemporary Australian city. This imbalance, however, is a relatively new statistic because, before colonial occupation, central Canberra was home to six Indigenous nomadic tribes. They referred to their country as Ngambri. Their national boundaries were dynamic, expanding or contracting, depending on political negotiations or changing societal configurations, for example, through intertribal marriages (Ngambri Inc, no date).

Following European settlement, the region was renamed Canberra, which was derived from the Aboriginal name *Kamberri* meaning 'meeting place'. Through the settlement process, the existing ecology was destroyed, predominantly to support extensive livestock farming. Canberra is an exemplary case where design was used as a political tool to eliminate one culture and substitute it with another (Dovey, 1999, 2010). The replacement was initiated in 1911 when the design by landscape architects Walter Burley Griffin and Marion Mahony was selected as the winner of the Federal Capital Design Competition, which made Canberra Australia's first entirely planned city. The construction of axial road networks, satellite suburbs and Lake Burley Griffin erased a series of Indigenous ceremonial sites within the central business district and displaced the Aboriginal culture from Australia's new capital. Furthermore, it established a new landscape influenced by classical aesthetics and ideas of the City Beautiful and Garden City movements (National Archive of Australia, no date).

At the same time, Canberra was divided into two jurisdictions that defined Parliament Hill and Lake Burley Griffin as federal land, with the surrounding landscape governed by the ACT. These boundaries still give the Australian Commonwealth the definitive power to legislate the central landscapes of Canberra, resulting in a suite of regulations and guidelines, for example, the Right to Protest Guidelines (Australian Government National Capital Authority, 2003). By defining and restricting activities and access in the Parliamentary zone, these guidelines limit the democratic right of the nation's citizens to protest on federal land. In addition, the requirement to apply for approval to protest at least two days in advance deters spontaneity in democratic expression.

The mapping further revealed that Canberra offers few sites that are similar to the third landscape philosophy because it is built to support the public service with little industrial economy. However, in the middle of the twentieth century, the watershed system was converted into a series of stormwater channels that no longer function as ephemeral waterways. Inside these fluvial corridors, a pioneer ecology has established on the highly engineered riparian edge. As such, the marginalised channel systems were identified as appropriate typologies to investigate the contribution of the third landscape philosophy to the reconceptualisation of Canberra.

Sullivans Creek was selected as an appropriate testing ground for the design, based on three criteria. First, the watercourse runs through two jurisdictions. The creek itself is managed by the ACT Government (2013) and is not considered part of *National Land* (Australian Government National Capital Authority, 2003, p 2) until it reaches Lake Burley Griffin. These legislative boundaries provide a loophole that would allow protests to be held inside the creek independent of the Right to Protest Guidelines. Second, the creek flows through various cultural and

political landscapes including parkland, sporting fields, privately owned property and the Australian National University, allowing a broad engagement with Canberra's demographic. Third, the stormwater infrastructure is constructed entirely as a reinforced concrete channel that runs from northern Canberra to its confluence with Lake Burley Griffin. A Commonwealth Scientific and Industrial Research Organisation (CSIRO) report into Sullivans Creek nutrient load suggests this configuration provides a fertile ground for the retention and eventual germination of weeds (Dyer, 2000, p 12).

Furthermore, the creek itself can be understood as an*other* landscape typology in central Canberra. A report into the heritage value of Lake Burley Griffin demonstrates that the creek was used historically by the Nganbra people for ceremonies and gatherings and is still considered as a valued Indigenous landscape in contemporary Canberra (Godden Mackay Logan Heritage Consultants, 2009, pp ii, 44). However, this perspective is overlooked by most of Canberra's post-colonial community, which identifies Lake Burley Griffin as the predominant cultural landscape; a perspective the traditional owners argue fails to acknowledge their submerged cultural sites (ibid, 2009, pp i, 54).

*Triffid City: Design exploration of an*other *urban landscape*

Based on the political and cultural expressions and challenges of both the aesthetics of and democratic rights to the city, the conceptual framework of the Triffid City was developed in relation to Sullivans Creek. In the Triffid City, the *other* in Canberra's urban construct is conceptualised through pioneer plant material. The title refers to John Wyndham's post-apocalyptic novel *Day of the Triffids* from 1954 in which Wyndham describes the ascent of a genetically engineered plant species that subsumes the anthropocentric dominion of the landscape.

In many aspects, the triffids act like the plant species identified in the national register of weeds of national significance (WoNS) (Thorp, 2012): they move, are illegal and challenge the cultural perception of landscape dynamics. Further parallels can be established between the novel and the design intervention, including the anthropocentric dichotomy of nature and culture. In the book, the protagonist Bill Masen demonstrates the role of humans in establishing the triffid-dominated landscape and he accepts the plants as a new ecological component of planetary dynamics, a framing designers have yet to fully engage with in Australian landscapes. Moreover, the global wind dispersal method of the triffids influenced the climatically driven Triffid City design intervention as a parameter that tests the role of landscape processes in reality.

In the instance of Canberra and the Triffid City design, the *other* is framed through the metaphor of the weed, specifically the 21 species included in the list of inaugural WoNS (Thorp, 2012). WoNS were selected for this project as the driver to explore how invasive floral species could spread across the landscape and challenge the cultural preconceptions of weeds in Australia.

Three sites were identified along Sullivans Creek with specific potential to help in the establishment and distribution of plant material (Figure 3).

Site A is located at the convergence of three separate stormwater channels, allowing for maximum floodwater inundation in storm events. This statement is backed by a CSIRO report that found up to 18 cubic metres of water per second

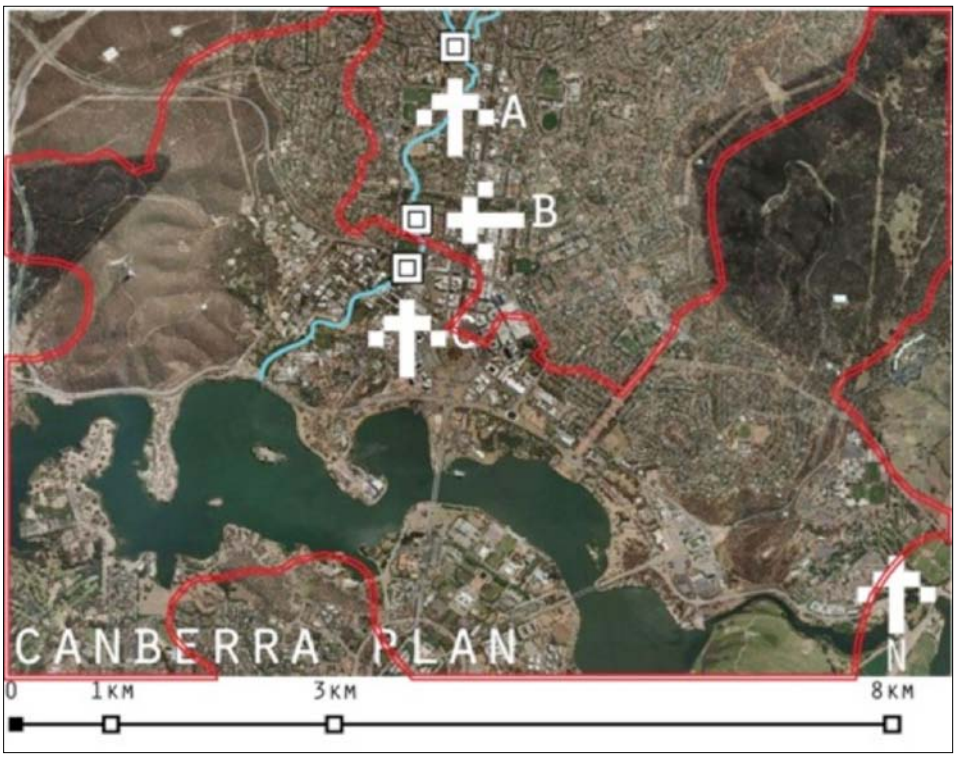

Figure 3: (2012) Triffid City spatial plan. The three sites (A, B and C) of the Triffid City intervention and their relationship to the Canberra landscape. Sullivans Creek stormwater channel is indicated in blue and the legislative boundary of the National Capital Authority is indicated in red.

flow down Sullivans Creek in large rain events (Dyer, 2000, p 50). Based on this information, it is hypothesised that a sudden influx of water will create sufficient force to destabilise established plants and push the debris downstream.

The embankment is regraded into an engineered garden characterised by a series of architectonic forms that inundate in heavy storm events (Figure 4a). As flood levels ease, water, sediment and plant material are captured in a variety of isolated deposition gardens. In stable conditions, the deposited plants are able to grow and establish themselves as permanent features of the design. However, extreme rainfall events for the ACT suggest the design will be disturbed frequently enough to push debris and disperse plants into the garden beds of sites B and C. Based on official meteorological rainfall data for 2013, this function would have already occurred 10 times as of September 2013 (Australian Government Bureau of Meteorology, 2014a).

Furthermore, the architectonic planes are designed in response to Canberra's prevailing north-westerly winds (Australian Government Bureau of Meteorology, 2014b), allowing wind-dispersed plant material (exterior to the site) to be captured. Certain WoNS, including cat's claw creeper (*Dolichandra unguis-cati*) and serrated tussock (*Nassella trichotoma*), disperse readily through wind movement (Osmond et al, 2008, pp 1–18; Weeds of National Significance, 2011) by being blown onto adjacent landscapes outside the boundaries of the creek; these species will spread uncontrollably through central Canberra independent of design.

Site B is located on a sweeping bend and passes through sports fields and recreational areas. Bends in water bodies, especially at times of high water flow, encourage fine silts and clay to settle on the adjacent bank (Vietz, 2012). Because Sullivans Creek is predominantly a low velocity environment (ACT Government, 2011), Site B is attuned to a vertical accumulation of passing sediment as it heads towards Lake Burley Griffin (Vietz, 2012).

Figure 4b shows that Site B responds to this phenomenon by collecting the falling sediment, thereby creating fertile ground for the future establishment of WoNS. The form is characterised by a series of stepping systems, platforms and deposition beds that allow people to interact with the fluvial process of Sullivans Creek. Furthermore, the platforms and deposition beds demonstrate the cyclical nature of pioneer ecologies as they evolve over time and adjust to varying environmental conditions. Through the application of and interaction with the *other* at Site B, the design aims to present the concept of a dynamic third landscape to the city.

Site C was selected because it bridges the legislative boundary between federal and territory law. In regard to cultural and ecological perceptions of the *other*,

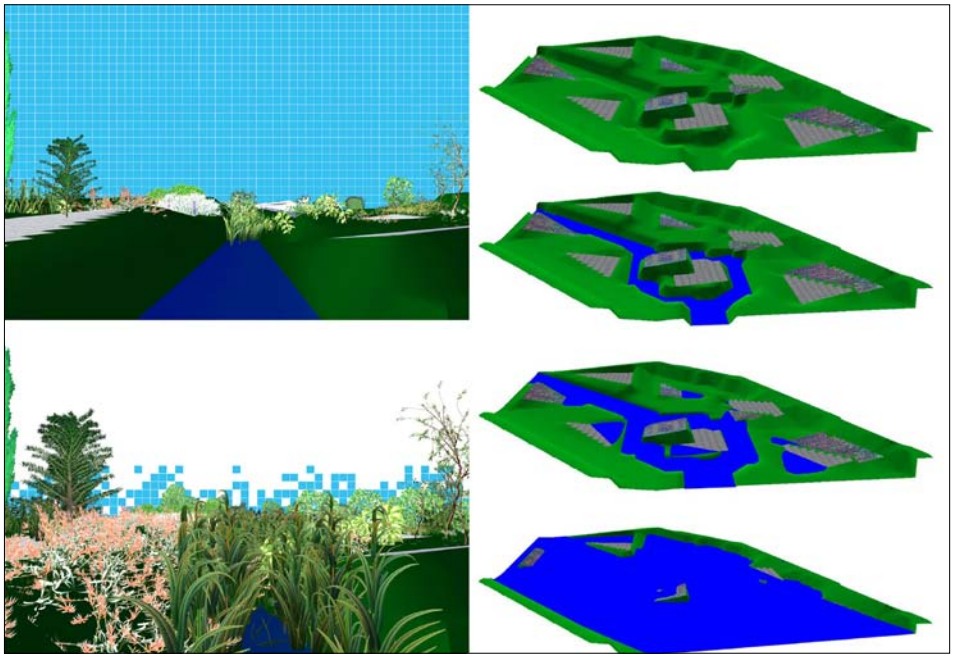

Figure 4a: (2012) Site A – perspective and exploded axonometric demonstrating the growth of pioneer plants (left) and architectonic folds responding to inundation (right).

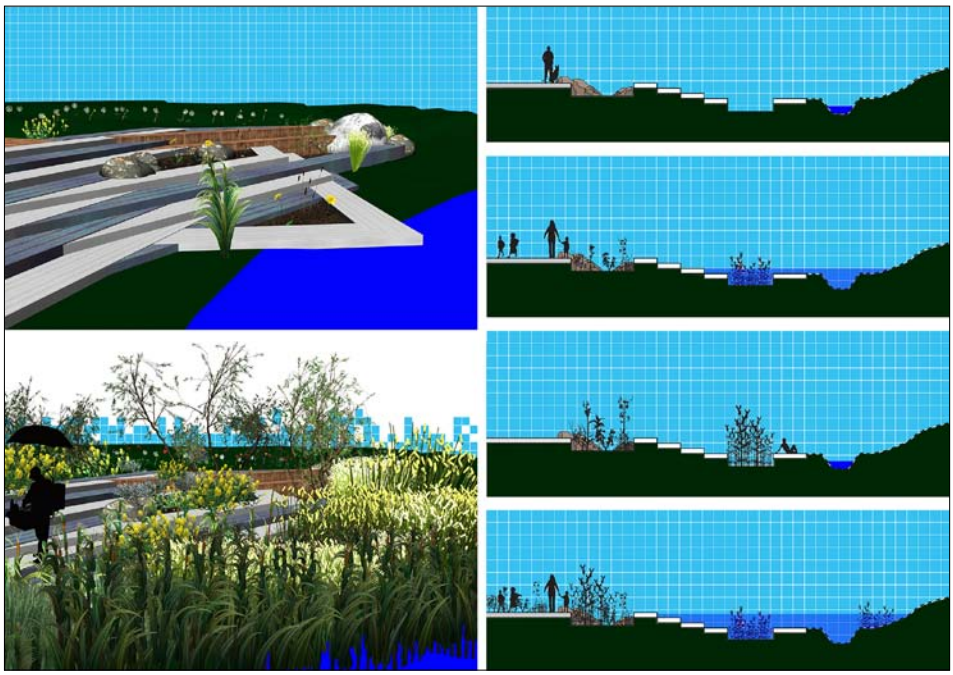

Figure 4b: (2012) Site B – perspective and section demonstrating the growth of weeds of national significance (left) and the inundation of the stepping system and occupation by people (right).

Site C is the most significant section of the design. On one side of this boundary, WoNS can be established independent of federal law; however, as they cross the invisible boundary, the weeds are redefined as illegal in the eyes of federal government. It is this classification that the intervention intends to rebuke.

The intervention here is an amalgamation of Site A's regraded architectonic planes and Site B's stepping systems and deposition beds, providing a heightened programme of sediment deposition and WoNS germination (Figure 4c). At the northern perimeter of the site, four deposition beds intersect the staircase, allowing the establishment of mature plant species that will continually produce seed stock. Moreover, the establishment of such species will protect against their removal in heavy storm events, encouraging the design's continuous function in the future.

Throughout sites A, B and C, the original v-shaped funnel of the creek bed has been intersected with folded landforms, stepping systems and interlaced deposition beds. These design moves are considered as a highly exaggerated interpretation of stormwater channel characteristics, programmed specifically for capturing sediment, fresh water and eventual plant growth. These forms, combined with careful examination of Canberra's historical rain events (Dyer, 2000, p 50; Australian Government Bureau of Meteorology, 2014a), Sullivans Creek flow history (ACT Government, 2011), prevailing wind patterns (Australian Government Bureau of Meteorology, 2014b), sediment deposition through fluvial process (Vietz, 2012) and major transport routes, suggest the design will sustain ongoing growth and transportation of WoNS across Canberra (Figure 5).

The design bypasses the strict guidelines on protesting in central Canberra and does so in three moves. The first involves spatial boundaries. As mentioned, Sullivans Creek is managed by the ACT Government and is not considered part of National Land (Figure 3), restricting the National Capital Authority's ability to act upon the demonstration. Second, the Right to Protest Guidelines strictly prohibit any change to the landscape aesthetic through the application of a structure

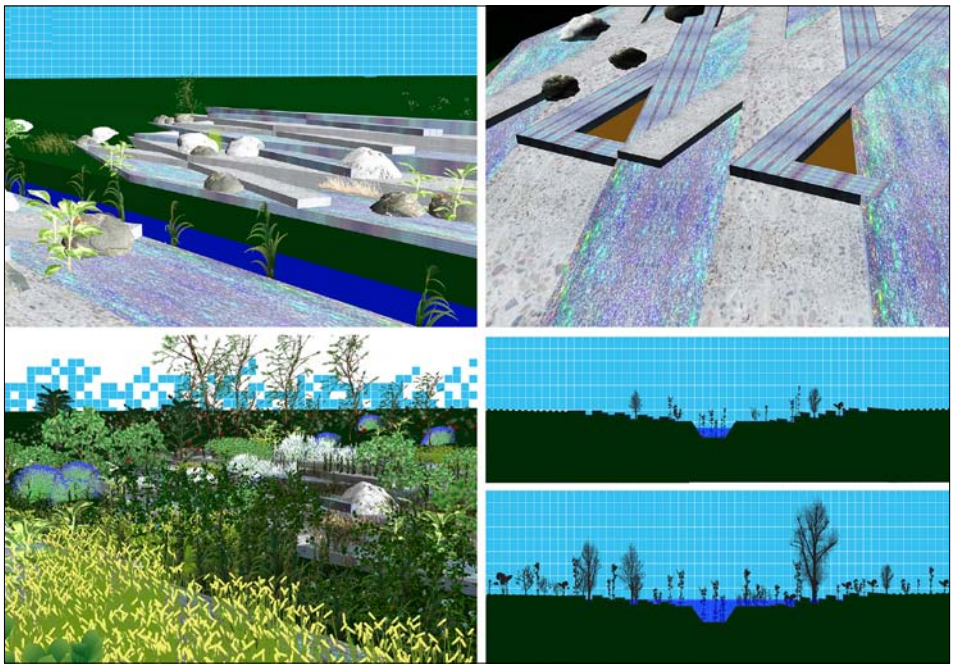

Figure 4c: (2012) Site C – perspectives and the section demonstrating the growth of pioneer plants (left), inundation of form (bottom right) and deposition gardens on the northern perimeter (top right).

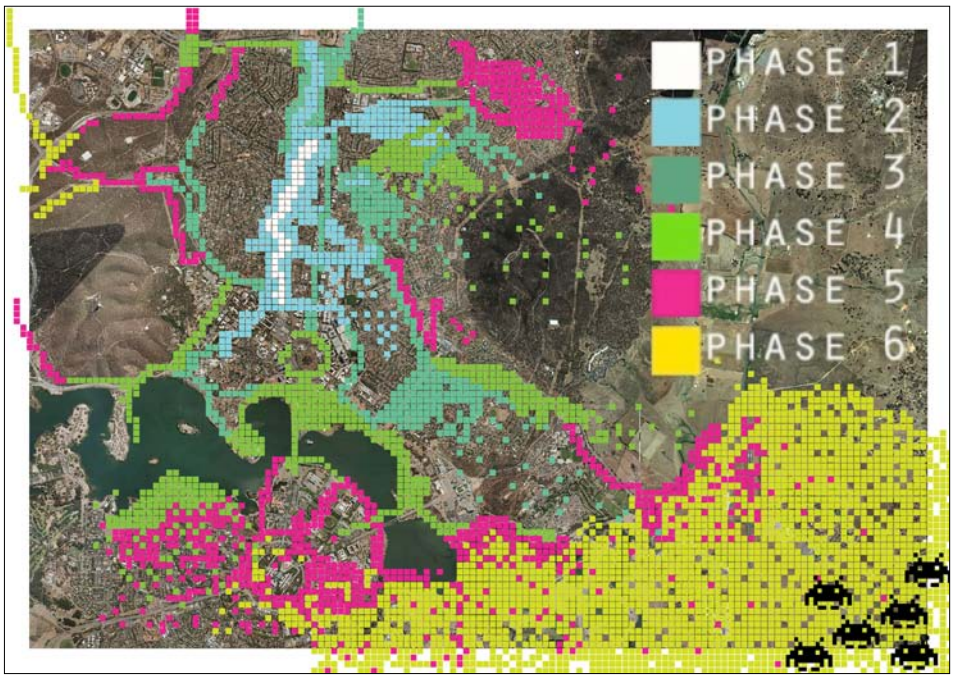

Figure 5: (2012) Triffid movement speculation, phases 1–6.

(Australian Government National Capital Authority, 2003, p 5) including staked vegetation. Plant material, however, cannot be considered as structurally solid because the establishment of species occurs outside National Land and depends on landscape processes rather than man-made and purposeful planting for survival. Finally, because the design is powered through landscape dynamics, a point of conclusion is difficult to discern, allowing the demonstration to continue for longer than the periods prescribed in the guidelines (Figure 6).

The Triffid design challenges the law through advocating the *other* and questions the fundamental position of these plants as invasive species in Australia. Demonstrating the benefits of WoNS as important components of the urban landscape may influence the negative socio-political perception applied to some flora in Australia. For example, it has been found that the WoNS common gorse (*Ulex europaeus*) has phytoremediation capabilities in sulfide-rich environments (Braga et al, 2013, p 2), a quality shared by the WoNS catclaw mimosa (*Mimosa pigra*) in nickel-contaminated landscapes (Handayanto, 2013, p 1). Moreover, the WoNS alligator weed (*Alternanthera philoxeroides*) can successfully remove contaminants from polluted waterways (Freitas & Prasad, 2003, p 9), a relevant issue in regard to the high levels of pollution found in Sullivans Creek (Dyer, 2000).

If these environmental benefits are realised, this may counter the cultural and scientific framing of WoNS in Australia. When expressed through a contemporary design language that challenges the community's perception of valued landscapes – in this instance, Lake Burley Griffin (Godden Mackay Logan Heritage Consultants, 2009, pp i–ii) – the performative aspect of the *other* is established as a valued urban landscape alongside its traditional counterpart. This inclusive programme would allow the *other* to become part of the political, cultural and ecological discussion at the national level.

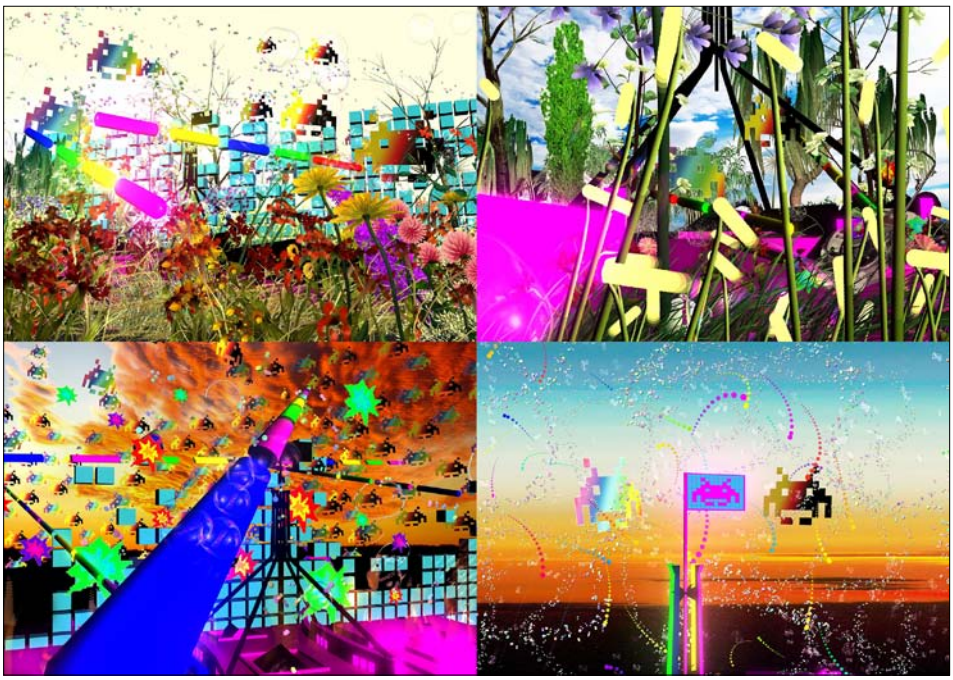

Figure 6: (2012) Conceptual renders – digital collage representing the ongoing protest by the Triffid community in Canberra.

Discussion: The emergence of 'Glitterosophy' as an appreciative design approach

Elizabeth Meyer (2008) argues that design is a cultural act that merges civilisation with environmental processes. Landscape architecture as an expression of culture can develop a new aesthetic that deconstructs the 'blanket' approach to open space in the metropolis (McHarg, 1969). As outlined in the introduction, it is evident that contemporary landscape architecture in Australia so far lacks engagement with pioneer ecologies in urban projects either because of a conservative interpretation of naturalness in the design profession (Weller, 2006) or because of government policies and regulations.

International examples that engage with pioneer ecologies in an unprecedented way directly involve the generative components of landscape processes and start to formulate a new, contemporary design language in landscape architecture in the urban context. Examples of this approach can be seen not only in the work of Gilles Clément (for example, Derborence Island in the Garden Henri Matisse, Lille, 1991–1995) but also in works such as Park am Nordbahnhof (by Fugmann Janotta, Berlin, 2009), Schöneberger Südgelände (by Odious, Berlin, 2009) and Side Effect (by Amir Lotan, Bat Yam, Israel, 2010).

In the case of Park am Nordbahnhof, landscape architects Fugmann Janotta designed alongside the pioneer ecology that settled on the perimeter of the site. This remarkable move established a dynamic edge condition that has diminished the boundary between design and process. Similar design moves are present in Odious's and Amir Lotan's projects. Odious's design for the Schöneberger Südgelände treats the pioneer ecology with sensitivity through minimal intervention. The circulation systems are elevated to limit disturbance of the ground plane and old industrial relics are left to erode through continual exposure to landscape and environmental processes. Lotan's Side Effect works exclusively with ruderal plant species and other materials, including old car tyres and gleaned industrial paraphernalia, to introduce the aesthetic in the urban realm.

What allows these international precedents to operate at this level is a shared engagement with contemporary design theory that justifies a direct encounter with pioneer ecologies through urban design. It has been argued that this approach of linking theory and practice is paramount to testing the applicability of new concepts in real-world situations (Sepänmaa, 2010, p 397). The two case studies discussed in this paper combined the theoretical and practical perspectives through the exploration of the third landscape as a basis for design approaches for two Australian cities. What these explorations demonstrate is the necessity of design approaches that are open to alternative perceptions of aesthetics and that appreciate the potential of otherwise marginalised ecologies.

Through reflection on the case studies presented in this paper, Glitterosophy evolved as a possible term for framing design approaches that are positive and appreciative of the other. Glitterosophy is a portmanteau, the combination of the words 'glitter' and 'philosophy'. Glitter suggests a spectrum, a condition not confined to a definitive set of values, varying in response to evolving conditions and processes. Philosophy is 'the study of the theoretical basis of a particular branch of knowledge or experience' (Oxford Dictionary online, 2013), in this case, contemporary landscape theory. Glitterosophy, in the case of Fishermans Bend and Triffid City, suggests a landscape perspective in which the *other* is discussed as part of – and not in opposition to – the existing landscape aesthetics of Australian cities.

In reference to Fishermans Bend, the mapping technique revealed a disturbed landscape that was still functioning as an ephemeral wetland in times of heavy flooding. In this instance, the endemic wetland system has been replaced by light industry and the corresponding native vegetation deeply altered. However, various pioneer plant species have naturalised in the existing landscape, establishing a paradoxical relationship with native animal species. This discovery questions the assumptions made by science that invasive species are detrimental to endemic landscapes (Preston et al, 2006) and so should be forcefully removed.

In the case of Triffid City, the intervention expanded on the Fishermans Bend discovery and tested the *third landscape* theory through spatial intervention in Canberra. Although the design is defined as hypothetical, the rigorous study of Canberra's landscape dynamics suggests the intervention would facilitate the ongoing germination and transportation of WoNS across the urban landscape. Through the emergence of a dynamic aesthetic, Triffid City questions the hierarchical value of cultural landscapes in central Canberra and Australia. Why, for instance, is Lake Burley Griffin included on the National Heritage List (Godden Mackay Logan Heritage Consultants, 2009, pp i, 54) rather than the Indigenous ceremonial sites that were submerged through the lake's creation?

Further, the interventions question why pioneer plants are forcefully removed from Australian civic space instead of being applied through urban design. It may be argued that these decisions are based on ecological perspectives; however, considering only 5 percent of Australia's urban and rural ecosystems are unmodified or are not at risk from human intervention (State of the Environment Advisory Council, 1996), these methods seem misguided in the contemporary urban situation.

Lastly, the Triffid City project suggests that the incorporation of *otherness*, by programming space as a medium through which social and cultural perceptions can evolve, ensures a level of resilience that is currently missing in Australian urban design strategies. Civic landscapes should not be appreciated as static spatial artefacts; instead the interventions demonstrate that urban landscapes should have the inherent aptitude to respond to evolving notions of nature within the city. In this instance, the design aptitude has emerged through the concept of landscape aesthetics, specifically pioneer ecologies and their application in Canberra.

Conclusion

Clément suggests that the *third landscape* is next in a lineage of environmental evolutions that should be applied through design for the betterment of our urban habitats (Clément in Borasi, 2006, p 92). Based on the case studies discussed, it is proposed that, if landscape architecture as a design practice was to engage with the concept of *third landscape*, the emerging projects could have the capability to change the public's perception of pioneer plants in Australian cities.

The role of the architect is to understand landscape dynamism, to articulate this through design and promote its continual function in urban settings (Clément in Borasi, 2006, pp 88–89). This perspective is shared by contemporary environmental aestheticians (Berleant, 2005; Carlson, 2010; Saito, 2007) and can be successfully demonstrated through design that uses pioneer plant species that often have a high degree of environmental adaptability (Dunnet & Hitchmough, 2004). If design practice taps into these abilities, urban space in Australia may develop better resilience to any variable climates in the future.

The Melbourne and Canberra projects discussed in this paper are a starting point for exploring alternative approaches on how design might engage with the concept of the *third landscape* and what the potential of remnant vegetation could be for Australia's contemporary urban environments. In the Fishermans Bend project, if the presence of interstitial ecologies in the built form is acknowledged then this could lead to a counterbalancing of the increasingly homogenised urban landscape in future urban renewal projects. The Triffid City design for Sullivans Creek in Canberra demonstrated an alternative strategy to address issues of political power and otherness as well as dynamic landscape processes. Shifting the design perspective to appreciate the *other* provides a foundation from which a progressive landscape aesthetic can evolve that supports diversity over homogeneity in Australian cities.

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