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*Reimagining the cultural significance of wetlands: From Perth's lost
swamps to the Beeliar Wetlands.*

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Abstract: The history of Perth, Western Australia, has been characterised by the incremental loss of its wetlands. While disputes about wetlands are often framed solely in terms of the environment, they are places of cultural significance too. The extensive wetlands of central Perth, food gathering and meeting places for Noongar people are now expunged from the landscape. Urban dwellers of Perth are largely unaware that the seasonal lakes and wetlands of the centre of the city were the larders, gardens, hideouts, dumps and playgrounds of previous generations; both Noongar and Settler. The loss of social memory of these lost cultural/natural places entails the framing of wetlands as aberrant and continues to influence Perth's development and the sense of place of its inhabitants. *Reimagining Perth's Lost Wetlands* was a project which attempted to reimagine the pre-colonial landscape using archival material. Reimagining the past allows connections to be made to the last remaining wetlands in the wider metropolitan area. The fight to save the Beeliar Wetlands in southern suburban Perth as a cultural/natural place illustrates the changing value of wetlands and the laying down of social memories of place.

Keywords: social memory; wetlands conservation; reimagining landscape.

Introduction

A popular view of Perth, Western Australia, is of a pleasant city on the edge of a vast, arid state. Yet Perth has a Mediterranean climate, with a cool, wet winter. It is also centre of a biodiversity hotspot. The city sits on the Swan Coastal Plain, a geographical region encompassing the meandering Swan and Canning Rivers. The city was established on the banks of the Swan River, technically an estuary at this point in its journey to the sea. Prior to European colonisation in 1829, the plain was dotted with lakes and wetlands, or, as they are often known locally, swamps. The developing city of Perth was situated between the river and a network of wetlands extending across the north of the city. While the journals of European colonists repeatedly refer to these wetlands, or 'lagoons,' within the first hundred years of settlement, most have been drained. Perth dwellers can still experience a few highly modified lakes on the outskirts of the central district, but the original lakes and swamps are completely gone, covered by streets and buildings.

The development of Perth removed wetlands from the central city landscape and, moreover, from social memory. We use social memory in the sense articulated by Sturken (2008) as different to historical records and solely personal memories, but continually reproduced through cultural forms. Geographies of memory are reproduced not only by material form but by "bodily repetition of performance" (Hoelscher and Alderman 2004, 350). The limited visual traces of Perth's wetlands, in maps, artworks and photographs has led to a loss of understanding of the biogeography of the region alongside the physical loss of the wetlands, which can no longer be experienced. This paper takes as its starting point a research project that aimed to reimagine the lost wetland environment of central Perth by reconstructing a digital image of the natural landscape as it might have appeared in 1827 prior to settlement. Giblett (2011) problematises the separation of nature and culture, arguing that even national parks are cultural landscapes. In Giblett's (2011) five cultures of nature taxonomy, the transition from second nature (agriculture) to third nature (mining) occurred in a short period of time in Western Australia. Agricultural and pastoral pursuits were followed quickly by mining and engineering, and the central city of Perth began to engineer drainage solutions to perceived problems of flooding and sanitation from the early years after European settlement.

Perth was settled by Europeans just before the photographic era. Many of the well-known images of colonial Perth were taken by Alfred Stone, a lawyer and pioneer photographer (O'Brien and Statham-Drew 2012). As Perth was slow to develop at first, Stone's photographs taken from the 1860s show examples of original vegetation and landform. However, the majority of photographs of Perth, and indeed artworks, are from a perspective facing the river and the wetlands at the back of Perth do not feature. The other common perspective is from the highest point of Kings Park. This 400 hectare park, the majority of which is remnant vegetation, is promoted by its own park authority as the largest of its kind contained within a capital city. While it is not the pristine bush many believe, having been quarried and logged in colonial times (Seddon 1972), it has hundreds of endemic species and remains significant in how Western Australians view themselves. Seddon and Ravine (1986) have written about the iconic view from Mount Eliza, Kings Park, across the Swan River to Perth, and its linkage to Arcadian themes. Despite the fact

that this view now takes in a freeway interchange, constructed over a large, filled section of the Swan River, it is still understood as aesthetically pleasing. By contrast, there are just a few images of wetland areas in Perth, such as an image of Claise Brook by Alfred Stone (O'Brien and Statham-Drew 2012). Giblett (1996a, 127) has challenged the pleasant view of Perth, seeing instead "a city malignantly settling its swamp setting." Perth's Kings Park, renamed for the King in 1901, is the approved park with its pleasing prospect from Mount Eliza, whereas the lakes and wetlands behind the city were first exploited and then expunged.

Wetland drainage and clearing in metropolitan Perth continues to the present day, a local manifestation of a worldwide problem. The drivers for wetland clearing are most frequently transport development and urban sprawl. In this century, the few remaining wetlands on the Swan Coastal Plain are in the outer city and all are threatened by development of different kinds. The values attached to wetlands in Perth, however, have changed over time. After considering the lost wetlands of central Perth, this paper moves to a contemporary dispute about the Beeliar Wetlands in outer, suburban Perth.

Reimagining Perth's Lost Wetlands

The original intention of the *Reimagining Perth's Lost Wetlands* project was to create a model of the centre of Perth in similar way to the Mannahatta project. Manhattan Island is one of the most altered physical environments on Earth. Landscape ecologist Eric Sanderson led a team who attempted to reimagine the island, Mannahatta, at the time of Dutch colonisation in 1609 (Sanderson, Boyer and Robertson 2009). The foundation for this work was the British Headquarters Map, which dated from the American Revolutionary War, and detailed topography, shorelines, streams and wetlands along with settlement (Sanderson, Boyer and Robertson 2009, 35). Lacking anything as detailed as the British Headquarters Map, the *Reimagining Perth's Lost Wetlands* project used several archival maps to infer topography and the location of wetlands. One example is the 1838 Roe-Hillman map (Figure 1) showing the lakes and early city layout. Maps showing the water table and well depths were used to glean additional information about the seasonal nature of the lakes and contemporary soil maps were used to deduce the broad vegetation categories. Settlers' and surveyors' accounts, Noongar oral histories, colonial era artworks and the early photography of Alfred Stone were used to create a historical impression of the city.

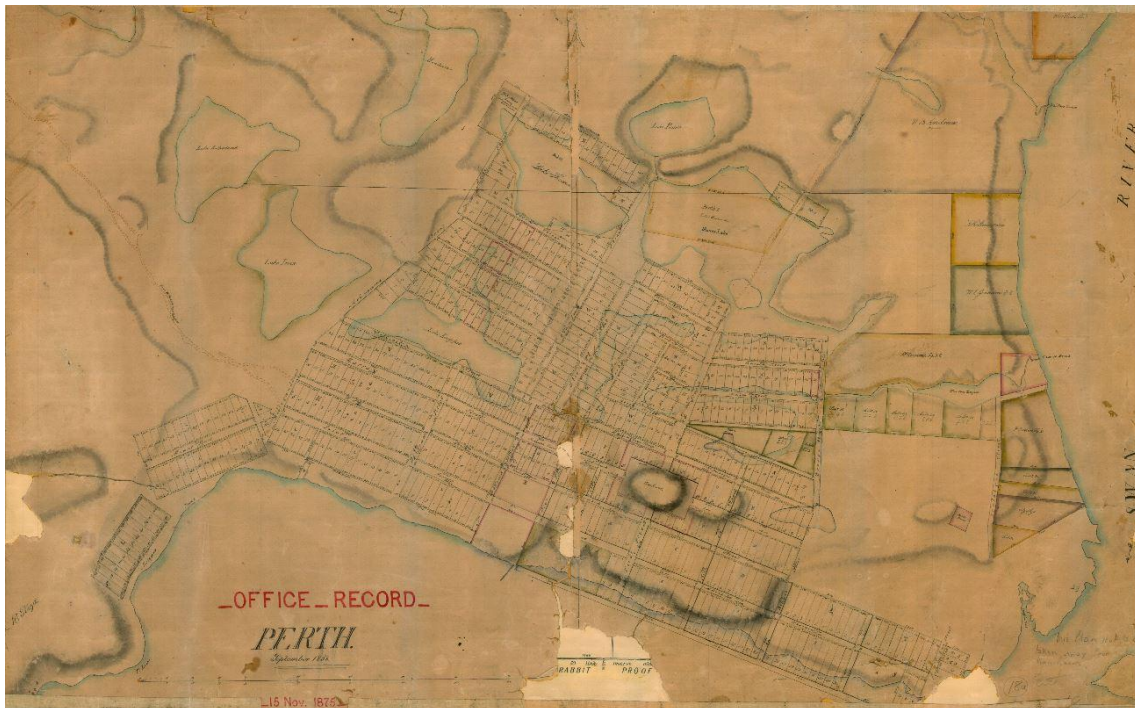
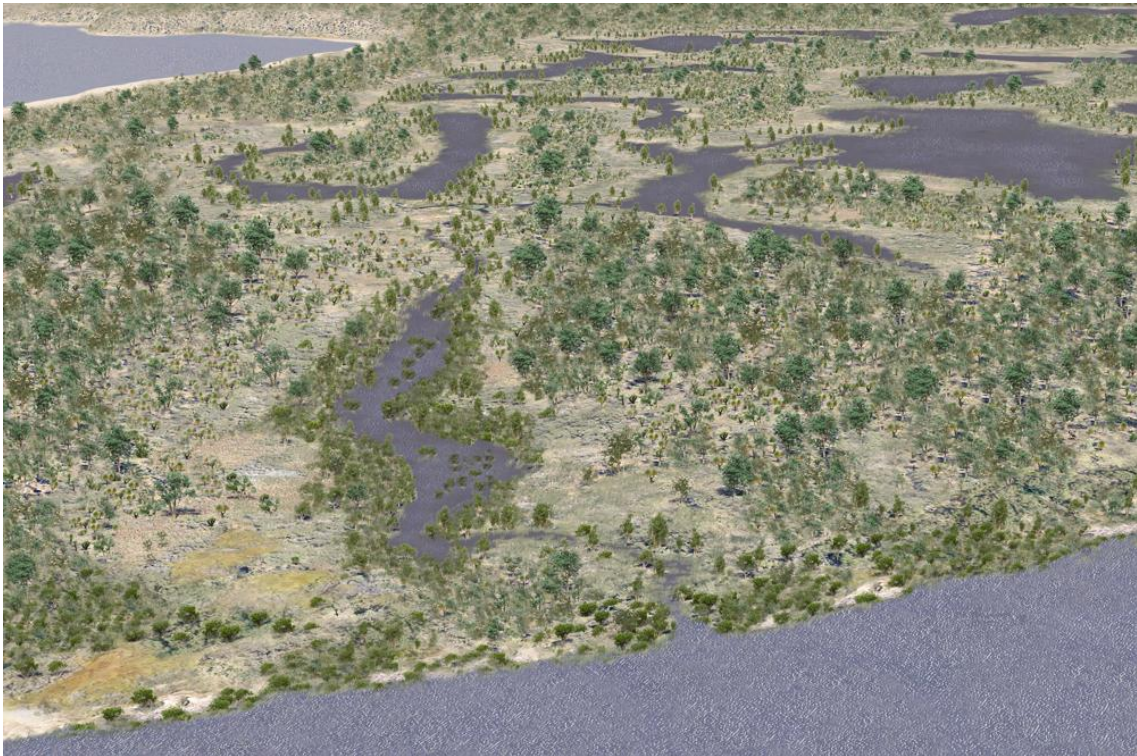


Figure 1: Plan of town site of Perth Western Australia 1838 by colonial draftsman, A. Hillman, and Surveyor General, John Septimus Roe. Photo: State Library of Western Australia.

Figure 2a shows the reimagined visualisation of Perth before European settlement. It reveals forgotten interconnectedness between the wetlands. The pre-settlement wetlands all drained eastward into a seasonally flooded area called variously Tea Tree Lagoon or Swamp and from there into Claise Brook, prior to emptying into the Swan River. The image shows the wet season extent of the lakes, whereas their boundaries would have varied during the year and across seasons. In Figure 2a, artistic licence has been employed in exaggerating the height of the vegetation to indicate the relative locations of forested areas and swamp/lake margins occupied by paperbark and rushes. The vegetation types, including sandy areas of native grass, are portrayed in locations deduced from the many historical sources researched during the project. Tree types appearing to grow in water replicate genera that were seasonally flooded. The image, therefore, presents an artistic impression of what the central area of Perth might have looked like in 1827, rather than a reconstruction, as in the Mannahatta project.

In contrast, a contemporary view of Perth shows no trace of the lost wetlands (Figure 2b). Claisebrook Cove shown in the foreground is a completely reconstructed inlet. It was developed as part of the East Perth Project in the 1990s and is in approximately the same area as the original Tea Tree Lagoon/Swamp but with a larger entrance to allow egress by boats. The present day 'brook' entering the cove from the north is an engineered, artificial waterway, complete with bronze turtle public art. As with many contemporary waterways in Perth, the Cove has limestone banks surrounded by either mowed lawns or paving.



a. Reimagined View of Perth, circa 1827. Image: Edith Cowan University.



b. Contemporary View, 2014. Photo: City of Perth.

Figure 2: South west view across central Perth from the Swan River at East Perth.

The reimagined impression of central Perth is viewed obliquely from the east of the city at the point the Swan River turns north. This is the opposite side of the town from the pleasing aspect from Kings Park (seen in Figure 2b as the vegetated area to the left of the skyscrapers). From colonial times, the east side of Perth was the location of tanneries, rubbish dumps, an abattoir and a cemetery. Later industrial uses included a power station, gas works and train yards (Stannage 1979). Claise Brook, which had drained most of the fresh water swamps and seasonal lakes across Perth into the Swan River, became instead the carrier of its effluent.

The loss of the social memory of the original landscape, particularly the wetlands, is only one layer of re-inscription of East Perth's, and Perth's, cultural history. East Perth has been continuously inhabited by Noongar people, but during 1927-48 they were prohibited from entering central Perth after 6 p.m. without a permit (Gregory 2003). It was the location of the Coolbaroo Club for Aboriginal people and their white supporters between 1946 and 1960 (Taylor 2000) and became a residential area for Aboriginal people from outside Perth due to the lower cost housing amongst the industrial activity (Gregory 2003). In 2000, East Perth was cut in two by construction of the Graham Farmer Freeway. While few can now afford to live there, sites of significance to Noongar people are memorialised in East Perth public art and plaques. Byrne and Houston (2005, 1) have pointed out that in the gentrification of East Perth "the colonial past has not really been displaced, but rather has been incorporated into popular multicultural representations of place." Gregory (2003, 328) cautions accepting a romanticised version of East Perth's history to avoid repeating the mistakes of the past. Avoidance of the mistakes of the past was a motivating factor in exhibiting the *Reimagining Perth's Lost Wetlands* project.

An exhibition of materials from the *Reimagining Perth's Lost Wetlands* project was held in the Perth Town Hall in 2014 (and later formulated as an online exhibition by the Western Australian Museum). The exhibition contains archival photographs, maps and textual accounts of the lost wetlands. When the 1827 view (Figure 2a) was displayed, exhibition visitors expressed surprise, and even disbelief, at the extent of wetlands that had existed across central Perth. The visual materials prompted visitors to make connections between the lost wetland landscape of central Perth, remaining wetlands in outer Perth, or their memories of wetlands. While it is obvious on one hand that all urban environments were once natural, change has taken place in Perth over such a short period of history it is almost as though the wetlands of central Perth had never existed. The superficially pleasant tree-lined streets and abundant parks mask the extent of the changes. Bolleter, Buck and Sweetman (2016) have noted that although parks are numerous in the suburban core of Perth, "one quarter have no trees, only one-tenth have significant wildlife function and only one-hundredth have wetlands" (68). This loss of biodiversity in urban environments has motivated at least some Perth residents as the city spreads further across the Swan Coastal Plain. Organisations such as the Urban Bushland Council have attempted to link together localised "Friends" groups who act as custodians of remnant wetlands and bushland. "Friends" volunteers promote activities like weeding, planting, watering and rubbish removal. The bodily repetition of these communal acts of care may inscribe a different suite of social memories for the remaining wetlands of Perth.

Perth's lost swamps as landscapes of culture

Wetlands and swamps have been described as intermediate, neither wholly land nor water, which may account for the ambivalence towards them (Giblett 1996b, 39). Even the arguably more aesthetically pleasing river systems of Western Australia have been paid limited attention in histories of Perth, given their importance to settlement (Graham-Taylor 2011). However, the river is still visible, albeit with modified foreshores and declining biota. The wetlands of central Perth are gone and the seasonal fluctuations in water and fauna activity are no longer visible. Gardens and public areas are planted with species expected to survive the hot, dry summers with reticulation from precious water supplies.

Morel-EdnieBrown (2009) demonstrated by GIS (Geographic Information System) analysis of colonial Perth town plans that depictions of the inner city swamp lands disappeared over the twenty-two years from 1833 to 1855. She concluded that swamp lands were preferentially selected by settlers due to their fertile soil and access to fresh water and that the town plan was modified to maximise lots with swamp frontages. This work showed that drainage and clearing were not due entirely to fears about disease. Indeed, disease had been associated with swamps in colonial Perth due to sewage entering the water table connected to the lakes. Outbreaks of typhoid in the 1890s doubtless extended the period in which people associated swamps with illness and beyond the era when miasma were thought to cause disease. Chinese gardeners had been amongst the first of the settlers to utilise the rich, swamp soils for food production and became the target of complaints, along with their swamp gardens. At the time this aggrieved Perth resident wrote to *The Daily News* in 1909, the inner city swamps were no longer shown on maps:

There is no doubt the time is fast approaching when the citizens will demand the filling up of all the oozy swamp areas all over the city. These areas are the breeding ground for that champion disease-carrier, the ubiquitous mosquito, and one has but to notice the heavy dank pall which hangs over the swamps during most nights to be convinced that in the interests of health an end must come to their existence in their present state. Another serious menace to health lies in the use of high-smelling fertilisers by the Chinese gardeners, who rent the swamps. The heavy stench which arises from the vegetable gardens on muggy nights is clear evidence that public health is menaced by their existence. The time must come when every city swamp must be filled in, and when every Chinaman now cultivating the gardens will be told to remove their business to less populous parts. ("Swamp Lands of the City" 1909)

While all of the wetlands shown in Figure 2a had disappeared by the turn of the century, two on the outskirts of central Perth, Lake Monger and Third Swamp (later Hyde Park), would continue to elicit public commentary until they were tamed. In the 1890s, arguments about what to do about Third Swamp resulted in numerous letters to local papers. Residents made a deputation to Premier John Forrest about Third Swamp claiming "a great deal of the sickness in the locality it was thought was due to the bad smell that came from it" ("Third Swamp Reserve" 1897). However, not all were content with the moves to turn the swamp into a park:

An expensive fence has been placed round the said reserve, the value of which, as an investment, can benefit only the surrounding estate. Again, trees which cost nothing and gave a grateful shade, also tending to keep the earth cool, have been ruthlessly cut down, and to replace them 300 border plants have been set, and at a cost, did the ratepayers know it, that might well make them ponder. Then come to the swamp itself, and what has been done to it? As things go in Perth it would make a valuable market garden addition, if cheapness of living is a sufficiently important factor to be considered. It would economically dry by evaporation if undue haste were absent; and then the reeds could have been cut and grubbed, islands banked, and all else done at a fractional expense of what has been already expended, and for which there is so little to see. ("Third Swamp Reserve" 1898)

This agricultural reimagining of Third Swamp did not come to fruition, and it was reborn as Hyde Park, complete with decorative flower beds. Negative connotations of swamps and indeterminate wetlands persist to the present. As recently as 2012, the Hyde Park Lakes Restoration Working Group investigated options to ensure the park "does not continue to be a 'seasonal wetland' and a casualty of declining water levels which transforms it into a swamp each summer" (City of Vincent 2012). In this context, the term "swamp" is understood intrinsically as undesirable. The restoration of Hyde Park did not restore the original landscape, a swamp rather than a lake, but extended the already park-like environment with limestone edges to the lake, constructed islands and artificial water level management.

The memory of swamps as places of abundance and social activity has largely been lost along with their original ecosystems, except to Noongar people. Interviewed about their family connection to Forrestdale Lake, south of Perth, Noongar elders described the swamp as "a larder," "a kitchen" and "a supermarket," thus reflecting the memory of this usage (Giblett 2006, 4-5). Lake Kingsford, one of the original lakes in central Perth and now replaced by the Perth Railway Station, was known as a collection site for vegetable foods, fresh water crayfish and turtles (Bates 1929).

Swamps were also places of refuge. In the second year of European settlement of Perth, a battle occurred between local Noongars and soldiers and armed settlers. Fought over the course of one day in May 1830, this dispute started near present day Kings Park and ended at a swamp believed to be Lake Monger. At this site, the Noongar attempted to take cover in the tea trees and dense reeds. Spears were thrown from the cover of the swamp and muskets fired into the bush. At nightfall, the soldiers attempted to corral the Noongar:

Darkness had now fallen, and patrols were told to completely surround the lagoons and prevent, if possible, any movement during the night. For a considerable time voices were heard in the lagoon, but in a while silence reigned. Yet the patrols had not reported any movement on the part of the blacks. At daybreak next morning the commander of the troops endeavoured to get into communication with the blacks and, if possible, re-establish friendly feelings, when it was found that the lagoon was practically deserted by the enemy. The military cordon had reported no movement during the hours of darkness, but the thick scrub made the matter of reconnaissance very

difficult. In a little while, however, the patrol to the eastward reported that the enemy were in the act of crossing the river at what is now the Causeway, having eluded the vigilance of the reconnoitring parties, travelling, no doubt, along the chain of swamps which then extended to what is now East Perth. ("A Battle near Perth" 1914)

The account of the battle and aftermath by the commanding officer, Captain Frederick Irwin, also explained that, in the morning, the Noongar were "seen to cross the river at the islands, with their families, in considerable numbers" (cited in Carter and Nutter 2005, 68). The swamps across the northern boundary of Perth had provided refuge and an escape route for the Noongar people as they fled along a traditional route across the river. While combatants on both sides were wounded in the battle, it is unknown how many Noongar people were killed. This significant event in colonial history is not well-known in Western Australia and there is no written account of the Noongar side of the story.

Lake Monger continued to be a meeting and campsite for Noongar people until the 1920s (Stannage 1979). Arguments about the vegetation, drainage of, and access to Lake Monger were made as the city grew, and early claims were often utilitarian, preferring wetland uses that favoured agriculture. Ultimately, exertion of control over the indeterminate wetlands and swamps was often achieved by turning them into rubbish dumps:

Five acres have been reclaimed for the Lake Monger reserve by the tipping of refuse into the swamp [...] 25,960 loads of trade waste and rubbish (making a total of 30,797 tons) had been dumped at the tip and 13,000 cubic yards of sand had been used for the covering seal. The area added to the reserve would ultimately be grassed and added to the acreage already reclaimed for the 'creation of a fine recreational reserve.' ("Swamp to be Reserve" 1948)

In 2017, the assumed site of the Battle of Lake Monger is a clearly defined lake with sparse vegetation around much of its perimeter. Due to its proximity to the city, it is heavily used for recreational purposes such as walking and cycling. Although the natural environment of Lake Monger has changed dramatically, it is still home to large numbers of birds including the black swan, and is a place where city people now encounter wildlife. On the east side of town, the river crossing of muddy islands where the Noongar fled the muskets of colonists in 1830 is today the discrete Heirisson Island. It is traversed by a causeway and is a major traffic route into and out of Perth. The route across the causeway and down the Albany Highway was probably a Noongar *bidi*, or traditional pathway, and the island known also by its Noongar name, Matagarup, has been a site of protest and resistance since 1978 (Kerr and Cox 2013). Facing Matagarup on the city side is the reconstructed wetland of Point Frazer Park. Bolleter (2015) has suggested this particular 'park' is a minimal response to numerous failed naturalisation plans for the reclaimed river foreshore and notes that the original, swampy Point Frazer is subsumed within the reclaimed foreshore.

The original lakes and swamps in central Perth are long gone, but even the two remaining on the outer edges of central Perth are lost in the sense that they no longer resemble their natural state and only a part of their histories is retained. Lake Monger has been

hydrologically disconnected completely from the Claisebrook catchment, with a drain emptying into the Swan River at Mounts Bay. Hyde Park is faintly reminiscent of its English namesake. Perth's inner city wetlands have been reformulated as discrete lakes and parks and only selected social memories of these former cultural/natural places are held. There are no 'swamps' left in central Perth.

Reimagining the Beeliar Wetlands as other than the Roe 8 reserve

Colonial attitudes to wetlands continue to shape the development of the city as Perth expands inexorably across the Swan Coastal Plain. A present-day dispute about wetland clearing demonstrates the changing value of wetlands in metropolitan Perth and that, although road development continues to override other land uses, the clearing of swamp land can no longer proceed uncontested. The foundation of what was ultimately a successful protest against a highway project was the reimagining of the Beeliar Wetlands as other than a road reserve. This reimagining was mediated not only through the spatial and experiential knowledge of the natural wetland environment, but by acknowledging the social values attached to the specific place of Beeliar.

The colonial surveyor John Septimus Roe is well remembered in Perth for laying out the inner city. A monument to his memory can be found in Kings Park, not far from the location of the famous viewing site. The place, Roe Gardens, has at its centre a granite plinth topped with a bronze version of the map shown in Figure 1. Of course, no lakes or swamps can be observed today from the viewing point of Roe Gardens, and significant areas of Swan River in the vista have been reclaimed. The Roe Gardens monument dates from 1956, the heyday of modernist highway planning in Perth (Gregory 2011). Roe's name was given to a highway first proposed in 1955, which later became part of Perth's Metropolitan Regional Scheme (MRS). The Roe Highway was to be an outer ring road around the city centre at the time it was planned, but by the time construction commenced in 1981 it was contained within greater metropolitan Perth. Construction of several sections of the Roe Highway involved the clearing of remnant bushland, but the most controversial section, Roe 8, was to pass between two lakes and bisect the Beeliar Wetlands.

The Beeliar Wetlands, named for the original Beeliar people, also contains Bibra Lake (Wallibup) and North Lake (Coolbellup), now part of the Beeliar Regional Park located about twenty kilometres south of central Perth (Department of Conservation and Land Management 2006). Surrounded by residential development and encircled by roads, the wetlands contain fauna species that are now rare in urban environments, including splendid fairy wrens, oblong turtles and the shy, burrowing marsupials known locally by their Noongar name quenda. The banksia woodland flora includes iconic species, such as spider orchids and the Christmas tree (*Nuytsia floribunda*), and serves as critical foraging habitat for the endangered Carnaby's black cockatoo. Migratory birds like the rainbow bee-eater nest in shallow burrows in the sandy ground. Massive flooded gums and paperbarks grow in a swampy peat basin believed to be hydrologically unique on the Swan Coastal Plain (V. Semeniuk, pers. comm.). The high biodiversity of this area has been recorded by successive studies, both in terms of plant communities and in total

number of species. It contains a particularly unusual and untouched swamp that has come to be known as Roe Swamp. In contrast to the situation with the wetlands of central Perth lost in colonial times, the Beeliar Regional Park is commonly agreed to have environmental value, and parts of the wetlands are mapped as “conservation category,” a category intended to ensure their preservation (Department of Conservation and Land Management 2006). However, the State government has excised parts of the regional park in order to build the Roe 8 Highway. The Roe 8 reserve can be clearly seen on maps dating from the 1960s.

Strong objection to Roe 8 has been voiced since the 1970s, alongside the growing environmental movement, while the need for it to be completed has been supported by successive Liberal governments in Western Australia. While justifications for the highway have changed over the fifty years since it was first suggested, they are all connected to the idea that roads equal progress and that highway building is a natural consequence of development in Perth. In 2008, the state government recommitted to completing the Roe 8 Highway section. By this time, the Beeliar Regional Park containing the wetlands and two lakes to be impacted by the highway was heavily used by the local community and increasing numbers of visitors. Recreational users, such as bird-watchers, dog-walkers and cyclists contributed new values ascribed to the wetlands and social memories associated with them. The wetlands became a focus for education with the establishment of a Wetlands Education Centre in the 1980s, attracting students, artists and tourists. Increasingly the Beeliar Wetlands are cherished for their intrinsic value as a wild place remaining within an urban environment. There is also growing understanding that this urban bushland provides necessary habitat for mobile endemic species like the endangered Carnaby's black cockatoo. The assemblage of plants and animals found in the remaining wetland areas of Perth are often described in the terms of environmental science, but there are complex values attached to the sights and sounds of the native flora and fauna in their natural habitat.

The Beeliar Wetlands were settled by Europeans in the 1840s and, as with other wetland areas on the Swan Coastal Plain, there were early incursions for agricultural purposes including dairying and market gardening and the inevitable rubbish dumping at the southern end of Bibra Lake (Berson 1978). An Australian Women's Army Service (AWAS) camp was stationed at Bibra Lake during the Second World War (Tucker 1991). Residential developments have continued to infill around the wetlands and recreational facilities, including a water park, ice rink and skateboarding park, abut Bibra Lake. The shores of Bibra and North Lake have long been known as Aboriginal heritage sites, and remain significant to Noongar people, but in 2015 approval was given for construction of Roe 8 through heritage sites (Kagi 2015). A traditional Noongar custodian, Corina Abraham, attempted to challenge the approval in the Western Australian Supreme Court on cultural heritage grounds.

Just before Christmas in December 2016, work on the Roe 8 highway commenced. This followed the overturn on appeal of a Western Australian Supreme Court case won by the community group, Save Beeliar Wetlands, which had held off construction for a year (Nisbet and Syme 2017). Over the following three months, a grassroots community protest movement opposed the dominant narrative surrounding the need for the highway to reduce traffic congestion and improve road safety. Community members instead supported the retention of the Beeliar Wetlands, firstly, for their intrinsic value as a wild

place and, secondly, as a space tied to community values of connectedness and well-being. This emotional geography incorporated natural and cultural values (Davidson, Bondi and Smith 2007) and led to Indigenous and non-Indigenous people joining forces to protest the construction of the highway.

The desire to preserve the Beeliar Wetlands, and opposition to the highway, revealed that fragmenting wetlands into discrete areas is no longer uniformly accepted. In a similar way to the network of seasonal lakes and swamps behind Perth, the Beeliar Wetlands comprises several lakes and swamps with interconnected hydrology. Building a highway between the two lakes would disrupt the natural flow of water, make the movement of animals difficult and also fracture the community. This barrier to movement, of both people and fauna, was a major point of opposition. The past human uses of the wetlands, both Indigenous and Settler, were incorporated into the suite of cultural touchpoints referenced by protestors. For example, two Norfolk Island pines, non-endemic species planted in 1900 by dairy farmer John Dixon, were cut down during early site works to the outrage of the community (Figure 3). The City of Cockburn heritage inventory entry captures the layers of meaning surrounding these trees on the shores of Bibra Lake:

The pine trees are very tall and have streetscape and landmark qualities. The trees have historic value as they display strong links with a dairy industry on the shores of Bibra Lake, an industry that is no longer practiced in this vicinity. The trees are fine representatives of vegetation that has survived urban development and are associated with early settlers, the Dixon Family. (City of Cockburn 2014, 287)



Figure 3: Heritage Norfolk Island pine trees at Bibra Lake in 2017. (Left: Fenced in the Roe 8 Reserve; Right: Lopped). Photo: D. Brady.

The trees were crudely lopped at an early stage of work when they did not pose any impediment to other clearing and well before other nearby work began (Figure 3). The local community and protestors experienced this as a purposeful desecration of the place they were fighting to preserve and as an attempt to demoralise the community. The lost trees were seen as a symbol of the government attitude to the protest, a metaphorical two finger salute, and even mentioned in the federal parliament by an opposition member: “A few weeks ago they were chopped down to stumps and left to stand in a fenced enclosure like exhibits in a display of human stupidity” (Wilson 2017). So easily observed in the wetland area at stake, the ruined trees hardened the resolve of protestors and galvanised non-violent direct action at the construction site (Figure 4). Although the Dixon Pines were the remnant of an agricultural incursion into the Beeliar Wetlands, they were incorporated into the social memory of the place along with the Noongar heritage sites, the AWAS camp and the biodiversity of Roe Swamp.

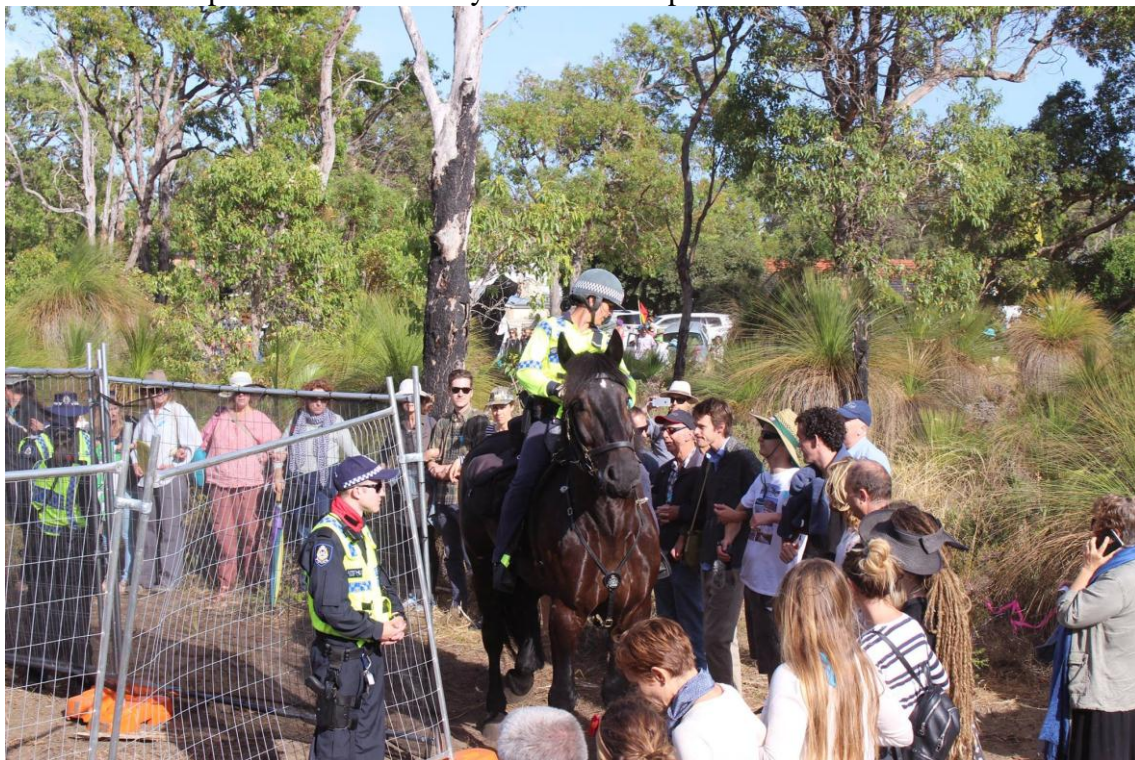


Figure 4: Non-violent direct action by Roe 8 protestors at the Beeliar Wetlands, 2017. Credit: S. Stevens.

The Roe 8 clearing was halted with a change of the Western Australian state government in March 2017 with community protest as a likely factor in the election result. By this time, however, a path had gouged the entire length of the Roe 8 reserve and through the wetlands. The ghost road seen on maps since the 1960s had become a physical road. The attempts to preserve the Beeliar Wetlands by mapping unique landforms and cataloguing rare species had been unsuccessful. Just as the city maps of the wetlands of central Perth were instruments of colonial intent, the later MRS overlays predetermined that road uses would outweigh other uses of the Beeliar Wetlands. All maps betray the social systems that create them. The people who sought to preserve the wetlands, however, rejected the mapped and catalogued version of the Beeliar Regional Park, preferring their experiential, spatial knowledge. Numerous mass protests were held in bushland around the perimeter

of the construction site and tree-sitters—and those who locked themselves to trees and equipment—used local knowledge to circumvent fencing and security. Turnbull (2007) considered the ways differing knowledge traditions could be used in mapping and concluded that a performative dimension was one solution to avoid “subsumption into one common or universal ontology” (Turnbull 2007, 140). Certainly the regular pathways through the wetlands used by the community included an old limestone road to the Dixon farm, an access road for the state electricity utility, fire breaks and the Roe 8 road reserve itself. The emotional performance of walking through the space but experiencing it as ‘other’ than a road reserve was the foundation on which the protest movement was built and led to the later ‘reclaiming’ protest actions. Protestors also objected to the loss of land for the highway being ‘offset’ by purchase of conservation land one-hundred kilometres outside the city. The place of Beeliar, in the eyes of its protectors, was indivisible, specific and irreplaceable. One wetland is not as good as another and the cultural values inscribed upon it are a complex of interactions between the people, animals and plants that inhabit or continue to experience that particular place.

Giblett (2011) has claimed that “wilderness is a human artefact, or more precisely a European settler aesthetic and land-use artefact to which various, often contradictory, meanings have been ascribed” (114). While the Beeliar Wetlands, with an auditory background of birdsong and traffic noise, can hardly be described as a wilderness, it was their wild, non-urban character which first drove efforts to preserve them. And yet, as the description of layers of meaning inscribed on the Beeliar Wetlands show, the most recent preservation efforts involved an emotional geography of interwoven cultural and natural values (Davidson, Bondi and Smith 2007). Hoelscher and Alderman (2004) point out the spatial aspect of social memory and its linkage to identity. The location and characteristics of the original wetlands of central Perth are largely lost to social memory, while urban development and transport needs continue to dominate the identity of the city. In the fight to save the Beeliar Wetlands, a community of activists acted out their protest that the wetlands were other than a road reserve. The laying down of social memories about Beeliar, mediated through cultural objects, and through practices of walking and remembering in the natural environment, provides a possible new context for Perth identity, one which values wetlands for their intrinsic cultural and natural attributes.

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