

# Manly Dam Project

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The Manly Dam area is a unique landscape, rich in natural biodiversity, shaped by the interventions of engineering and science. Once the source of drinking water for Sydney’s north, freshwater continues to flow from the catchment to the sea.

Along with a rich Aboriginal cultural significance, the area’s European history is layered with stories of social and recreational activity.

Adjacent to this area, now known as the Manly Warringah War Memorial Park, is a hub of international research through the work of the Water Research Laboratory (WRL), a facility of the School of Civil and Environmental Engineering, UNSW Sydney.

Eight contemporary artists from a variety of practices have created new work inspired by place, history, water management and engineering.

Artists	Participating Engineers
Shoufay Derz	Ian Coghlan
Blak Douglas	Chris Drummond
Nigel Helyer	Francois Flocard
David Middlebrook	Mitchell Harley
Sue Pedley	Alice Harrison
Melissa Smith	Tino Heimhuber
Cathe Stack	Gabriella Lumiatti
Nicole Welch	Ben Modra

Curated by Katherine Roberts and Ian Turner.

Exhibition presented by Manly Art Gallery & Museum and the Water Research Laboratory (WRL), School of Civil and Environmental Engineering, UNSW Sydney, and supported by the Aboriginal Heritage Office.





Aerial view of Manly Dam. Photo by Chris Drummond





Project team walking together around Manly Dam, 26 March 2019

# Gulgadya Muru - Grasstree Path

Karen Smith

Aboriginal Heritage Office

Living in an urban environment, the place of rest for my spirit has always been Gulgadya Muru, the grasstree pathway in the Manly Dam reserve. It is the place I go to when grief overwhelms all sensibility: a healing place.

With the winds changing direction and a taste of autumn upon us, the artists and engineers' thoughts remained in the cool green spaces surrounding the waterway. I asked them to envisage the creeks before they were dammed to provide drinking water for the families that lived around the coastal area. Manly Reservoir was built in 1892 and quickly filled from the creeks that ran down from high ground around the Wakehurst Parkway and Allambie.

There is no doubt that this area would have provided Aboriginal people with a rich food resource and many opportunities to enjoy the freshwater environment.

As we walked in the bush around the area, we moved through many different environments, from the reed beds and bird homes of the dam to the sandstone ridge line and view of the dam itself, and later the original creek babbling across smooth sandstone rocks.

Manly Dam Reserve has over 300 native plant species and 18 different orchids. It includes various vegetation communities like bloodwood, scribbly gum, silvertop ash, stringy bark, red gum, peppermint woodlands and heath species of banksia, grevillia and hakea to name but a few. This vegetation provided material for tools, rope, fishing nets, gum or glue, medicine, weapons, shields, coolamons and canoes. This bushland also provided material for spiritual practices and ceremony.

The bush had good tucker with various grubs, honey, sweet bool from the flowers, possum, snake, goanna, wallaby and the fresh water resources of ducks and water hens and their eggs, freshwater yabbie, mussels, turtle and fish. Today, over 80 bird species have been recorded here.

Following Gulgadya Muru will reveal north-facing rock shelters which formed warm and comfortable homes away from prevailing southerly winds. Shelters like these made permanent homes or contained images made from charcoal or ochre. On the muru you may find stone artefacts and maybe even midden deposits. You may find stones from an edge ground axe and see grinding grooves carved in sandstone that show where the axe was honed and sharpened. Up high on the ridge tops above the shelters and creeks there may have been rock carvings or stone arrangements. Did the gullies of the creeks echo with the sounds of clap sticks and the bull-roarer?

The artists and engineers used all their senses to experience this environment. Trying to move with stealth, we saw reptiles and bird life moving about.

Bush Care workers advise visitors to keep dogs on leashes and to wash soil from boots and tyres before entering bushland reserves to prevent the spread of root rot.

Enjoy Gulgadya Muru. It is a rare gem in an urban environment.

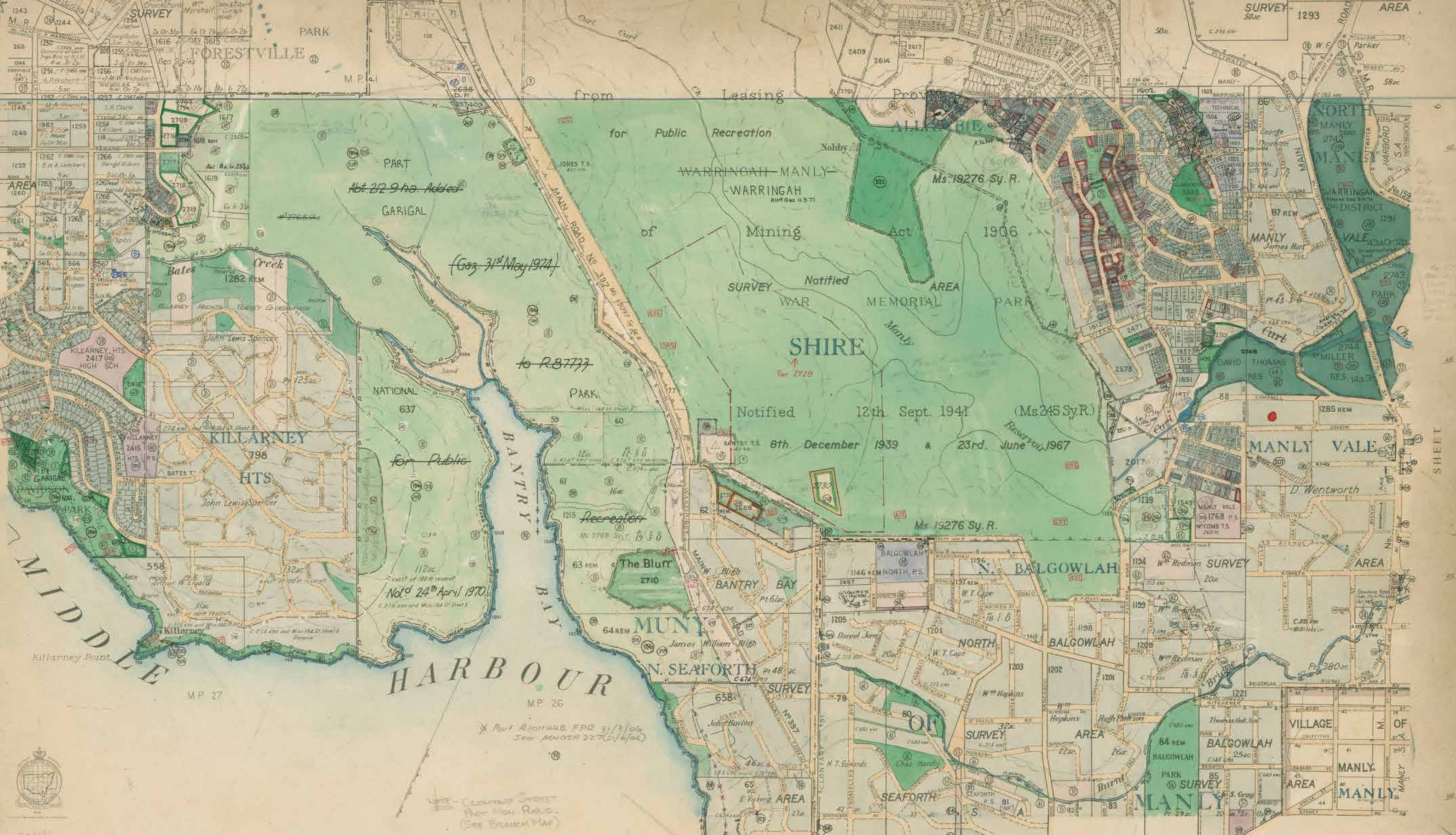




Parish Map Manly Cove, 1922-1929  
 Following page: Parish Map Manly Cove showing 'Manly Reservoir', 1939  
 All maps courtesy Northern Beaches Local Studies Library collection

Parish Map Manly Cove showing Curl Curl Creek, 1850s









# UNSW Water Research Laboratory 60th Anniversary

Ian Turner

Professor and Director, Water Research Laboratory, School of Civil & Environmental Engineering, UNSW Sydney

Creativity is at the core of both the arts and scientific research. Artists and researchers share a common aspiration to discover, understand, interpret and communicate the natural and cultural environment we live in. So with 2019 marking the 60th year that the UNSW Water Research Laboratory (WRL) has been in operation at the base of Manly Dam, it is especially fitting to participate in an arts-science partnership focussed on 'place', with a particular emphasis on the critical role of water and coastal management to Australia's future.

Indeed, it is the very existence of Manly Dam that resulted in the decision in the mid 1950s to establish WRL at the University of New South Wales' Northern Beaches Campus in Manly Vale. In 2019 WRL is the workplace to more than 50 staff and postgraduate students from the School of Civil & Environmental Engineering, UNSW Sydney, and the home of Australia's largest coastal/hydraulics research laboratory facilities.

Across the four hectare site, water from Manly Dam is temporarily diverted by an extensive pipe system into WRL's three warehouse size laboratories, where it is used in large tanks, pipes, flumes and pumps to undertake experiments spanning coasts, rivers, estuaries, catchments, hydrology, civil engineering hydraulics, groundwater, renewable energy, climate change adaptation and wetland restoration. Once the dam water has done its work, it is released and returned to Manly Creek unchanged, flowing downstream to Manly Lagoon and finally into the Pacific Ocean.

WRL researchers are especially proud of the laboratory's reputation and track-record of

collaboration with partners from academia, industry and government, working together to tackle some of the most pressing water engineering challenges in Australia and globally. And in a time of increasingly rapid environmental and social change, UNSW is a leading educator of the next generation of innovative and forward-thinking water engineers.

In this context, it is probably fair to say that WRL's partnership throughout this year with such an exceptional group of artists represented in this exhibition, has put us engineers further outside our comfort zone than we have previously experienced. But what could be a better way to mark this 60th Anniversary, being stretched and stimulated to look with new perspective at who we are in 2019 and how we now choose to engage with the future.

For your enthusiasm, insights and patience, on behalf of the entire team at WRL a sincere 'thank you' to our artist partners Shoufay Derz, Blak Douglas, Nigel Helyer, David Middlebrook, Sue Pedley, Melissa Smith, Cathe Stack and Nicole Welch.

From me, personal thanks to my brave WRL colleagues who rose to the challenge around 12 months ago, when I was unable to explain where all this may land: Ian Cogan, Chris Drummond, Francois Flocard, Mitch Harley, Alice Harrison, Tino Heimhuber, Gabi Luminatti and Ben Mondra. Thank you team for your trust and engagement.

And of course, none of this would have happened without the drive and commitment of Katherine Roberts and the team at MAG&M - thank you for bringing several years of discussion to fruition.

Aerial photograph of Manly Dam and the WRL. Photo by Chris Drummond





Manly Dam Project team in the WRL laboratory, 25 March 2019

# Curatorial Rationale

Katherine Roberts

Senior Curator, Manly Art Gallery & Museum

Ian Turner

Professor and Director, Water Research Laboratory, School of Civil & Environmental Engineering, UNSW Sydney

Artists and scientists approach their work with similar methodologies and philosophies, firmly rooted in research, intellectual rigour and above all creativity. This timely project is part of a growing conversation globally about the relationships and synergies between art and science.

This is the third major art and science partnership project in three years presented at Manly Art Gallery & Museum which illuminates key local environmental areas; Ku-ring-gai Chase National Park, North Head and now Manly Dam.

Manly Dam Project has emerged from a partnership between Manly Art Gallery & Museum and the Water Research Laboratory (WRL), a research facility of the School of Civil and Environmental Engineering, UNSW Sydney, with the support of the Aboriginal Heritage Office. This project has brought together eight artists and eight engineers in an open forum where ideas about art, engineering and the environment have been exchanged.

The Manly Dam area is a unique landscape, rich in natural biodiversity, shaped by the interventions of engineering and science. Once the source of drinking water in Sydney's north, freshwater continues to flow from the catchment to the sea. Along with a rich Aboriginal cultural significance, the area's European history is layered with stories of social and recreational activity.

Adjacent to this area, now known as the Manly Warringah War Memorial Park, is a hub of international research through the work of the UNSW Water Research Laboratory (WRL), focused on water engineering relating to the coast, the environment and groundwater. 2019 marks the 60th anniversary of the laboratory on this site, set on four hectares in the bushland below the dam wall. Partnering on a project was something the curators had discussed for some years, so bringing it to fruition at this time has been hugely rewarding.

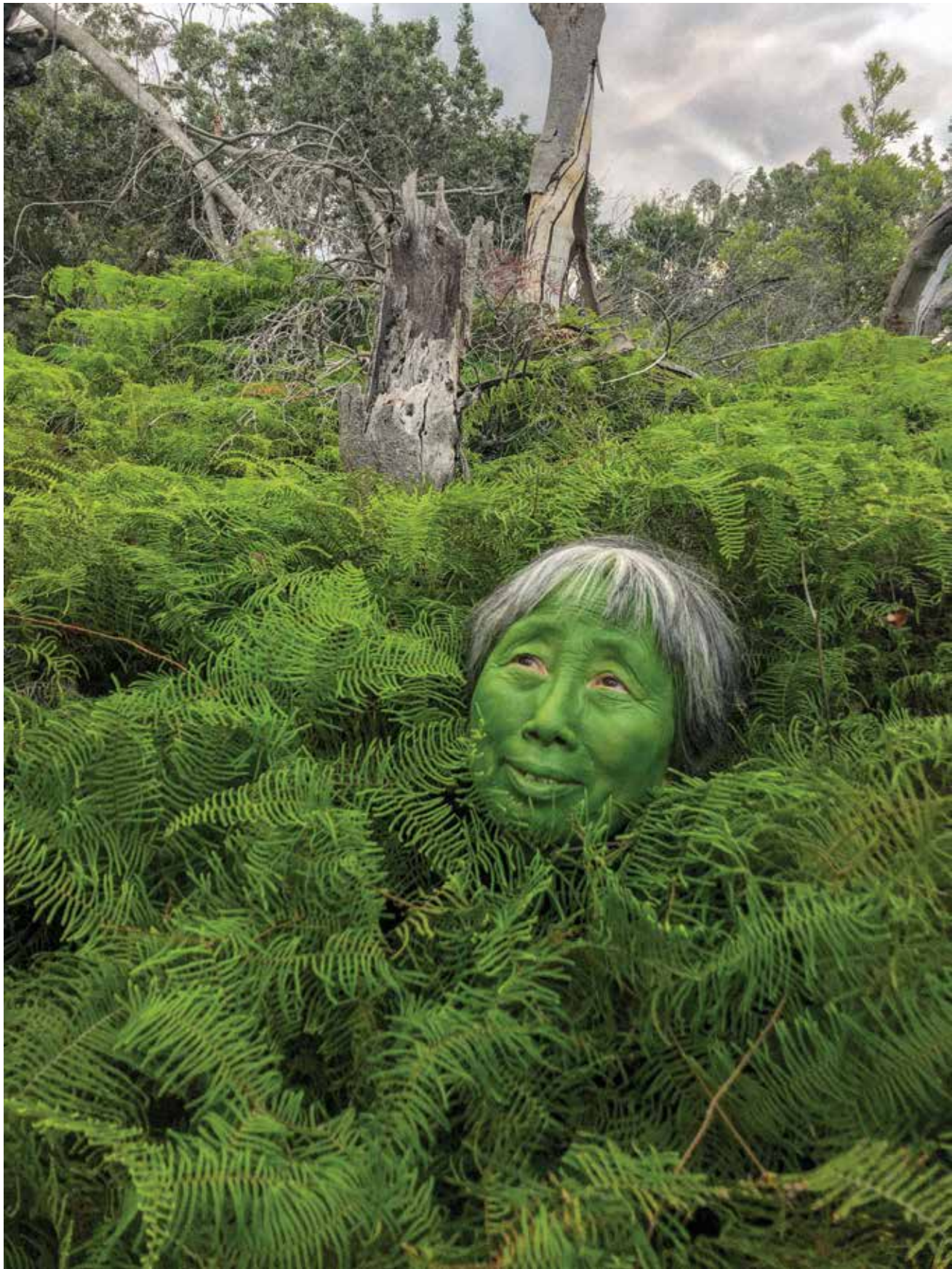
Bringing the artists and engineers together on site at Manly Dam and within the research laboratories at WRL in February 2019 created a palpable energy among the group. They understood this project was an opportunity to create something meaningful about place and water, with a broad scope for interpretation. It was driven by genuine artistic endeavour and provided an opportunity for the artists to explore ideas, gain knowledge and experiment. The artists immersed themselves in the site, initiated their own research and enquiries, learned from the WRL engineers, educators and historians, and created new series of works.

Four of the artists (Blak Douglas, Shoufay Derz, Melissa Smith and David Middlebrook) took as their inspiration the Manly Dam environment itself, all of them deeply respectful and responsive to the Aboriginal cultural heritage of the area. Various, they researched its biodiversity, social history and engineering story to create work that is poetic, powerful and provocative.

For the other four artists in the exhibition, their conversations on issues around water management, coastal erosion, sea level rise, estuarine and wetland habitats with eight WRL engineers were the geneses of their artworks. Exchanges of ideas led to investigations into the climbing galaxia fish (Sue Pedley working with Ben Modra and Gabriella Lumiatti), marine ecosystems (Cathe Stack working with Francois Flocard and Ian Coghlan), coastal erosion along Collaroy-Narrabeen Beach (Nigel Helyer working with Mitchell Harley and Chris Drummond) and wetland restoration at Yarrahapinni (Nicole Welch working with Tino Heimhuber and Alice Harrison), all critical and topical issues today.

Manly Dam Project provides a platform for relationship building through the fields of the arts, science and environment with the support of many stakeholders. It is hoped that this project deepens our understanding of the Manly Dam area as a significant site for cultural understanding, environmental study and for raising the awareness of issues related to water management more broadly.





# Shoufay Derz

*I would like to show my respect and acknowledge the traditional custodians of the land, the Gayamaygal people, of elders past and present, on which these meetings took place.*

This is a longer story, beginning before now. On being neither this nor that. On our irresolution. On our relations in the midst of our deeper unknowns.

Through the bush we were guided by Karen Smith from the Aboriginal Heritage Office. High in the eucalypts, a black bird followed. This was the warrior bird, Karen shared. I asked, what are the creation stories of this place?

There are none. They were killed. We've lost so much.

Amid the trees, water, rocks and creatures warmed by the glowing autumn sun, I felt an internal fire extinguished, a light giving breath withdrawn into darkness towards a time before imagination had a chance to spark. The void clenched onto me, digging a deep hole inside and retreating into a black stone I'd forgotten I carried. We are born into a shared wound, a murky pool of loss.

'A picnic of Eels'

Persons from separate places were invited to gather and share in a lavish feast by the water.

Afterwards towards the fading sun, their faces magically transformed into green and their bodies disappeared into the cool muddy water. Green heads could be seen above the surface basking in the warm light while their bodies quivered beneath among the roots. That day an assembly of strangers collectively entered the pond and became eels. This is a true story.

We disappeared and appeared in all shades of green. The colour of aliens, the embodiment of what is both not there and there. The colour of imagination.

We are foreigners to each other. We came from all places and no places. We are kin and not kin. We are eels and we are not. We speak towards and away from what we cannot say. We are separate and yet we carry the same dark stones.

A hidden silence reached out across the great muteness to meet the silence in the other, as if breathing life into the immovable sense of a closer unknown.

Days later eels began to emerge from the pond and were seen at various patches amongst the coral ferns. Forty or more were encountered.

We walk the land of the buried past, present and future. We are born into the unknown as the unknown is born into us.

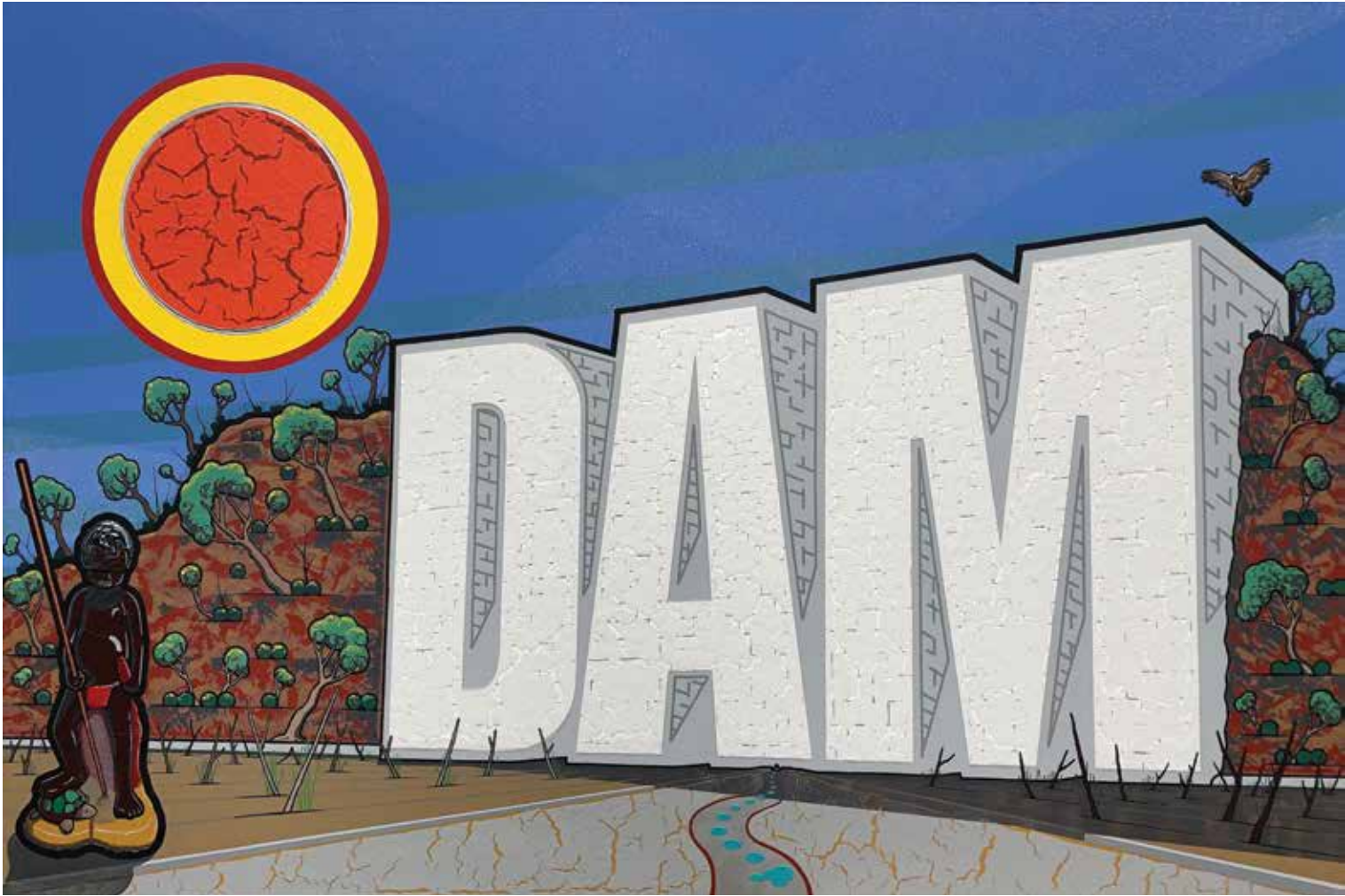
## Bio

Shoufay Derz's practice is concerned with the limits and possibilities of language and the ambiguities faced when attempting to visually articulate the edges of the known. Just as the writer uses words to express the ineffable, her practice engages the intersections between known and unknown worlds. Deeply engaged with poetic potentiality her projects attempt to connect the silences in language with holes in social, structural and geological landscapes to contemplate the voids of history and also the uncertainties of future landscapes.

The resultant, elegiac artworks are simultaneously a lament on the transience of life and a celebration of its mystery. Recently her performative experiments have played with tactics of intuition and humour to convey stories of exclusion and collectivity, while delving into the transformative possibilities, impossibilities and risks of site-specific storytelling. In darker times, expressions of joy can be a radical activity. Derz holds a MFA by research at UNSW and is PhD candidate at the University of Sydney.

Image: Work in progress from the series *Loving the Alien*, 2019





# Blak Douglas

By 1850, the theft and destruction of Gurin-Gah (Kuringgai) Gayimai (Gayemagal) lands had begun. Orchestrated by Henry Gilbert Smith, the oppression of the local first nations peoples was quickly cemented into the his-story of a place that we would colloquially refer to as Manly.

Amongst every Aboriginal culture whose tribal land accommodates a place where freshwater meets salt water, this particular point is an invaluable spiritual place. The energy emitted from two such members of one of the most powerful elements in nature should not be tampered with. Attempting to do so is considered absolute sacrilege. In this case, it was Curl Curl Creek that would suffer this environmental catastrophe. Granted... we do retain a pristine recreational precinct today for 'all to enjoy'.

The strangulation of a natural flowing water source represents a commensurate trophy of colonisation of another people's land. Historically on this continent, such 'great feats' presented a gesture of bringing

different ethnic groups together through united employment. In the case of Manly Dam, it is understood that credit for the construction of the dam lies with the Department of Works (1892), later sold to the local council. The intensive labour output however might be credited to demographics of convicts, Chinese and or remnant locals.

In this canvas artwork, I've attempted to represent the gross might of the impending doom perpetrated by the British invaders: the astonishingly abrasive impact on a sensitive and spiritual landscape and peoples through the introduction of 'evolution', and the absolute disregard for the traditional custodians of the land, and the denial through 'salt in the wounds' gestures such as declaring a war memorial and/or certifying a heritage listing.

The cameo appearance of my treasured little 1950s jarjum garden ornament represents the perfect metaphor of the fragility of the landscape and its occupants prior to the 'wall' of advancement.

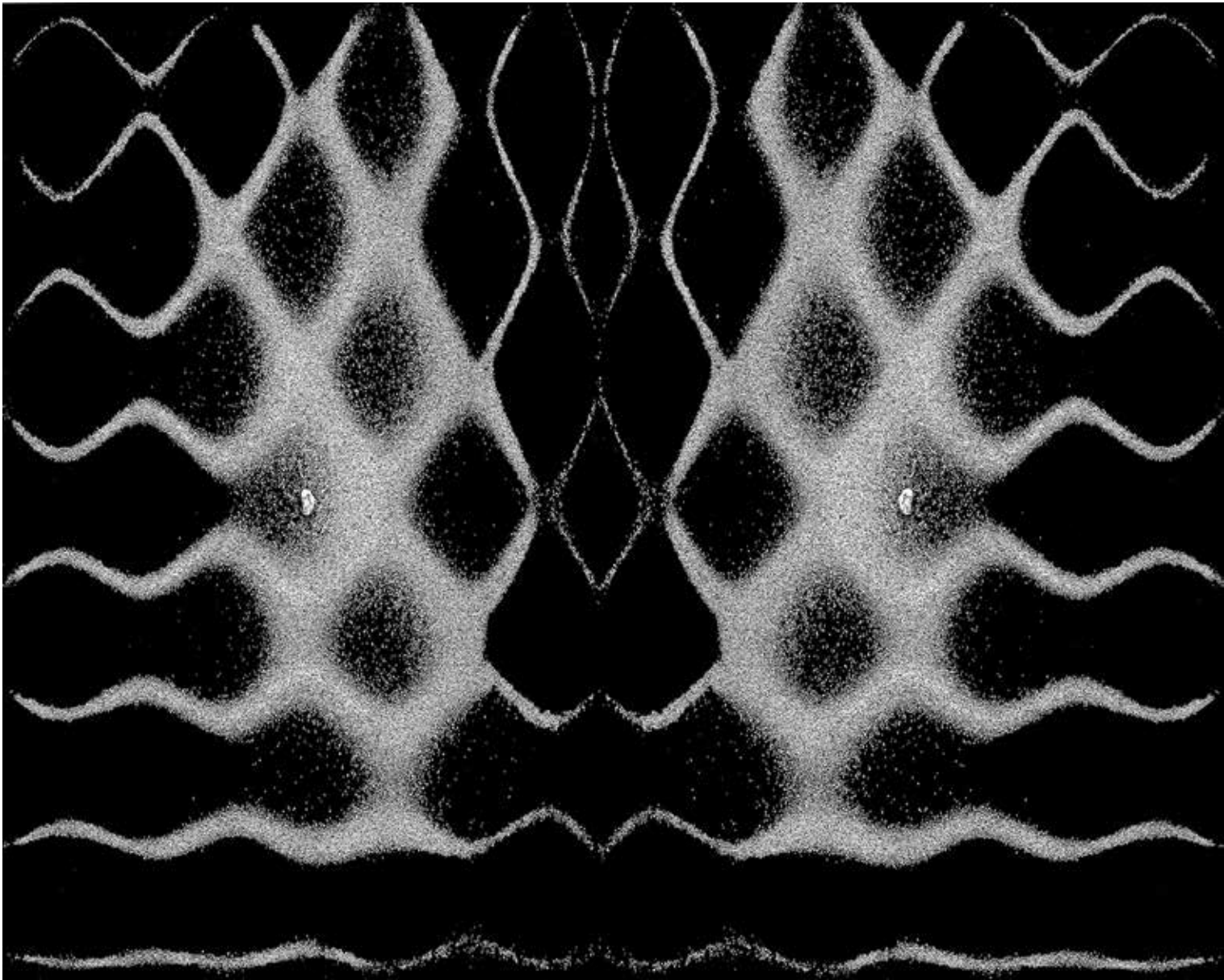
## Bio

Born Adam Douglas Hill in Blacktown NSW (1970) to a Dhungatti Aboriginal father and Irish/Scott Caucasian mother. Trained in illustration and photography, became self-practised in painting with a style influenced by the study of graphic design and devoutly politicised through social justice. A classically trained Didgeridoo player having performed nationally and internationally accompanying the likes of Christine Anu, Emma and Casey Donovan, Jessica Mauboy, Jenny Morris, Jane Rutter and Peter Sculthorpe. Major events have included *Australian Idol*, *The Deadlys*, the Rugby World Cup opening ceremony, Yabun and the welcome for Nelson Mandela.

Collections include Blacktown, Liverpool, Campbelltown and City of Sydney Councils, Aboriginal Art Museum (Utrecht), National Gallery of Australia, Art Gallery of New South Wales, Australian National Maritime Museum, National Museum of Australia, Australian Museum, Town Hall Collection and Taipei Museum. A successive finalist in the Telstra National Indigenous Art Award, the Parliament of NSW Aboriginal Art Prize, the Mosman Art Prize, Archibald and Wynne Prizes.

Image: *Dam nation*, 2019  
synthetic polymer on canvas, 200 x 300cm





# Nigel Helyer

We are neurologically predisposed to seek patterns in our surroundings: in fact, pattern recognition is our core cognitive ability, vital to our evolution and survival as a species, as it affords the capacity of prediction.

In life as in art, we take delight in the symmetries, growth patterns and morphologies of the natural world as through them we recognise our own formation. However, there is a constant flux between the regularity, or predictability of a pattern and an instability or turbulence that might threaten to render it indecipherable - to walk this tightrope between order and chaos is one of the central techniques of art, to distill clarity from chaos is the purpose of science.

In 1917 the Russian Formalist writer Viktor Shklovsky made a distinction between poetry and prose, coining the term *Ostranerie* (or *Defamiliarisation*) a device for making strange, to render a common thing in an unfamiliar manner or context to create a fresh perception of it. This trope of making strange with language has recurred throughout the twentieth century, surfacing as Freud's notion of the *Unheimliche* (the uncanny), as Berthold Brecht's *Verfremdungseffekt* (the estrangement effect) and as Jaques Derrida's *Différance* (which hovers somewhere between difference and deferralment).

The probabalistic learning that pattern recognition develops is extremely useful in the prosaic world - it is the way we navigate our daily lives. However, in creative practice we always require a twist to

a narrative, a dissonant metaphor in a joke, or an unpredictable note to conclude a melodic series. This is the sweetspot, the point at which our expectations of regularity in a pattern is disrupted - but not too much, just enough to throw the brain into mild confusion. It is the fissure, the reveal, the punchline that reflects back on the narrative-arc and plays with our assumptions.

Science is based upon empirical evidence, it observes and carefully quantifies the complex phenomena that surround us in an attempt to make sense of chaos. At the small end of the scale each wave that crashes onto the beach at Narrabeen creates turbulent swirl of sediment, multiplied thousands of times in each individual storm. The scientists/engineers of the Water Research Laboratory understand these individual events as nonlinear interactions which are difficult, if not impossible to interpret or predict. However, they have been monitoring the shifting shoreline at Narrabeen for over 43 years and from this long-term view it is possible to identify an accumulative effect in which the sand volume rotates between the northern and southern end of the beach in cycles that range between two to seven years. When considered in conjunction with wave and storm data an overarching mechanism driven by climate emerges - it is our point of view along the axis of the particular to the general that allows us to see the wood from the trees.

## Bio

Dr. Nigel Helyer (a.k.a. Dr Sonique) is a sculptor, sound-artist and writer who has forged an international reputation for his large-scale sound-sculpture installations, environmental public artworks, museum inter-actives and new media projects.

His practice is interdisciplinary, linking art and science, or more accurately *Poesis* and *Teche* in a strong

embrace of the environment, community and ecology - manifest as a range of complex works that form a nexus between art, society and ecology. These prompt the community to engage with their cultural histories, identity and sense of place, inviting us to examine the abstract conditions of our world and our complex relationships to it.

Image: *Chaldini plate pattern*, 2019



# David Middlebrook

I am only an observer in this country, I love this country. Dry arid places, flooded deserts, isolation and alienation, the unreachable horizon, a fascination with Australia's indigenous present and past, history, exploration and literature, these are some of the reasons compelling me to draw and paint the landscape.

Being a desert landscape painter facing the challenges of interpreting a dam within the heart of Australia's largest city, I tried not to think of how I would represent it, but wait till I was moved to interpret it. I went, sat on a rock and then started to draw, I wanted to represent the quiet and gentle solitude, to experience the spirituality I had heard about, "the connection to place", one said. Then the screaming motor boats, filled with giddy people and jarring discordances of colour, the smells of burning meat, fishing, an elderly man swimming in water lilies, the beautiful symphony of numerous languages. It was then I realised that everyone there had a different connection to the dam and their own purpose of the dam.

I read and saw the indigenous peoples' connections, not to the dam, but around it and under it, to the valley that was, a connection locked in DNA for thousands of years, almost hidden, but strong and proud. We were enjoying it, but it was 'Not My Land', a war memorial silently reminding of so many lost Australian lives on foreign land, perched on the edge of the dam, but nothing of the black lives lost on or for this land.

So the drawings are from the dam wall looking west. The large work also looking west, has a white square representing those who demand acknowledgment for 250 years of ownership, red squares symbolising the fear that some have of new perceived ownership, and at the centre of it all the black square, not discordant to the land, a symbol for the people who never ceded this land, who are at one with land, water and sky.



## Bio

David Middlebrook holds a PhD in Australian landscape painting where he researched cross cultural influences on contemporary art practices, with an emphasis on colonialism, post Mabo. David has held over 35 solo exhibition in Australia, China, South Korea and Hong Kong. His work has been acquired

by numerous public and private collections in Asia and Australia, including The National Museum of Art, Beijing, China and The Ningbo Museum of Art, Ningbo, China, where he had his most recent solo exhibition of large paintings and studies. He makes art full time and lives at Medlow Bath, NSW.

Image: Not my Land, 2019  
ink and acrylic on polyester, 112 x 552cm



# Sue Pedley

*Otolith: in the ear of the fish*

*In articulating the situations of water, we shape the relations between our watery selves and our watery others.*

*Otolith: in the ear of the fish* is a series of speculative and allusive drawings in ink and soot that map the unseen adaptations and changes over time of the Climbing Galaxias (*Galaxias brevipinnis*), a native fish inhabiting the waterways of the Manly Dam and its surrounding reserve. Ecologists been able to trace the migratory patterns of this fish and learn about its growth, age and life history through decoding their otoliths - the calcified kidney-shaped ringed structures inside the fish's head that lay down a pair of translucent and opaque bands every day.

An ancient fish, the Climbing Galaxias existed before the splitting up of Gondwana between 60 and 120 million years ago. It is believed to be the species from which other native galaxias evolved and is the only remaining galaxias inhabiting the Sydney area. In past times, it migrated between the sea and fresh water, the suction of its strong pectoral fins allowing it to climb heights of 10 metres or more.

When Curl Curl Creek was dammed in 1892 to create Manly Dam, the Galaxias became landlocked. Since then it has adapted to spawning in the dam. The juvenile fish retreat upstream to Curl Curl Creek to escape predators such as perch and carp.

In the drawings that comprise *Otolith* the body parts of the Climbing Galaxias are layered and fused with elements of scientific imagery, engineering plans for the Dam and snatches of text. This new narrative incorporates marks made with materials from the dam itself - water, wood, sedges and casuarinas.

The research for this project evolved through swimming in the dam, walks and conversations with friends on tracks surrounding the dam, and communication with engineers at the Water Research Laboratory, dedicated local activists, archivists, rangers, scientists and ecologists from Australia and New Zealand.

Reference: *Thinking Water* by Cecilia Chen, Janine Macleod, and Astrida Neimanis. McGill-Queen's University Press; Montreal, 1 edition (October 10, 2013)

## Bio

Sue Pedley is an artist who researches place, community, culture and history in relationship to materiality through site-specific installation and interdisciplinary practice. Sue has received Australia Council residencies in Vietnam (2008), London (1993) France and Germany (1985) and an Asia Link residency in Sri Lanka (2001). Other residencies include Tokyo Wonder Site (2012), Redgate Studio Residency, Beijing (2011), Banff Art Centre, Canada (2007) and Bundanon Trust (2016).

A recent collaborative work - *Tracing Water* - with Iwaki Kazuya, a Japanese architect, explored

water usage in a rice growing community in Japan, commissioned by the Echigo Tsumari Art Triennial 2018. Exhibitions include *Patches of Light* - Sue & Peggy Pedley - Queen Victoria Art Museum and Gallery, Launceston, Tasmania (2019); *Tracing Water* - Echigo Tsumari Art Triennial 2018, Japan; *Orange-Net-Work*, Ningbo Art Museum, China (2019), Mosman Art Gallery (2017), *Spare Room*, Elizabeth Bay House, Historic Houses Trust, Sydney, (2007); *Blue Jay Way*, Heide Museum of Contemporary Art and Penrith Regional Gallery & The Lewers Bequest (2007).

Image (detail): *Otolith: in the ear of the fish*, 2019  
ink and soot on paper, 1000 x 150cm





# Melissa Smith

In the process of researching the Manly Dam Reserve environment for this project, I uncovered a letter to the editor of *The Manly Daily* from 1999. It referenced the origin of the name of a track in the Reserve - Eva's Track. Eva was a migrant who came to Sydney, driven from her home in Silesia in the late 1950s. She found a sense of refuge and peace in her daily walks in the bushland surrounding the dam. Eva developed a strong interest in the native flora and subsequently a broad knowledge of the wide variety of trees and plant species that grow there. Due to this interest, a friendship was established between her and a local ranger, and when there was a track upgrade, he recommended her name for one of the tracks.

Situated in the middle of suburbia, Manly Dam Reserve provides a sense of quietness, layered in its own history and stories. The impression of Curl Curl Creek

remains on the floor of the dam as evidence of the time before the wall was built to capture a water source for a growing town in the late 1800s. These waters - now still, not flowing - harbour vast colonies of microscopic plankton species that change with the seasons, unseen but an integral part of this uniquely diverse environment.

Eva sought solitude in her walks through this landscape and was captivated by its beauty. My own engagement with this site imbued the same reaction. The prints I have created depict the shifting perspective of moving through this bush land; the eye drawn to points of focus close by and others in the distance. Panoramic views of the water caught through a veil of trees - a sense of peace and understanding found through listening to this landscape.



## Bio

Melissa Smith lives and works in Launceston, Tasmania. Her first degree was a Bachelor of Education (Secondary Art). She then studied a Masters of Cultural Heritage at Deakin University, Melbourne. Smith balances her art practice with her dual roles at Arts Tasmania as a Roving Curator and a Program Officer for Public Art.

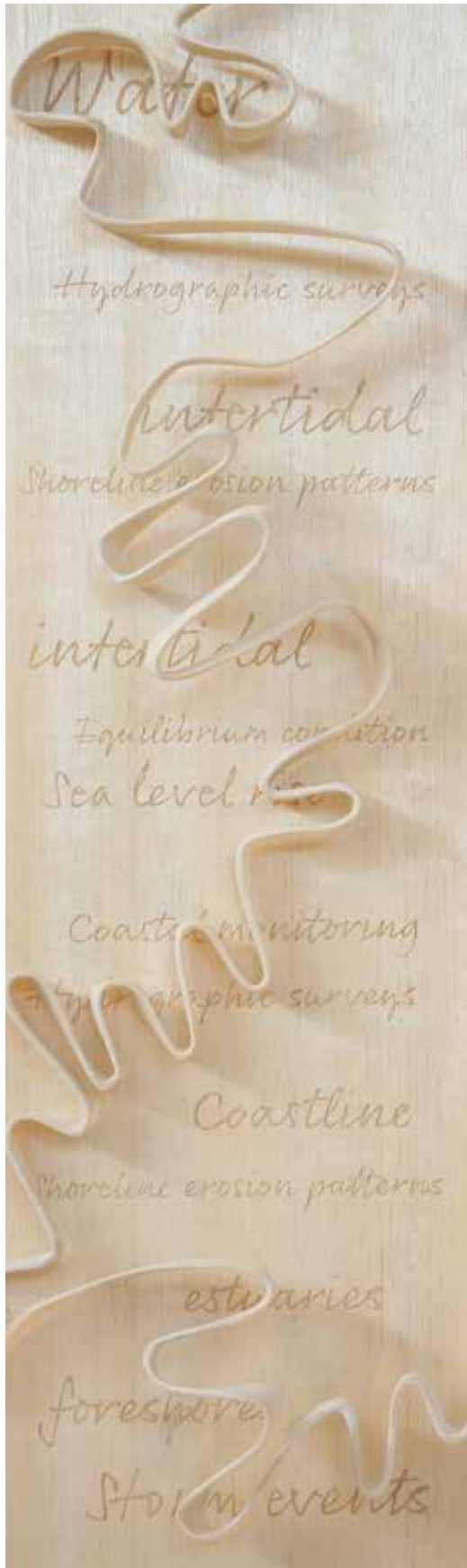
Smith's work has been exhibited widely and is held in private and public collections including the

National Gallery of Australia and regional galleries in New South Wales, Victoria and Tasmania. She is represented by Handmark Gallery, Hobart.

The artist would like to acknowledge Karen Smith, Education Officer - Aboriginal Heritage Office, Susan Fenech, Professional Officer - University of Technology, Sydney and Rose Cullen - Local Studies Librarian, Northern Beaches Council for their assistance in this project.

Image: *Eva's walk I*, 2019  
intaglio collagraph print (triptych), 76 x 168cm





# Cathe Stack

This series of sculptural works is titled *Changing line of Coastline* and references the discourse shared between myself as the artist and coastal engineers Ian Cogle and Dr Francois Flocard from the UNSW Water Research Laboratory.

In general terms, the discourse centred on the actions, effects and impact of salt and freshwater systems upon the Eastern coastline of Australia, specifically wave dynamics and wave energy conversion processes. As advances in Climate Change Science indisputably identify Climate Change as the main force driving sea level rise and altering regional wave climates, it follows that there are frequent and pronounced changes to our coastline, inclusive of coastal erosion and threats to coastal sustainability.

At the WRL scaled models are constructed in multiple wave flumes and wave basins, as a means to study the motion, velocity, interaction and forces of waves upon specific environments such as harbours, ports and beaches. This hands on process is assisted by 2D and 3D software.

For the *Changing Line of Coastline*, my focus is on the interpretation through sculptural and design technologies of what rising sea levels, driven by climate change, actually mean in real, everyday terms. To familiarise the overarching challenge of bringing a vast, seemingly abstract, 'not quite here yet so not happening to us' concept, the artworks are focused on Sydney Harbour and surrounding coastline.

Employing patterns found both in nature and coastal structures in this region, the series engages the human need to connect with landscape through sensate physicality - the bodily rhythms of motion, the tacit knowledge accumulated through experiencing nature, the biophilic drivers in the creation to make artefact. In turn, these form part of our consciousness and placement in the contemporary world.

Climate change, rising sea levels and coastal erosion are critical issues of our time: understanding these through the expression of artefact has potentialities to engage in new ways of connecting to landscape and therefore caring for it and having responsibility for it.

## Bio

The art practice of Cathe Stack draws on empirical and tacit knowledge to explore the principle that understanding the structures and forces that shape landscape allows her the means to create artefact. Stack's multi-disciplinary art practice encompasses the three dimensional exploration of form through materials such as timber, ceramic and fibre, employing drawing, photography and the written word as investigative pathways to support her three dimensional work.

Stack has continued to collaborate with architectural practices engaged in public and private spaces throughout her career and in 2019 was awarded a full time scholarship to undertake a PhD at the University of New South Wales, Faculty of the Built Environment in the joint departments of Architecture and Landscape Architecture.

Image (detail): *Changing line of coastline*, 2019  
silver ash veneer, 80 x 26 x 60cm





# Nicole Welch

The *Yarrahapinni* time-lapse film records tidal flow into an estuary, symbolically referencing the rejuvenation and reawakening of a wetland environment. Recorded on location in the Yarrahapinni Wetlands National Park, it is an affirmative work that celebrates our capacity to rebuild fragile ecosystems.

The Yarrahapinni Wetland Restoration Project undertaken by the Water Research Laboratory team in collaboration with the NSW National Parks & Wildlife Service, has successfully rebalanced the hydrological and water quality conditions to encourage naturally the regeneration of what was a highly acidic wetland. It is now a thriving estuarine wetland with greatly improved bird and fish habitat and with regenerating mangrove and saltmarsh endangered ecological communities.

The scientists' use of remote and on-ground monitoring and sensing techniques, including satellite

and infrared mapping was of particular interest to me, as they are technologies that I have used in my arts practice to record landscape, and to extend and collapse time. For wetland restoration projects, this visual data is collected to analyse changes in wetland distribution, vegetation, tidal inundation and health of the estuary over time. Constructed from 4,800 high resolution photographs captured over several hours, the *Yarrahapinni* infrared time-lapse film mirrors the use of these scientific methodologies to speak to the potential of environmental restoration and rejuvenation.

The area is in the country of the Dunghutti and Gumbayaggir nations (a sharing place). I pay my respects to elders past, present and emerging and give thanks for the opportunity to make work at this significant location.

## Bio

Nicole Welch lives in Bathurst NSW. Her site-specific *Land & Body* works explore personal, cultural and environmental histories, echoing the symbiotic relationship we have with an enduring natural world, and our ephemeral place within it. Welch's process involves traversing areas of bushland where she selects significant locations to create her compositions, using large-scale projectors, generators, research-inspired objects and in-camera technologies. Recorded on location, these installations result in

incongruous photographic and moving image works that record at once both past and present ideologies.

Welch has been invited to show in numerous exhibitions nationally and most recently internationally. In 2019 Welch's film *Wildēornes Body* was selected for the fifth International Motion Festival Cyprus. In 2018 she was a featured artist for ArtState NSW. Welch's works are held in the numerous public and private collections throughout Australia. Welch is represented by MAY SPACE Sydney.

Image: *Yarrahapinni*, 2019  
infrared time-lapse film still



# Acknowledgements

We extend our gratitude to the artists who participated in this project, for their deep consideration and exploration of the Manly Dam site and ideas around contemporary water management in Australia, and for their involvement in the public and education programs at Manly Art Gallery & Museum. We also thank the engineers who shared their time and knowledge with the artists and were the catalyst for the artists' ideas and research.

Thank you to the team of partners who supported and funded the Manly Dam Project, including: Karen Smith (Aboriginal Heritage Office, Manly), Grantley Smith (Principal Engineer and WRL Manager, UNSW), Nadine Ayers, Rachel Tesoriero, Lorraine Nicolas, Amanda Toone and Melodie Coronel (Division of External Relations, UNSW) and Coral Johnson (UNSW-WRL), Chris Buckley (Head Ranger, Manly Dam), Michelle Richmond (Northern Beaches Library Local Studies Historian) and Create NSW through Manly Art Gallery & Museum's program funding.

On the production side, thank you to Barry Nichols for creating the documentary film about the project, and MAG&M and Northern Beaches Council staff for assistance with the installation, catalogue design and marketing of this project.

We hope you value this publication and are moved and inspired by the artists' work and the themes they reveal around the significance of one of Australia's most precious resources - water.

**Katherine Roberts and Ian Turner**  
November 2019



Manly Dam Project team at WRL, 25 March 2019



# Manly Dam Project

## Exhibition

6 December 2019 - 23 February 2020  
Manly Art Gallery & Museum  
West Esplanade Reserve, Manly NSW  
magam.com.au

## Curators

Katherine Roberts  
Senior Curator, Manly Art Gallery & Museum  
  
Ian Turner, Professor and Director,  
Water Research Laboratory, School of Civil  
& Environmental Engineering, UNSW Sydney

## Project Partners

Presented in partnership with the Aboriginal  
Heritage Office, Water Research Laboratory  
School of Civil & Environmental Engineering  
UNSW Sydney, Northern Beaches Council  
and Manly Art Gallery & Museum.

## Documentary Film

Produced by Barry Nichols  
Visual Information

## Catalogue

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Cover image (detail): Aerial view of Manly Dam.  
Photo by Chris Drummond

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