The Wild Edge

A survey of ocean pools in NSW
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The Wild Edge: A survey of Ocean Pools in New South Wales

Introduction

The NSW coastline is home to the highest concentration of ocean and harbour-side pools in the world with over 120 in active use today[7]. Ocean pools frame some of Australia's most iconic coastal landscapes and are synonymous with its history of beach culture[9]. Many were built as publically funded projects to generate employment through wartime and the depression[1]. Ocean pools are unique structures providing protected access to our beaches, bays and harbours, and are highly valued assets serving as effective recreational infrastructure for the community[21].

Ocean pool structures are typically sited in the intertidal zone at the intersection of the landscape and the ocean[11]. They are usually opportunistic 'bare minimum' interventions that emphasise the natural topography of the coastline. De-materializing into the rock platform, the structure offers a sheltered and convenient ocean swimming experience.

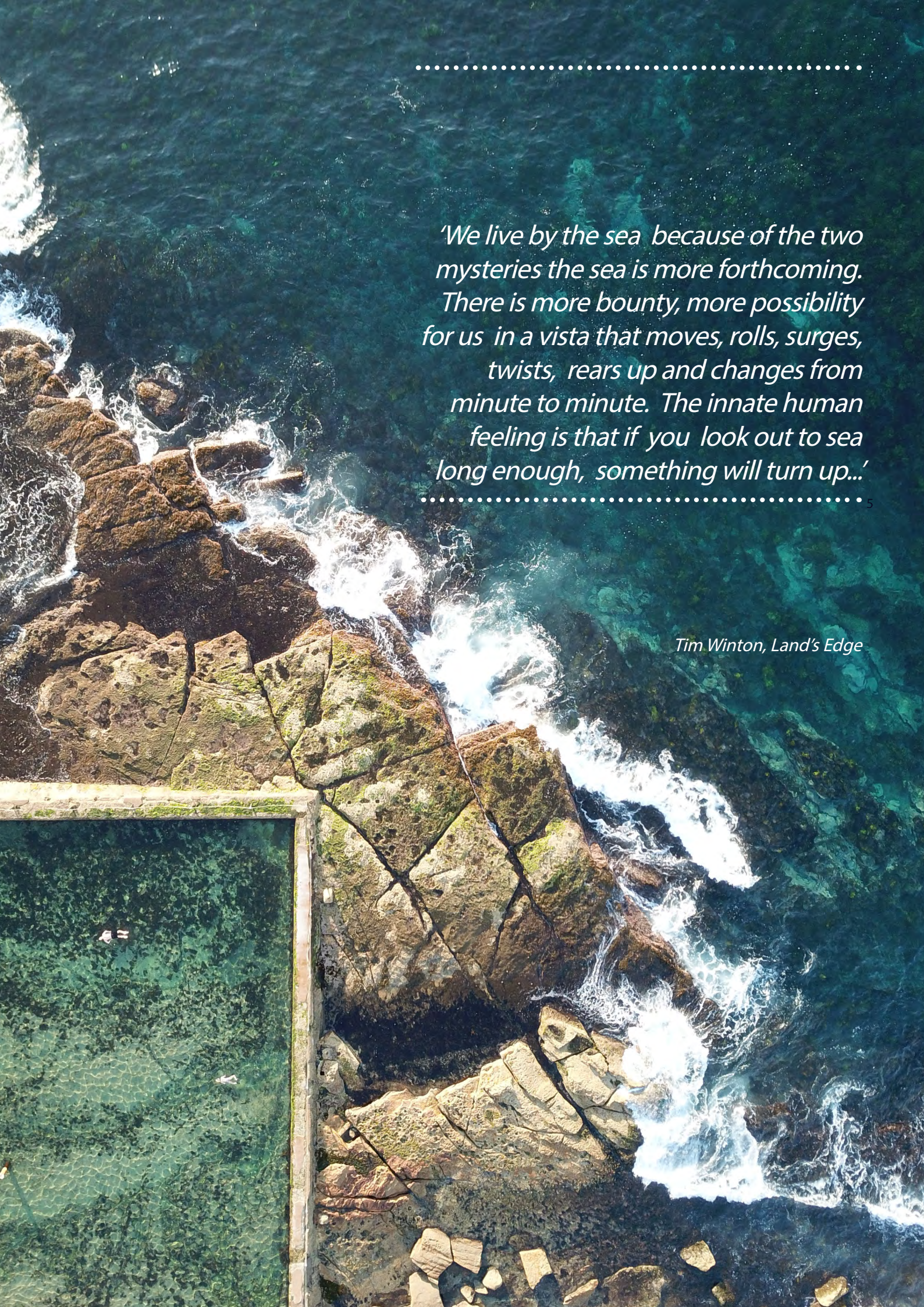
Today, climate change poses challenges to the future management and conservation of coastlines globally. Ocean pools in NSW will increasingly sustain damage from severe storm systems and are at risk of being inundated by rising sea levels.

The planning framework in NSW provides municipalities with pathways to maintain, repair and upgrade existing ocean pools. While this framework is also in place for new ocean pools, none have been built since the 1970's in NSW.

Future proofing ocean pools for resilience in the face of climate change will trigger the first major works to many of these structures since they were first built. This presents the community with an opportunity to revitalise this unique type of infrastructure in a considered, vibrant and enduring way. Fundamental to this approach is to preserve the intrinsic character of ocean pools in the natural landscape while delivering safe and robust public amenity.

This study equips the community with a design framework to sensitively adapt or build new ocean pools. This framework is founded on established cultural and environmental values in Australia. It challenges existing concepts of what an ocean pool is and proposes how to better integrate them with our modern built envrionment in NSW.

Wylies Baths, Coogee. Eastern Beaches - Sydney



'We live by the sea because of the two mysteries the sea is more forthcoming. There is more bounty, more possibility for us in a vista that moves, rolls, surges, twists, rears up and changes from minute to minute. The innate human feeling is that if you look out to sea long enough, something will turn up...'

Tim Winton, Land's Edge

'The eschewing of form, reducing everything to all but the most basic conveniences, its openness and lack of internal barriers or compartments is almost a psychological model of our own nakedness. An admission of vulnerability and smallness before nature.'

Philip Drew, Coastal Dwellers

1.0

Understanding Ocean Pools

In this study, ocean pools are defined as tidal swimming enclosures facing the open ocean and flushed by natural sea water. Typically they are located on sites which exploit protected sections of the rock platform to create sheltered access to the ocean.

The body of the report examines the future development of ocean pools and how this integrates with community values, modern design practices and compliance within the built environment.

To understand what ocean pools should become it is important to identify how the community engages with existing pools and what attributes hold intrinsic value. Figure 1 illustrates the process used in this study to identify these attributes based on ocean pools in NSW. The process examines the built elements and the community values of each pool individually and then collectively as a typology. It follows three stages of analysis:

1. Establish existing context
   Map existing physical attributes and identify community values for each pool.

2. Analysis of valued attributes
   Analyse how community values have shaped the usage or form of the pool and formulate a framework to understand this across the typology.

3. Application of guiding principles
   Propose principles to guide the adaptation of existing structures and construction of new ocean pools based on findings in Stage 2.

The outcome of this study is a series of design principles which give guidance to sensitively adapt or build new ocean pools in alignment with community values of the typology.

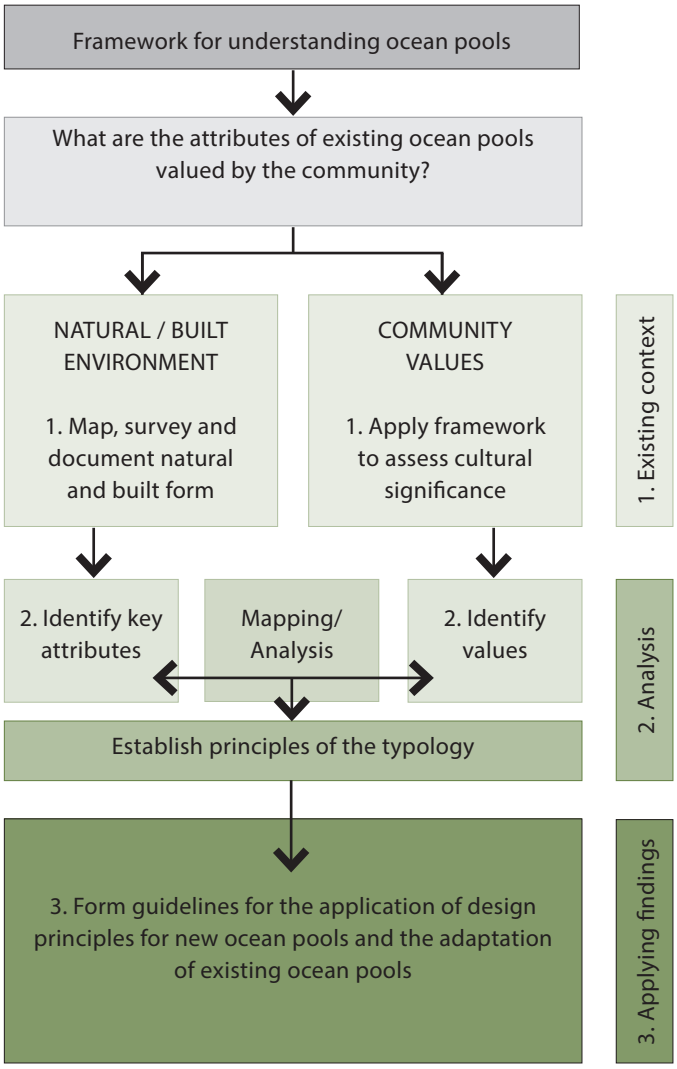


Figure 1. Framework for understanding ocean pools
Left: Mona Vale Ocean Pool., Northern Beaches

1.1

Context and scope

The coast of NSW hosts 59 active ocean pools - the highest concentration of these structures along a state coastline in the world[1]. This unique cluster forms an exemplar sample group for the focus of this study.

In this study and for the first time, these pools have been documented through 3D mapping and scale drawings which analyse and identify their natural and built attributes. Key attributes include, but are not limited to the following:

- Orientation
- Siting
- Foundation
- Adjacent natural features
- Adjacent infrastructure
- Extent of enclosure
- Attachment to major dune line
- Wall crest height
- Connectivity
- Accessibility
- Privacy/activation
- Pool bottom
- Pool form
- Entry type
- Construction

For the full scope of the study, including selection criteria for the sample group, please see section 5.2.

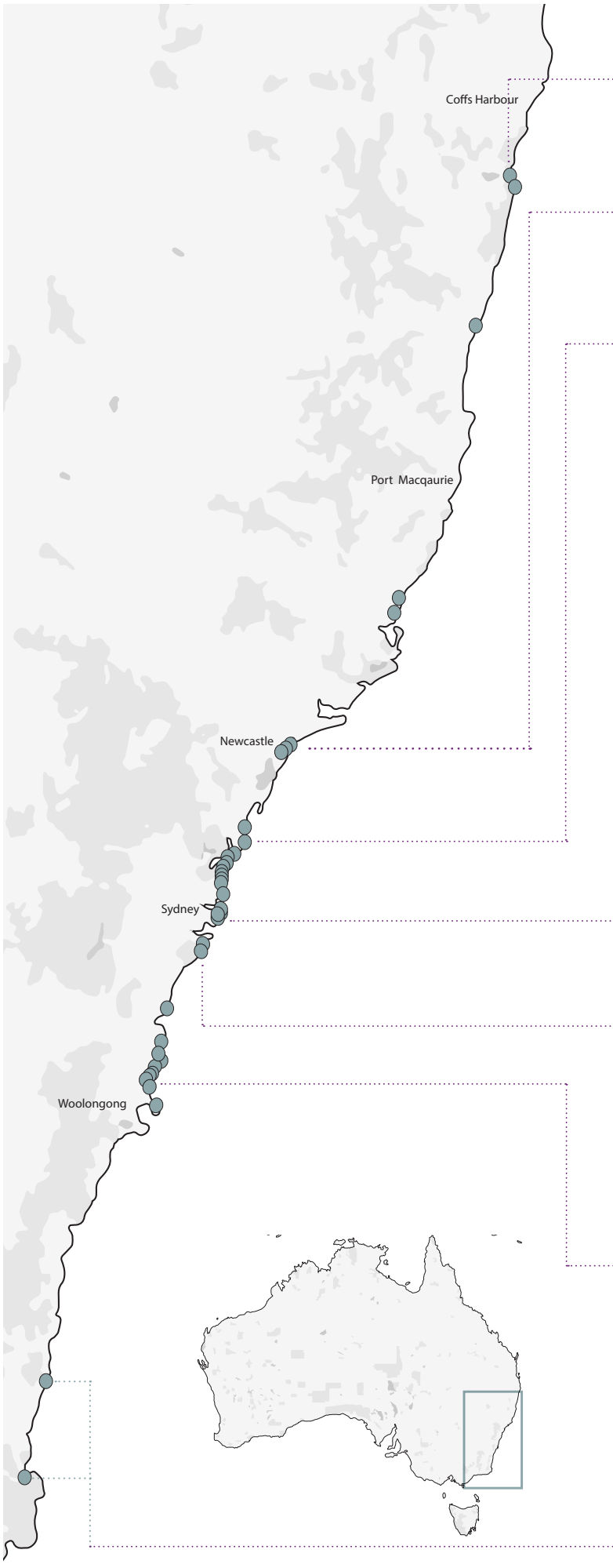
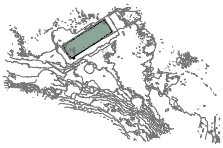


Figure 2: Ocean Pool locations in NSW

Image: NSW Ocean Pools

1.2

Typology Overview

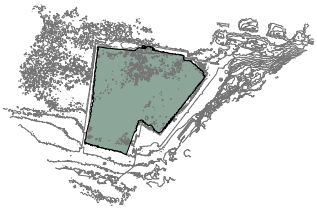


YAMBA

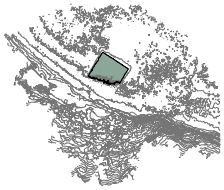
ANGOURIE

SAWTELL

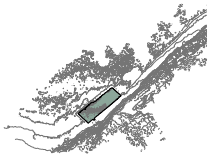
BLACK HEAD



FORSTER



MACMASTERS

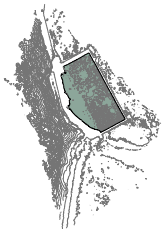


PEARL BEACH

PALM BEACH

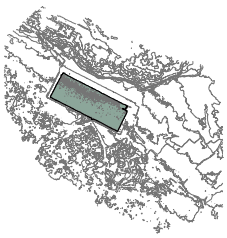
WHALE BEACH

AVALON

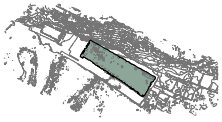


BILGOLA

SOUTH CURL CURL



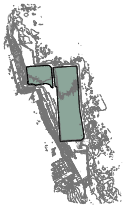
FRESHWATER



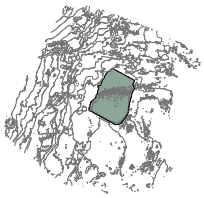
QUEENSCLIFF

FAIRY BOWER

WALLY WEEKS

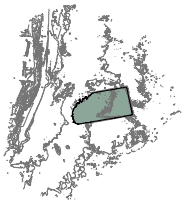


BONDI ICE BERGS

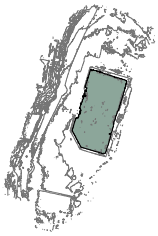


MAHON

MALABAR

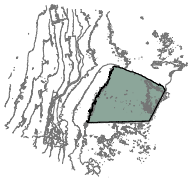


NORTH CRONULLA

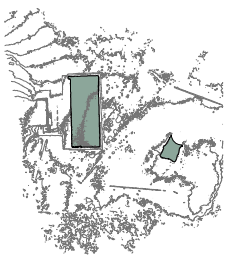


SOUTH CRONULLA

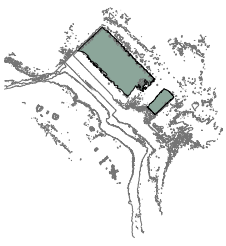
SHELLEY BEACH



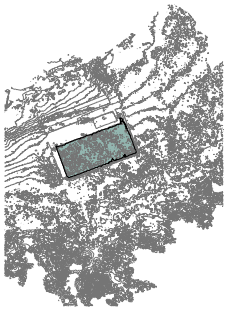
OAK PARK



WOONONA



BELLAMBI

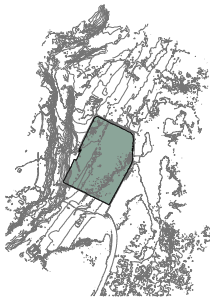


TOWRADGI

NUN'S POOL

LADIES' POOL

PORT KEMBLA



PHEASANT POINT

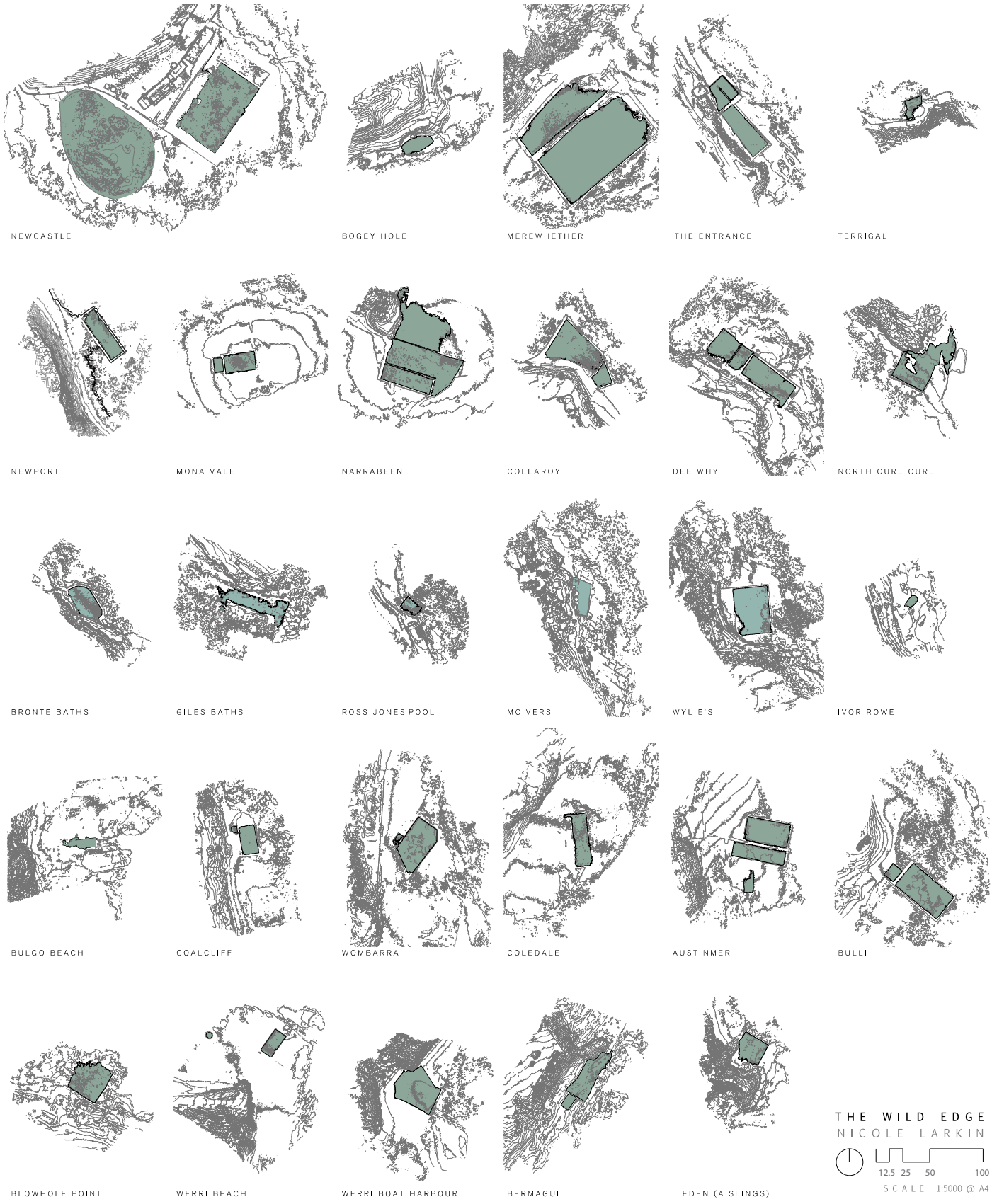


Figure 3: Overview of ocean pools in NSW scale indicated above

1.3

Community values

'A natural heritage place is one that we believe we should keep for the future— because it is valuable to us. It may be part of a coast, desert, mountain or bushland that we gaze at andsee as 'home' — a place which connects us to Australia and helps us to define our distinctive identity. It is part of our life support system. Our natural heritage places are those we would want to inherit if we were to be born one hundred or one thousand years from now. By keeping our natural environment healthy we are investing in our own well-being, protecting the essence of Australia's unique character and securing an irreplaceable gift for the generations ahead.'

- Australian Natural Heritage Charter 2nd Edition
Australian Heritage Commission (2002)

The International Council on Monuments and Sites (ICOMOS) publishes best practice guidelines for the assesssment of culturally or naturally significant places in Australia under the Burra Charter. The Charter establishes significance through the sum of the qualities or values that a site has to clearly describe its importance. This framework is referenced by the Australian Heritage Council and the NSW Office of Environment and Heritage (OEH) when assesssing sites for significance within the natural and built environment. As such, heritage listings in NSW carry weight as they provide formal recognition of a site's value and the community's desire to conserve it.

Numerous ocean pools in NSW have been assesssed for significance through heritage listings and from a survey of ocean and harbouside pools commissioned by the NSW National Trust in 1991. Indicators of significance identified in these assesssments and listings have been used to define valued attribute of the ocean pool typology.

An assesssment of these records identified the aesthetic appeal of ocean pools in the natural coastal landscape as a common indicator of significance across the sample group. Other indicators of significance include the following:

- An emphasis on iconic natural coastline;
- Juxtaposition of built and natural landscape;
- Natural/iconic vistas and views;
- Adjacency to natural landmarks; and
- Links to the origins of swimming and beach culture.

The pools are especially valued as structures which encourage engagement with the ocean in a secluded and safe environment, enfolded by the natural coastal terrain.

What this study has drawn from documented heritage values is a correlation between community values and the simple, understated architecture of ocean pools in NSW. It is this simplicity which underpins the form and siting of many ocean pools and the introduction of built elements only as required to permit an immersion in the landscape.

Evidence of minimal and simple intervention can be seen at Ivor Rowe (figure 7), where this natural rock pool has been enlarged with access stairs and chain link barriers installed. This can be seen in varying degrees across all ocean pools, with an emphasis on the natural rock tempered only by the provision of amenity and creation of sheltered swimming areas.

A comparison of Icebergs Pool (figure 9) and Bermagui Blue Pool (figure 8) exemplifies the two extents of intervention. Despite the contrast between these two structures they are considered the most iconic ocean pools in NSW. Both are listed for their heritage significance.

Located in regional NSW, Bermagui Blue Pool is largely exposed to the ocean, only partially enclosed by built walls. Shaped by the natural topography of the rock platform, it relies predominantly on natural flushing and is home to a thriving marine life. In contrast, situated in a developed urban tourist destination, Bondi Icebergs supports high level usage. The pool is rectilinear in shape, entirely of concrete construction and requires regular drainage and maintenance.

These examples and others shown to the right illustrate how each structure uniquely responds to the natural coastal landscape and an adequate level of infrastructure and amenity. The distinct way each ocean pool balances these factors is a fundamental aspect of the typology.

Figure 4. Freshwater Ocean Pool, Northern Beaches

Figure 5. Wylies Baths, Eastern Beaches

Figure 6. Narrabeen Ocean Pool, Northern Beaches

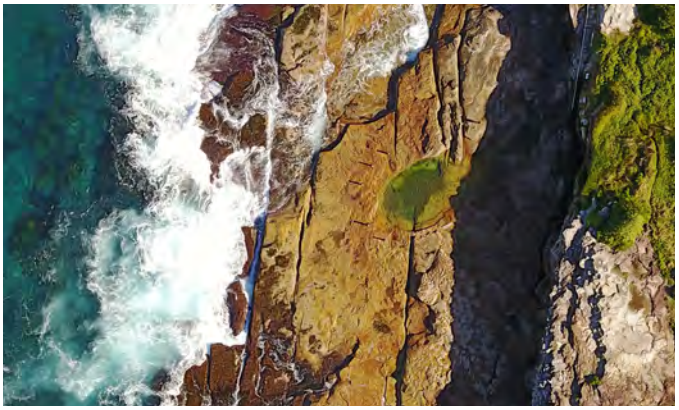


Figure 7. Ivor Rowe Pool, Eastern Beaches

Figure 8. Bermagui Blue Pool, Eurobodalla Shire

Figure 9. Icebergs Ocean Pool, Eastern Beaches

2.0

Analysis

The factors shaping ocean pools reflect community values for these structures. How each pool responds to these factors is a defining aspect of this analysis. To plot this, each pool is mapped along two spectrums representing key factors of the typology; retention of natural landscape and the provision of amenity. Indicators at either end define a range within the typology.

Axis 1: Form *(Natural vs. formal form)*

Assesssed based on the built form of the pool including the following criteria;

- Pool bottom (Natural or concrete)
- Pool geometry (Natural or rectilinear)
- Pool entry (Sand/rock or ramp/stair)
- Construction (Excavated or built up)

Spectrum 2: Usage *(Secluded vs. activated)*

Assesssed based on visibility and accessibility of the pool from adjacent landmarks, facilities or infrastructure including the following criteria;

- Roads/Car parks
- Beaches
- Walking tracks
- Surf clubs

Rating	Secluded/Activated	
+1	Accessible/Visible	Natural/Formalised
0	Neutral	Built Form
-1	Removed/Secluded	Neutral

Ocean Pool Sub-Groups

Three clusters are described within the typology;

1. Activated/formalised
2. Secluded/formalised
3. Secluded/natural

Few pools identify as 'activated/natural' (top left quadrant). Typically, pools in high density urban areas require frequent maintenance and a greater level of amenity to support steady operation. Built infrastructure is more prevalent in these urban environments to provide protection against elements which may cause disruption to availability.

Therefore, most activated pools generally exhibit less of the natural landscape as they rely on a greater degree of built infrastructure.

In the context of what an ocean pool should become the analysis summarised in Figure 10 can be used to determine the required level of amenity for a proposed site. Informed by analysis of the surrounding context and community needs, the intended outcome is to locate the proposed pool on the spectrum described in Figure 10, per the sub-groups listed above. Design principles can then be employed to determine level of amenity in a manner which responds sensitively to the landscape, modern coastal engineering, legislative and compliance requirements.

Ocean Pool Typology Spectrum

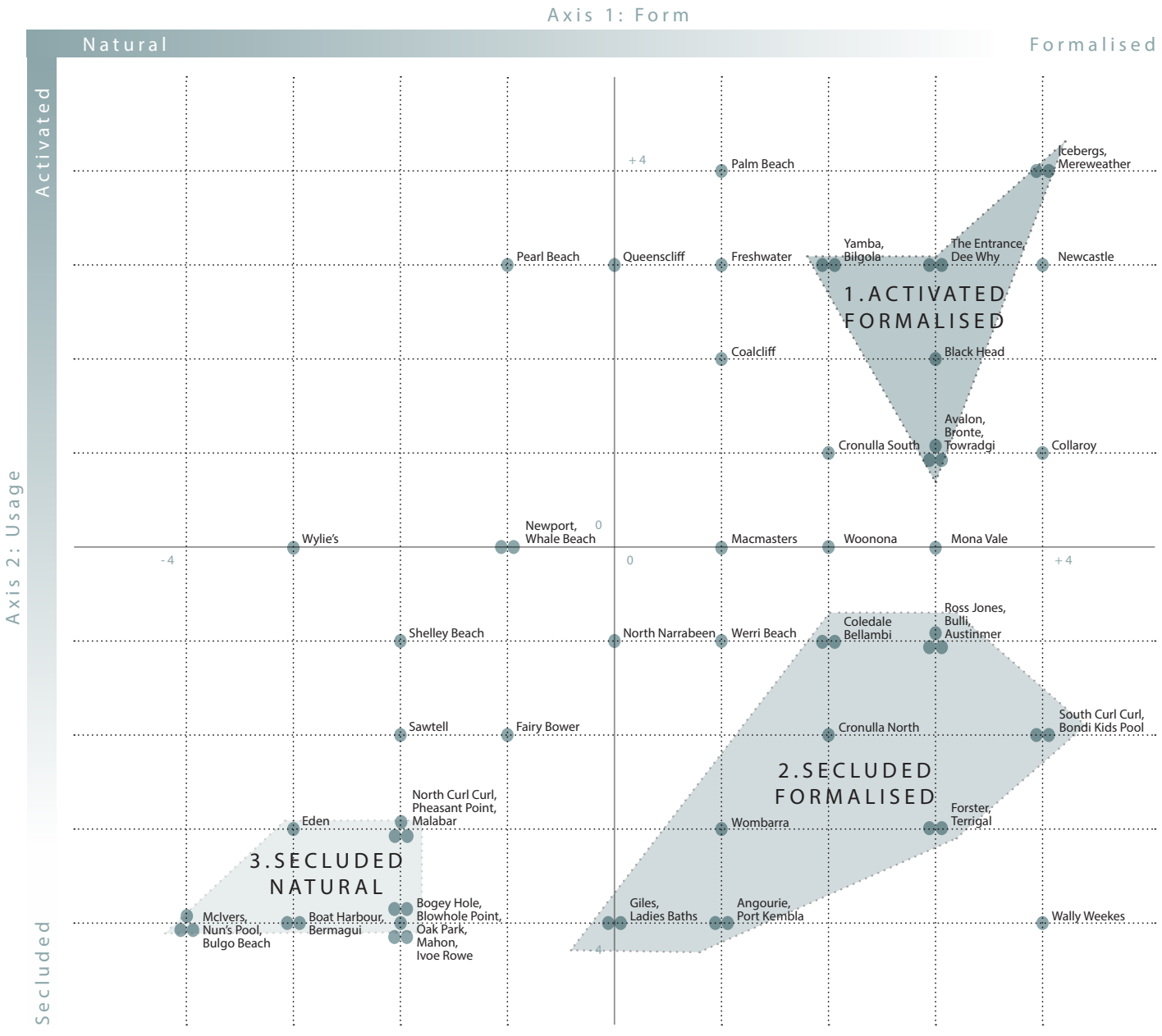


Figure 10: Typology spectrum diagram

3.0

Applying Research Findings: Design Principles

Design principles form a framework of reference to achieve consistent core objectives across varied sites and contexts. They are intended to guide desired outcomes while allowing flexible response to variable parameters. Key principles established in this study can be applied during the design and planning of new ocean pools or the adaptation of existing structures. The overarching objective of these principles is to maintain the inherent characteristics of the typology, while observing engineering practices, meeting planning policies and complying with regulatory requirements.

Design Principles

Balanced with the pre-determined level of amenity and retaining an intimate connection to the natural coastal landscape, the fundamental principles of the ocean pool typology respond to the context and community needs established in Section 2.2., which include:

- Emphasising the natural coastline;
- Juxtaposing of built and natural elements;
- Enhancing iconic vistas and views to landmarks;
- Minimising formalised structures;
- Introducing built elements only as required;
- Sensitive responses to marine ecosystem;
- De-materialising built form into landscape; and
- Blurred boundaries between natural and built.

A preliminary analysis of site and context is essential to determine the level of amenity required for an existing or new ocean pool. The spectrum established in Section 2.0 can be used to map the balance of these factors.

Planning Framework

Planning policy, development and environmental protection is regulated by State Government in Australia. Under current coastal planning policy there are viable pathways for the assesment and approval of new ocean pools in NSW. This is governed by the NSW Coastal Management Framework which outlines the objectives that coastal developments must meet. Under this any potential adverse impacts posed by a proposal must be considered by an authority prior to consenting to works within the coastal zone. Impacts on community envrionmental values and the landscape are measured through Landscape and Visual Impact Assessments (LVIA). The focus of LVIAs and planning policy is to mitigate the impacts of development where possible. This infers that on balance the net community benefit of the project may be deemed acceptable.

There is nonetheless scope to strengthen the structure of this policy by encouraging development which actively aligns with envrionmental values from the outset of the project. This establishes the landscape, ecology and natural beauty of the coastline as a driving influence for a proposal rather than a subsequent consideration. It follows a pro-active approach to development regulation.

A framework of principles to inform this approach is yet to be developed in NSW however industry and government guidelines for the preperation of LVIAs have begun to pave the way for this. In additon to this Australia benefits from a strong existing framework of heritage and conservation management policies and guidelines which identify attributes of the natural and built envrionment that are of importance to the community.

Design-led Processes

This study has drawn on existing heritage and conservation frameworks to inform and pro-activeley drive a design-led process. The intention of this is to achieve best practice outcomes for the design of maritime structures such as ocean pools. It seeks to enhance features of the natural landscape and envrionment through design rather than mitigate the adverse impacts of development on the coastline.

Regulatory Considerations

In addition to the design principles framework, due diligence must be exercised to ensure compliance to the relevant standards, codes and government legislations during the design process. Navigating compliance requirements brings into play duty of care and safety for local government authorities which can vary within natural and heavily landscaped sites. Due consideration should be given to this during the design process and undertaken in consultation with relevant stakeholders.

Collaborative Multidisciplinary Lead Teams

A majority of ocean pools in NSW were built prior to our current understanding of structural engineering, coastal processes and modern design. Contemporary practices in these areas seek to proposed structures that are resilient and offer sufficient protection in otherwise harsh marine environments. Modern coastal engineering, landscape architecture, community engagement and urban planning are fundamental aspects of ocean pool design and should be undertaken by a team of specialist consultants with extensive experience in this field.

Austinmer Ocean Pool, Illawarra Coast
Recently significant maintenance was undertaken by the local municipal council

3.1

Ocean Pool Design Principles

The following guidelines provide objectives and recommendations for the design and adaptation of ocean pools in alignment with principles established in Section 3.0. They serve to:

- capture relevant ocean pool design considerations
- describe objectives in alignment with typology principles established in section 2.2
- provide design guidance to achieve desired outcomes

Over the life of the project it is recommended that the design process be undertaken in collaboration with relevant expert consultants, stakeholders, community groups and government bodies to achieve an optimum outcome. Due consideration should also be given to relevant legislation, codes and standards.

Design Guideline Structure

The following design principles are structured into separate subject areas. For each area the relevant considerations, objectives and guidelines are described. An example of the structure is shown below for reference;:

Area of design	*2.0 Site Context*
Design consideration	*2.1 Climate*
Key objectives	*Facilitate thermal comfort*
Design guidance	• *Provide solar access*

1.0 Community infrastructure

1.1 Community Desire

Identify community desire for a tidal swimming enclosure within a selected region.

- Select localities where there is a current need for recreational coastal infrastructure
- Select communities which present a strong business case for an ocean pool socially, financially and environmentally

1.2 Access

Within a region, site ocean pool in a locality which serves to benefit the greatest portion of that community.

- Map regional transport and major transit routes to nominate sites which best facilitate connectivity
- Note: Average distance traveled for day trips to coastal recreation areas is 40km

1.3 Infrastructure

Identify and select localities within a region which exhibit a need for natural or built recreational infrastructure on the coastline.

- Nominate sites which target areas of the coastline which are currently unsafe and underutilised as swimming areas

1.4 Use

Maximise potential usage of the pool on an annual basis.

- Engage services of a certified coastal engineer to provide analysis and input on site identification and selection
- Nominate sites which are protected by the natural geology of the coastline from prevailing swell and storm surge
- Map known sewer or drain outlets, inlets or maritime thoroughfares to establish exclusion zones
- Provide an appropriate level of site activation
- Nominate sites which maximise accessibility

Sight lines are carefully controlled through the landscaping to give privacy
McIvers Pool, Coogee

2.1 Climate

Maximise thermal comfort throughout the year and provide protection from prevailing weather patterns.

- Establish existing seasonal conditions and prevailing weather conditions through site analysis
- Nominate areas of the site which maximise thermal comfort using thermal mass, site topography, surrounding vegetation, solar access and over shadowing
- Create wind breaks through landscaping or siting of amenities to buffer from prevailing winds
- Orient site to maximise thermal comfort during winter months by taking advantage of north facing rock walls

2.2 Landscape

Conserve and emphasise the natural environment.
Facilitate engagement with the coastline.
Frame the coastal landscape.

- Survey existing topography of rock platform, headland and tidal zone. Maintain the existing topography where possible
- Design along site contours, avoid constructing across them
- Site structures in the lee of a rise instead of the crest
- Introduce built elements only as necessary, exploit natural features where possible to achieve design objectives
- Where built elements are introduced employ landscaping to merge structures with natural landscape in sympathy with topography and geology. An acceptable exception to this is where built elements contrast with the natural landscape to emphasize or heighten natural features
- Limit excavation, cut and fill of site
- Maintain or improve tidal zone and marine habitats
- Define key axes along natural topographical, geological and/or natural features of the site

2.3 Connectivity

Connect site into existing coastal paths, roads and bike paths. Create legible physical and visual connections to surrounding infrastructure and landscapes to aid in way-finding/passive surveillance and frame landscape.
Facilitate activation and 'place making' by creating connections to adjacent community 'hubs'.

- Site pool within acceptable walking distance form the closest node. Alternatively update routes to incorporate proposed site. Create provision for drop off and pick up.
- Make provision for bike parking
- Identify coastal paths/lookouts/cycleways in proximity to site. Where possible direct or integrate path through site access or create vantage points along path to view pool.
- Consider introducing a viewing platform/look out point adjacent to the pool
- Nominate existing vehicle parking or introduce sufficient parking provisions adjacent to the site
- Provide vehicular access down to pool level for emergency response and maintenance.
- Provide safe access to adjacent beach/bay/rock platform for swimmers and other users at high and low tide
- Where possible site pool with a direct sight-line to existing beach access points, surf clubs, swimming clubs or marine rescue stations.
- Reinforce legibility of pathways and natural landmarks/ features through built elements and landscaping

2.4 Heritage/Archeology

Sensitively address existing heritage elements and/or archaeology.

- Engage services of a heritage consultant if historical or archaeological items exist on proposed site
- Liaise with local indigenous groups if site holds cultural significance

3.1

Ocean Pool Design Principles

2.5 Activation

Assess context to determine an appropriate level of activation for the site per section 3.0.

Facilitate engagement with the natural landscape for primary and secondary users of the ocean pool.

Active sites

- Provide amenities and facilitates for primary pool uses including lap swimming, recreational swimming, competitive swimming, rehabilitation and children's swimming areas.
- Consider provisions which facilitate secondary pool uses such as scuba diving training, snorkeling, nippers, rehabilitation, educational visits etc.
- Consider adjacent uses and functions to the ocean pool such as a kiosk, club house, spectator seating or event spaces.
- Provide informal hard landscaped spaces for activities such as fitness routines and group exercise.
- Introduce lighting to promote use of the pool during evenings

Secluded sites

- Provide screened areas ranging from secluded to open via landscaping and natural level changes
- Limit amenities to essential services
- Facilitate primary pool uses including lap swimming, recreational swimming, competitive swimming, rehabilitation and children's swimming areas

2.6 Passive surveillance/privacy

Create a sense of privacy for users while achieving passive surveillance to the pool from priority emergency response points.

Discourage opportunities for antisocial behavior.

- Implement passive surveillance to amenities area and pool
- Introduce lighting strategy
- Create buffers using landscaping and control sight-lines to emphasize a sense of seclusion in the landscape
- Refer to 2.3 Connectivity and 2.5 Activation to increase passive surveillance

3.0 Siting and Landscape

3.1 Siting

Nominate sites which frame and facilitate access to the natural landscape.

Create a protected swimming area when beach conditions are challenging or prohibitive (excepting extreme conditions).

- Seek professional advice from a qualified coastal engineer, geotechnical engineer, landscape architect, planner, indigenous specialist, heritage consultant and ecologist in selecting an appropriate site
- Locate structures in the headland of a beach/bay to avoid disrupting natural coastal processes and discourage sediment build up from long-shore drift. See 3.2 Orientation for further detail
- Locate pool foundation on a rock substrate or platform. Sandy beach sites are less desired as they interrupt long-shore drift and are susceptible to sediment build up
- Site structure 'attached' to the headland or primary dune. See figure 4. for reference
- Nominate sites which frame and direct views of the natural topography and beach/bay and/or which emphasize significant geological features

Attached to primary dune , partly enclosed. (Exposed, sediment build up)

Attached to headland, fully enclosed. (Exposed)

Attached to headland, partly enclosed. (Protected, sediment build up)

Detached, partially enclosed. (Exposed, sediment build up)

Figure 4. examples of a range of pool site types

3.2 Orientation

Orient pool to maximise thermal comfort, protect from the elements and frame the natural landscape.

Maximise the life of the structure and minimise maintenance.

Protect against prevailing weather fronts and storms.

- Seek professional advice from a qualified coastal engineer, geotechnical engineer and ecologist in selecting an appropriate site
- Preference sites with a northern aspect and a sheer rock face to the south. The rock face radiates warmth into the afternoon and buffers from southerlies.
- Orient the short dimension of the pool perpendicular to prevailing swell direction to diffuse the effects of over topping waves on pool users

3.3 Vistas/sight-lines

Maximise vistas towards and from iconic aspects of the landscape and surrounding landmarks.

Provide screening to less desirable vistas through landscaping.

- Maximise vistas towards pool
- Maintain and promote natural landscape vistas
- Consider introduction of a 'lookout' to reinforce iconic views and key vantage points or framed views.
- Establish a visual axis along key vistas and features or to frame significant views

3.4 Access

Provide an accessible, protected path from road to pool which reinforces the natural coastal landscape.

Create a transition from urban/built environment to natural/ coastal environment.

Cater for a range of ability levels in the community.

- Seek professional advice from a qualified access consultant and traffic engineer and refer to relevant standards/codes
- Reinforce legible, direct sight-lines towards access points
- Use landscaping, pathway, topography and level changes to buffer from prevailing weather/screen built elements
- Where possible position facilities and amenities to transition/screen between built and natural environment
- Provide access to the pool for varying levels of ability and design the pool to be inclusive of users with physical and vision impairments
- Consider provision of tactile points of engagement for users with visions impairments to navigate the rock platform and swim with a degree of independence
- Create a wheelchair accessible pathway to the pool and provide wheelchair and ambulant amenities

4..0 Built Form

4.1 Pool Geometry

Reinforce the natural contours and topography of the landscape.

Cater at a minimum for core pool uses including lap swimming, children's paddle area and leisure swimming.

Make provision for varied levels of ability and uses of the pool.

- Provide a minimum lap swimming area of 20 x 50m
- Provide a zone for recreational swimming
- Provide a zone for children and infant swimming
- Provide at a minimum a ramp, stair and diving block entry
- Facilitate for varied primary and secondary uses of the pool, rock platform and surrounds
- Consider the natural topography of the rock platform in the form of the pool
- Nominate zones for varying levels of amenity, ie. provision of concrete structure and concourse to lap swimming areas and provision of natural rock platform for informal swimming and recreation

3.1

Ocean Pool Design Principles

4.2 Built elements

Reinforce natural geomorphology and topography of the site.
Design walls/barriers and concourses where possible to integrate with other design elements and provide protection, amenity and frame views.
Where possible conceal built elements with landscaping.
Avoid hard boundaries between natural and built areas.
Select materials which reflect the surrounding natural site and are appropriate for coastal environments.
Locate space for recreation/leisure outside of the pool in protected areas.

- Min concourse width: 2200mm for circulation
- Provide adequate circulation to and around the pool. Do not provide circulation to areas subject to over-topping.
- Provide hardscaped areas which facilitate secondary leisure and recreation around the pool
- Ensure walls enclosing lap lanes are orthogonal and spaced at standard lap lengths
- Pool lip edge: where pool edge is constructed (ie, not the natural rock platform) design an appropriate lip to minimise injury, create a resting ledge and facilitate 'perch' areas for recreational or less confident swimmers
- Ensure hardscaped areas do not adversely impact coastal processes or become inaccessible in high tides
- Tapper the form of walls/platforms to minimise visual mass
- Integrate seating into level changes, stairs or ramps
- Integrate grab rails for perching, hanging, leaning and where possible use them to aid wayfinding
- Avoid obscuring views of the ocean, natural landscape and significant features

4.3 Exposure

Maximise acceptable ocean swimming conditions.
Cater for a range of ability levels.
Protect and shield pool users from uncomfortable and/or hazardous conditions where possible.

- Locate pool in areas naturally protected from prevailing swell by the geomorphology of the site
- Create zones within the swimming enclosure to cater for different activities, swimming abilities and a range of swell conditions
- Grade zones for swimmer ability from most proficient on the seaward side of the pool to less confident on the landward side of the pool
- Zones located on the ocean side buffer swimming areas on the landward side of the pool by dissipating waves which over-top the outer wall. Restrict access to seaward pools in hazardous surf conditions
- Avoid locating traffic-able walkways or concourses along ocean facing walls or platforms oriented to prevailing swell
- Engage the services of a qualified coastal engineer to design the toe of any ocean facing pool walls to dissipate wave over-topping
- Locate landscaping and built elements to protect from prevailing weather patterns
- Engage the services of a qualified ecological consultant to ascertain if planting to the seabed/rock platform surrounding the subject site can be employed to dissipate wave action

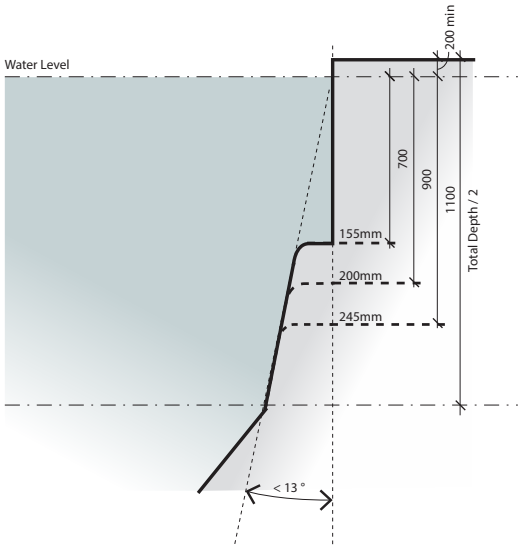


Figure 1. Source - AS 2818 (Superceded) Guide to swimming pool safety
Typical pool edge section (Australian Standards)

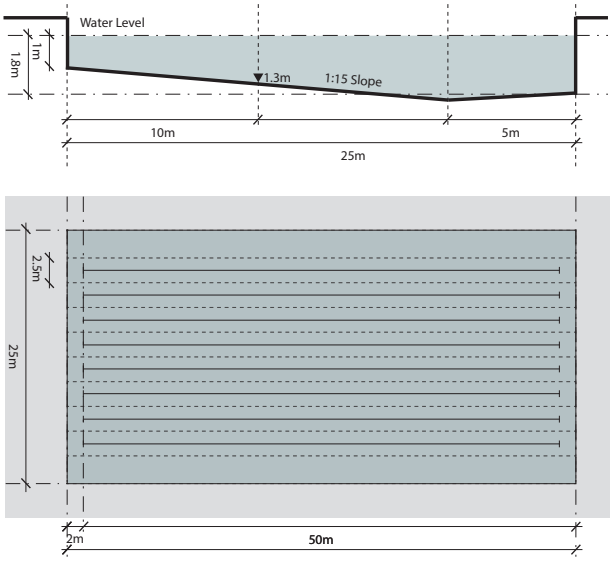


Figure 2. Typical 25m Pool Section (Source: Metric handbook)
Figure 3. FINA International Competition Pool (Source: Metric handbook)

4.4 Pool Edge Conditions

Facilitate safe entry and exit from the pool for a range of ability levels.

Treat edge conditions to facilitate opportunities for rest or leisure as well as transition in and out of the pool

- Locate rest ledges, perch spots and/or grab rails at key proximity areas of pool zones
- Provide at a minimum a stair, ladder and ramp entry to the pool. For rehabilitation zones provide a graded zero depth entry. Provide handrails to all pool entry/access point.
- Introduce perch edge conditions for areas of high circulation of use to facilitate brief rest opportunities
- Introduce recline conditions in removed areas with low circulation to orientate pool users towards specific vistas
- Provide seated conditions in leisure and rehabilitation zones
- Provide grab rails to pool edge to facilitate opportunities for lingering, rest or rehabilitation.

4.5 Resilience

Minimise drops of 1m or greater to reduce balustrading.

Emphasize natural topography, vegetation and geology.

Provide opportunities for pool users to intimately connect with the natural landscape.

- Introduce a plunge pool, a secondary secluded lapping lane or bodies of water exclusively for viewing marine life
- Where possible incorporate wet edges to provide uninterrupted views to the ocean
- Use scuppers to frame views from the pool
- Emphasize tidal changes relative to established levels of walkways, pool elements and enclosing walls
- Soften and/or screen built structure with landscaping to bleed/transition between natural and built environment

4.6 Protection

Restrict access to the pool in unsafe conditions.

Discourage anti-social behaviour and loitering.

Foster a sense of privacy for pool users while maintaining passive surveillance to the pool.

Align with local authority requirements for duty of care.

- Gates at access points and pathways should be used to restrict access to the pool in unsafe conditions
- Display signage at access points, parking areas, amenities and around the pool in hazardous swell to advise of pool closure and adverse conditions. Ensure signage provides relevant emergency point of contact information
- Locate balustrades in areas where proposed structure creates a fall of 1m or more. Introduce balustrading to restrict access to sensitive or unstable aspects of the landscape
- Specify materials which achieve appropriate slip resistance levels and can be maintained by pressure cleaning without the use of chemicals
- Specify stair nosings to achieve appropriate contrast luminance and slip resistance which assimilate with the natural material palate of the site.
- Provide vehicular access to the pool concourse for emergency response and maintenance vehicles.
- Delineate pool entry and exits points with contrast luminance
- Ensure passive surveillance stratgies are incorporated inot the layout of amenties and planting. Create clear sightlines from walkways and entry points. This is to be balanced with the need for privacy and shelter from prevailing weather.

3.1

Ocean Pool Design Principles

4.7 Levels

Ensure pool and enclosing walls provide sufficient protection from general surf conditions and permit adequate flushing.

- Establish relative level of pool wall height and pool bottom (at the lowest point) to engineer's advice
- Refer to diagram for guidance on pool depths

4.8 Materials

Preference the specification of integral materials which do not require applied protective coatings to reduce leaching and maintenance in the cases of scratches.

Specify durable, fit for purpose materials which have sufficient life spans to withstand harsh marine environments.

Specify materials which can be recycled or re-purposed if they are to be replaced. Minimise materials which have adverse effects on the environment during deterioration eg. composite materials.

- Select materials which align with the natural material palate of the site such as local masonry and hardwood.
- Specify contrast luminance nosings and edges in colours which reflect the surrounding landscape
- Consider specification of masonry elements in submerged or intertidal locations which support and propagate marine life. Do not encourage marine growth in traffic-able, high use areas or to walls which enclose lanes

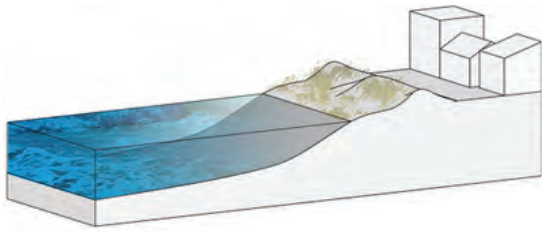
4.9 Accessibility

Provide inclusive, dignified access to the pool and maximise annual days per year users can comfortablly swim in the pool (ranging from competent to learners or less able swimmers).

Enable users with a range of ability levels to navigate primary and secondary pool facilities assisted and/or unassisted.

Make provision for rehabilitation, therapeutic exercise, low impact and endurance training activities where possible.

- Employ tactile indicators for way-finding to amenities and pool. Locate indicators along pool floor where possible to assist in navigating around the pool ensuring identifcation nearest pool edge and/or exit.
- Provide handrails, balustrades, grab rails and/or edge cables to assist in mobility, guidance and navigation of pool, entry points and surrounding amenities
- For lap swimming consider provision of audible indicator to locate either end of the pool length
- Adhere to relevant access standards, codes and guidelines for the design of access-ways, paths, amenities, vehicular access and parking provisions
- At a minimum provide one zero depth ramp entry to a protected swimming zone with sufficient clearance for water-based wheelchair access
- Assist navigation and distinction of hazards through contrast luminance
- Consider provision of shallow pools or rock platform edges which are tactile and promote the growth of marine life
- Consider provision of poolside vehicular access to facilitate direct access for pool users unable to navigate along access paths or in the case that site constraints do not permit walking paths to meet minimum grade requirements



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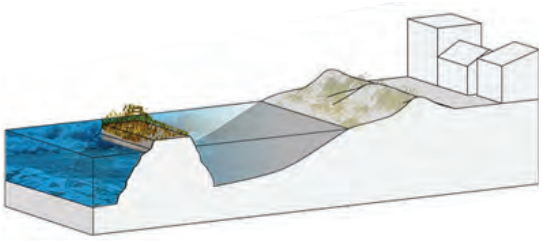

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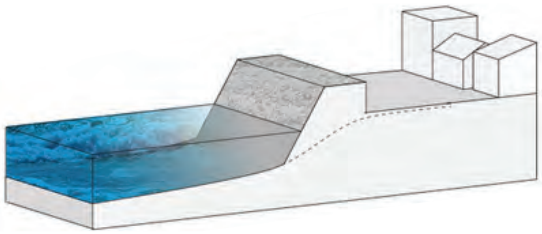

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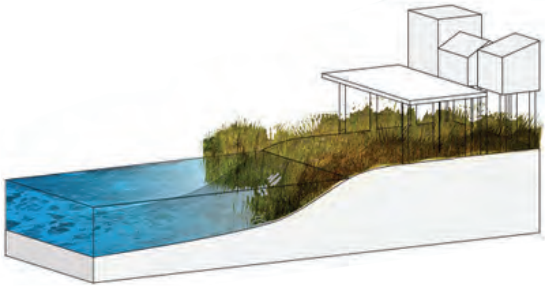


4.

1. Attentuate / 2. Dissipate / 3. Protect / 4. Retreat
Prinicples of coastal resilience design. (Source: Structures of Coastal Resilience)

5.0 Resilience and Sustainability

5.1 Sustainability

Provide community infrastructure which delivers a desired level of amenity which remains socially, financially and envrionmentally sustainable across the life of the structure.
Minimise the ecological and carbon footprint of the structure.

- Facilitate an activated space which reflects community values of the natural landscape
- Specify integral materials which are highly durable and facilitate ease of repair/maintenance
- Consider implementing adjacent uses which generate income and provide services. eg. a leased kiosk which services changes rooms/toilets

5.2 Resilience

Deliver a desired level of amenity throughout various climatic changes including rising seas levels and storm surges.
Reinforce coastal resilience design principles.

- Avoid locating ocean pool structures in locations which are vulnerable to rising sea levels, inundation and or storm surges
- Identify opportunities where ocean pools act as buffers to other coastal infrastructure. Integrate features which dissipate wave action to achieve this
- Allow for future provisions which permit adapatation to climatic changes over time
- Consider creating a series of pool zones which buffer more protected land-ward swimming areas from high swell

5.3 Marine Ecology

In order of preference; propergate, maintain and mitigate adverse impacts on surrounding marine life and habitats.
Where possible establish pool zones to permit concentrations of marine life and serve as nurseries.
Consider integration of educational and research applications.

- Do not drain pool areas where marine life are located. Water to transfer through tidal changes achived by lowering the wall crest height to encourage natural flushing
- Do not lime wash horizontal surfaces to marine life zones to allow propergation of plants and animals
- Establish educational and safety signage to delineate marine life zone. Provide appropriate warnings if hazardous species reside in the area
- Consider concrete products which encourage the propergation of marine habitat and 'seed' corals, sea grassess and natural sea weeds

5.4 Maintenance

Minimise upkeep, maintenance and upgrades required over the life of the structure.
Support surrounding ecological environments and habitats for thriving marine life.

- Employ use of pump and tidal movement to flush pool
- Introduce sump and scupper to filter out debris in water
- Consider introduction of a series of sumps which support marine life and provide filtration to pool water
- Secure gateways at access points and display warning signage in the event of hazardous marine life, pollution or low water quality.
- Establish maintenance regime scheduled according to tidal movements
- Employ maintenance methods which do not use chemical based cleaning agents which adversely affect marine life (ie. preference water pressure cleaning)
- Specify integral, durable materials which minimise replacement and maintenance requirements.
- Ensure trafficable walk ways, stairs and ramps are kept clear of algal build up

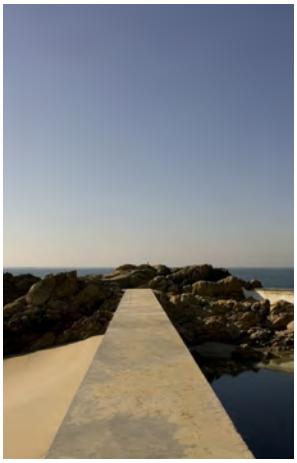
3.2

Design Principles: Case Studies

LEÇA POOL

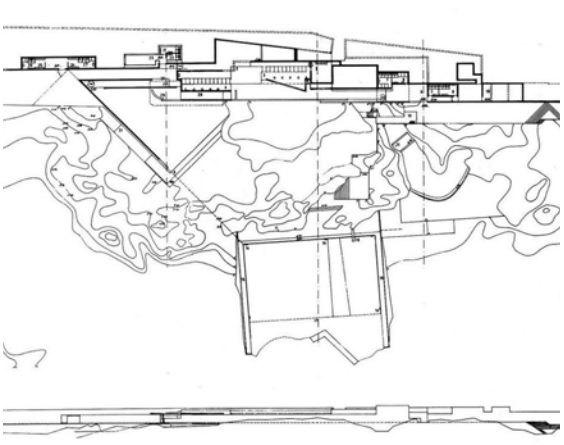
LEÇA DE PALMEIRA, PORTUGAL

The following case studies are exmaples of projects which reflect the design principles established in section 3.1. They exhibit contemporary design practices and exmeplary outcomes in a variety of coastal sites both in Australia and abroad.



PROJECT	Leca Swimming Pools
LOCATION	Leca da Palmeira, Portugal
YEAR	1973
DESIGNER	Alvaro Siza

The Leça de Palmeira beaches are on the northern coastline of Matosinhos, a small town to the north of Porto. They are exemplary for reconciling public coastal infrastructure with natural landscape. The structure consists of changing rooms, a café and two swimming pools, one for adults and one for children. The design intent was to preserve as much of the existing rock formations as possible. As visitors move through the space, the edge of the ocean merges with the water level of the pool to blur the boundary between natural and built elements. Two distinct axes through the site frame views of the coastline and horizon.



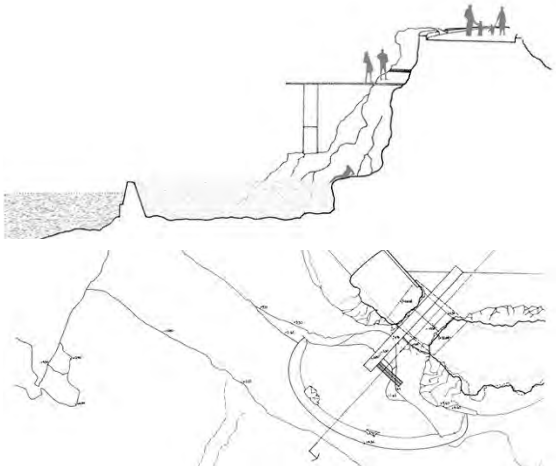
Source: Sofia Balters and Fernando Guerra. AD Classics: Leça Swimming Pools / Álvaro Siza Vieira 06 Aug 2011. ArchDaily

EL GUINCHO

TENERIFE, SPAIN

PROJECT	Swimming Pool El Guincho
LOCATION	Adeje Tenerife, Spain
YEAR	1993
DESIGNER	Fernando Menis, Felipe Artengo
	Rufino, José Maria Rodriguez

Menis describes this project as a 'soft intervention which minimizes the impact on the landscape and uses the natural resources of the place to provide amenity for the community. The passage of time is imprinted on all the materials used, providing them with their own personality, blended with the Mediterranean and African culture which surrounds Tenerife. The wet edge of the seaward wall blurs the pool with the ocean making them indiscernible during high tide. It is exemplary for dematerialising the pool into the surrounding landscape.



Source: Fernando Menis and Fernando Menis

3.1

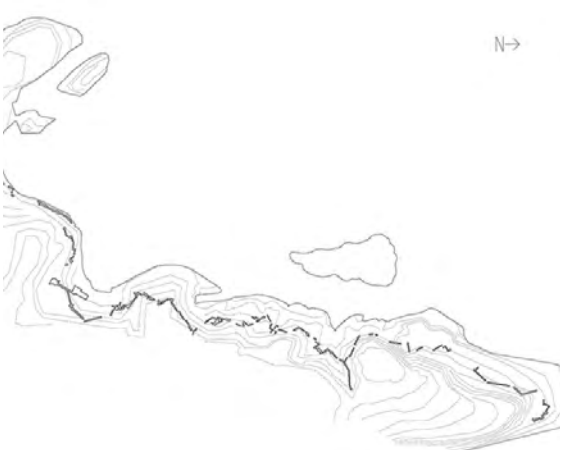
Design Principles: Case Studies

PUNTE PITE

ZAPALLAR - PAPUDO, CHILLE

PROJECT	Punte Pita
LOCATION	Zapallar - Papudo, Chille
YEAR	2005
DESIGNER	Teresa Moller

Located on the Chiliean coast this coastal pathway ambles along a headland that juts out into the sea. The path intervenes in the natural topography to make the existing rocky outcrops of the headland traversable. It is as much about where the landscape has been left untouched as where the built elements have been placed. Stairs and pathways have been built only to link between inaccesible stretches of the headland. Moller used the same masonry materials of the rock platform to create built elements and has laid new paths along natural lines in the topography.

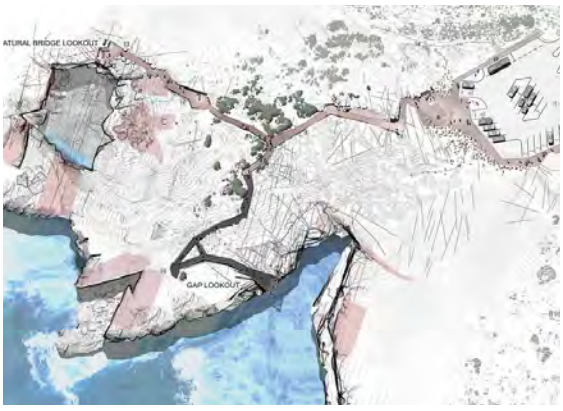


THE GAP

ALBANY, WESTERN AUSTRALIA

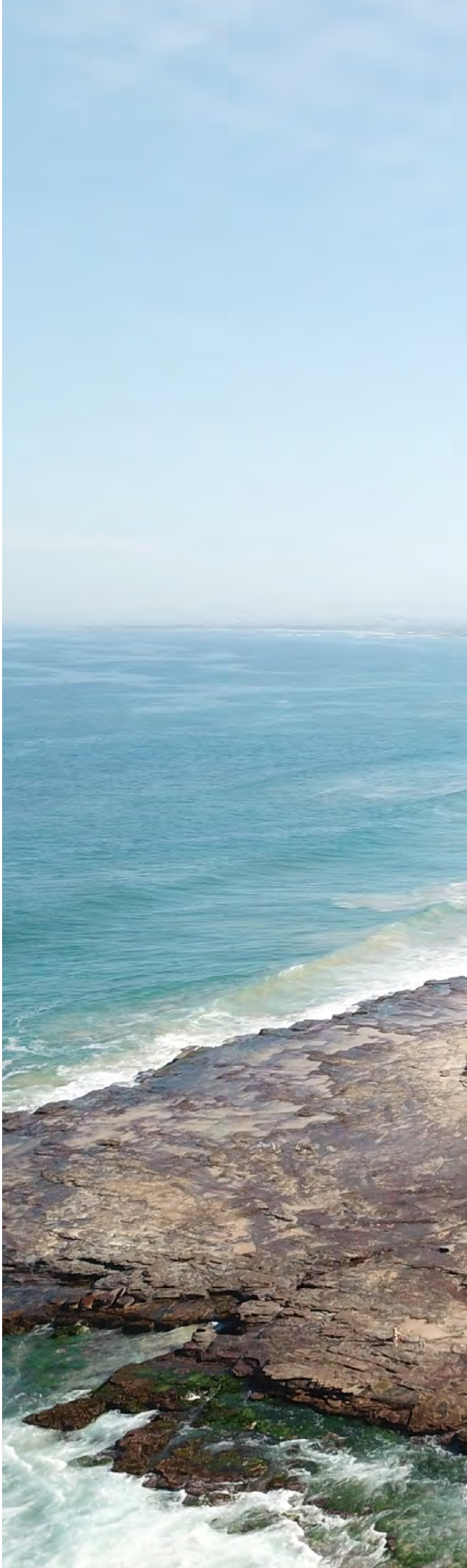
PROJECT	The Gap and Natural Bridge
LOCATION	Torndirrup National Park
	Albany, Western Australia
YEAR	2016
DESIGNER	Dept. Parks and Wildlife WA

The redevelopment of this landmark sought to create a spectacular and rewarding visitor experience whilst responding to risk, a need to increase visitor capacity and inclusive access. The structure and associated pathways intervene with the landscape with careful consideration given to the existing site. It meets the spectacular coastal setting with a bold statement while remaining complementary to its context. It has both made the landscape accessible to a broader group and created a valuable and resilient piece of natural infrastructure.



4.0

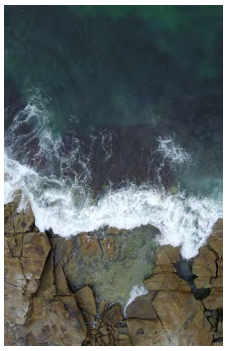
Mapping and documentation



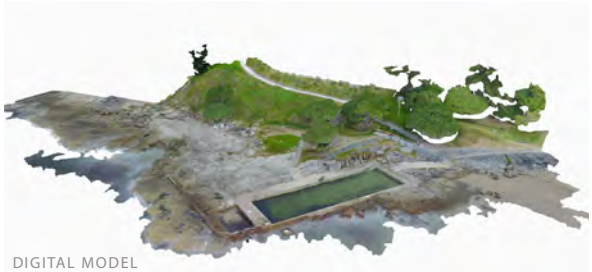
Wombarra Ocean Pool, Illawarra NSW

YAMBA

YAMBA OCEAN POOL, NSW

POOL LOCATION


DIGITAL MODEL

POOL	**Yamba Ocean Pool**
LATITUDE	-33.5998221
LONGITUDE	151.3279527
LGA	Clarence Valley
POPULATION	6032
YEAR	1969
LOCATION	Main Beach
BEARING	NE
ORIENTATION	55°
PREVAILING SWELL	124°
SITING TO HEADLAND	Tucked
COASTAL FEATURES	-
FOUNDATION	Rock platform
GEOMORPHOLOGY	Sandy Beach
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Semi-Detached
POOL WALL	-
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

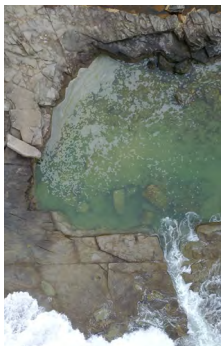
YAMBA OCEAN POOL
CLARENCE VALLEY LGA

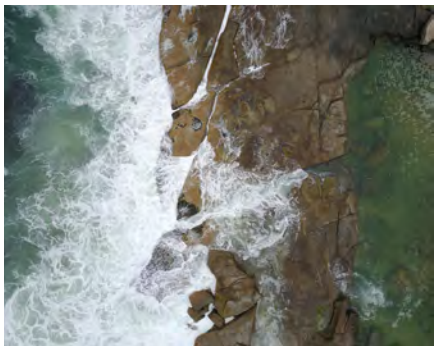
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

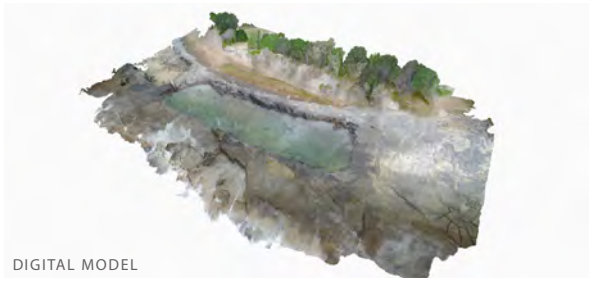
ANGOURIE

ANGOURIE BLUE POOL, NSW





POOL LOCATION



DIGITAL MODEL

POOL	**Angourie Blue Pool**
LATITUDE	-33.3500874
LONGITUDE	151.5034953
LGA	Clarence Valley
POPULATION	222
YEAR	1900
LOCATION	Secondary
BEARING	NE
ORIENTATION	45°
PREVAILING SWELL	124°
SITING TO HEADLAND	Tucked
COASTAL FEATURES	-
FOUNDATION	Rock platform
GEOMORPHOLOGY	Rock platform
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Semi-Detached
POOL WALL	No wall
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

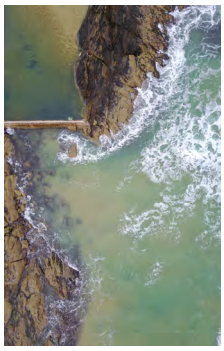
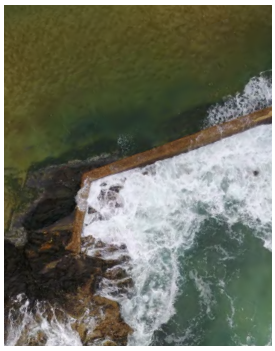
ANGOURIE BLUE POOL
CLARENCE VALLEY LGA

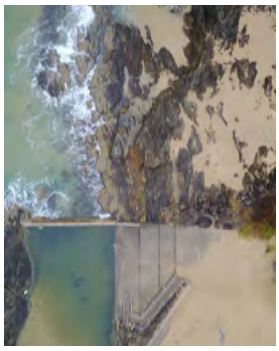
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

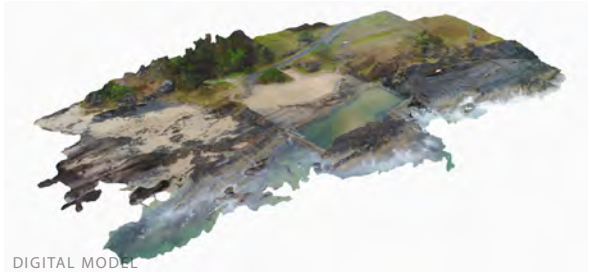
SAWTELL

SAWTELL MEMORIAL POOL, NSW

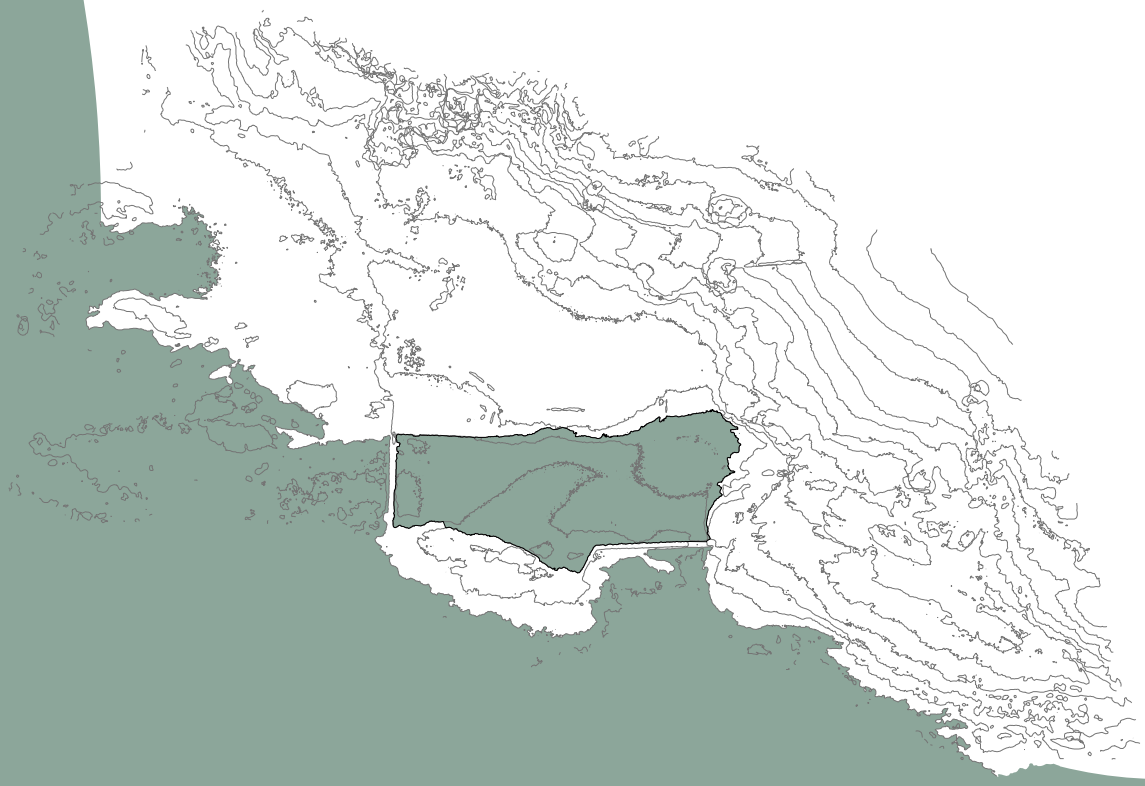


POOL LOCATION



DIGITAL MODEL

POOL	**Sawtell Memorial Rock Pool**
LATITUDE	-34.0646144
LONGITUDE	151.1560232
LGA	Coffs Harbour
POPULATION	3682
YEAR	1962
LOCATION	Secondary
BEARING	
ORIENTATION	180°
PREVAILING SWELL	124°
SITING TO HEADLAND	Tucked
COASTAL FEATURES	River Mouth
FOUNDATION	Rock platform
GEOMORPHOLOGY	Sandy Beach
POOL TYPE	Partly Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	-
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*Yes*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Ramp/Stair*
Excavated/built up form	*Excavated*



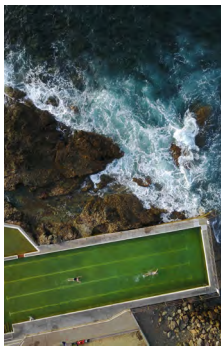
SAWTELL MEMORIAL POOL
COFFS HARBOUR LGA

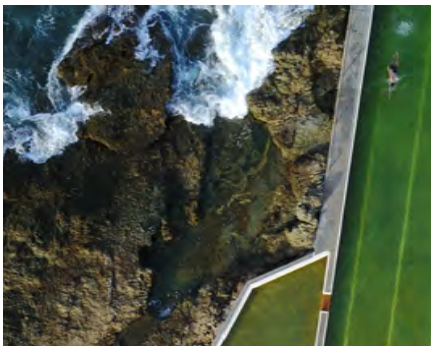
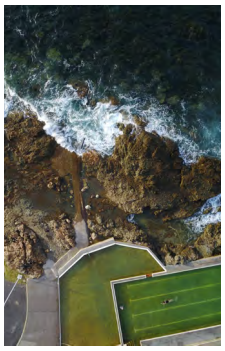
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

BLACKHEAD

BLACKHEAD ROCK POOL, NSW



POOL LOCATION


DIGITAL MODEL

POOL	**Black Head Ocean Pool**
LATITUDE	-33.637573
LONGITUDE	151.3320994
LGA	Mid Coast
POPULATION	851
YEAR	1941
LOCATION	Main Beach
BEARING	ENE
ORIENTATION	60°
PREVAILING SWELL	129°
SITING TO HEADLAND	Tucked
COASTAL FEATURES	River Mouth
FOUNDATION	Rock platform
GEOMORPHOLOGY	Rock platform
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Semi-Detached
POOL WALL	-
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Formalised
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Ramp/Stair*
Excavated/built up form	*Excavated*

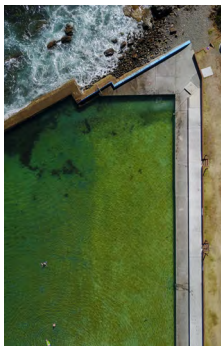
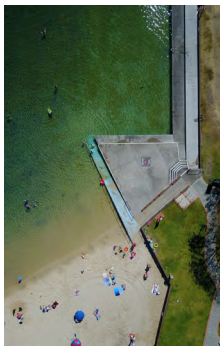
BLACKHEAD ROCK POOL
MID-COAST LGA

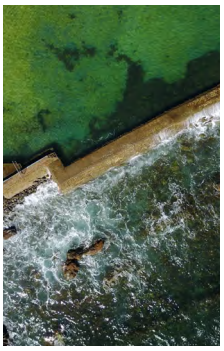
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

FORSTER

FORSTER OCEAN BATHS, NSW

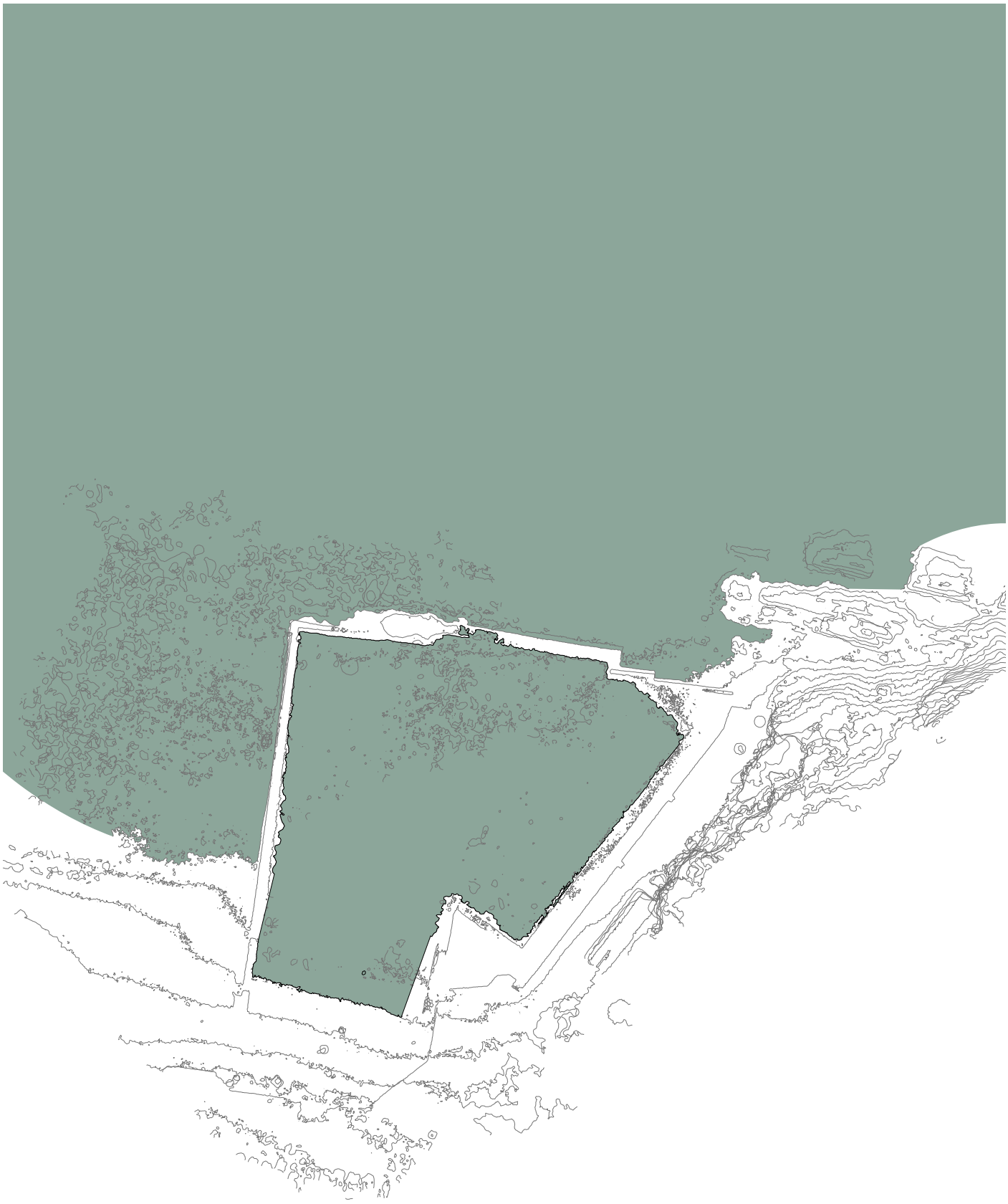





POOL LOCATION

DIGITAL MODEL

POOL	**Forster Ocean Pool**
LATITUDE	-29.4792061
LONGITUDE	153.3636153
LGA	Mid Coast
POPULATION	14267
YEAR	1936
LOCATION	Main Beach
BEARING	N
ORIENTATION	9°
PREVAILING SWELL	129°
SITING TO HEADLAND	Main Beach
COASTAL FEATURES	River Mouth
FOUNDATION	Sand bottom
GEOMORPHOLOGY	Sandy Beach
POOL TYPE	Partly Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	-
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



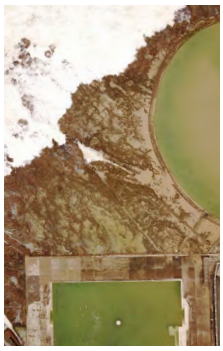
FORSTER OCEAN BATHS
MID-COAST LGA

THE WILD EDGE
NICOLE LARKIN

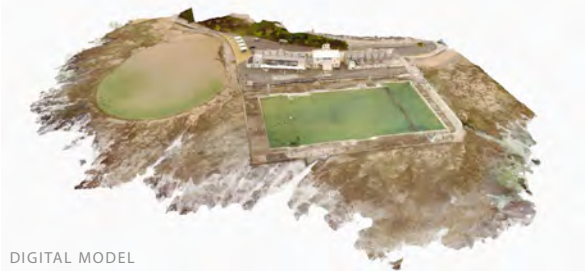
2.5 5 10 20

NEWCASTLE

NEWCASTLE OCEAN BATHS, NSW

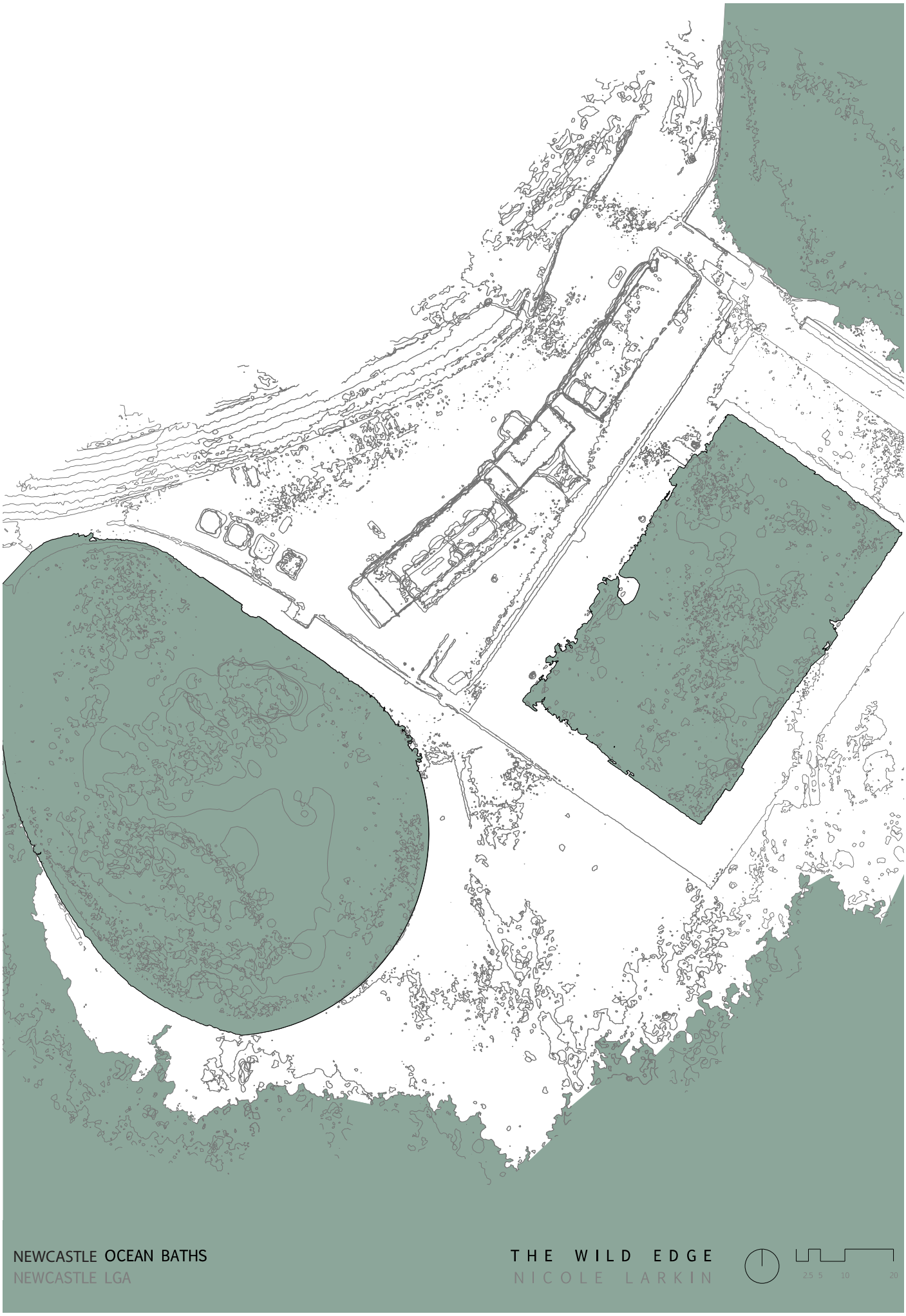


POOL LOCATION



DIGITAL MODEL

POOL	**Newcastle Ocean Baths**
LATITUDE	-33.9256627
LONGITUDE	151.2593955
LGA	Newcastle
POPULATION	
YEAR	1922
LOCATION	Main Beach
BEARING	
ORIENTATION	136.5°
PREVAILING SWELL	129°
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	Rock platform
GEOMORPHOLOGY	Sandy Beach
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Semi-Detached
POOL WALL	-
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*Yes*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Formalised
Concrete/natural bottom	*Concrete*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Ramp/Stair*
Excavated/built up form	*Excavated*



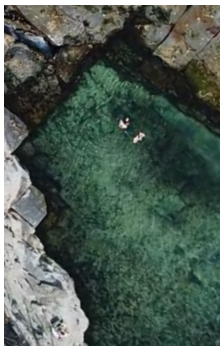
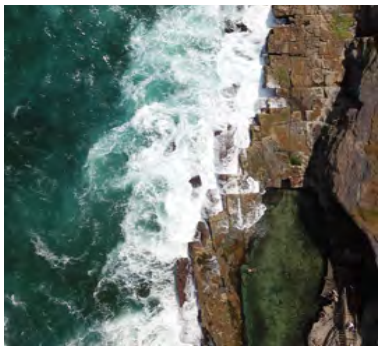
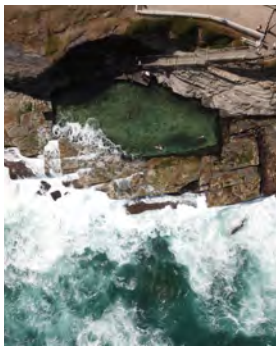
NEWCASTLE OCEAN BATHS
NEWCASTLE LGA

THE WILD EDGE
NICOLE LARKIN

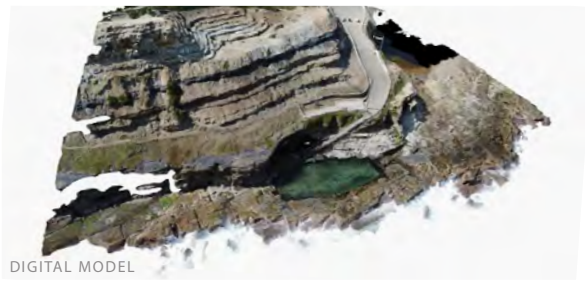
2.5 5 10 20

BOGEY HOLE

BOGEY HOLE, NSW

POOL LOCATION



DIGITAL MODEL

POOL	**Bogey Hole**
LATITUDE	-33.9685359
LONGITUDE	151.254546
LGA	Newcastle
POPULATION	
YEAR	1819
LOCATION	Secondary
BEARING	
ORIENTATION	160°
PREVAILING SWELL	129°
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	Rock platform
GEOMORPHOLOGY	Cliff
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	2500No wall
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

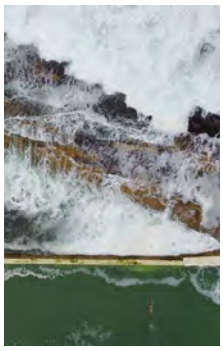
BOGEY HOLE
NEWCASTLE LGA

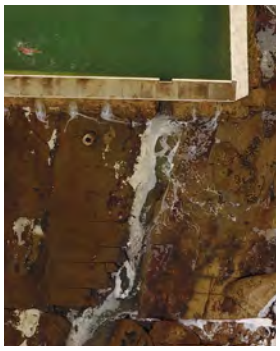
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

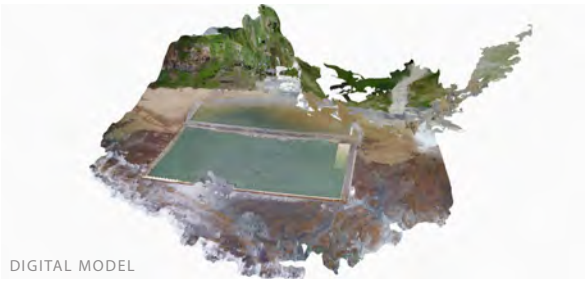
MEREWETHER

MEREWETHER OCEAN BATHS NEWCASTLE, NSW

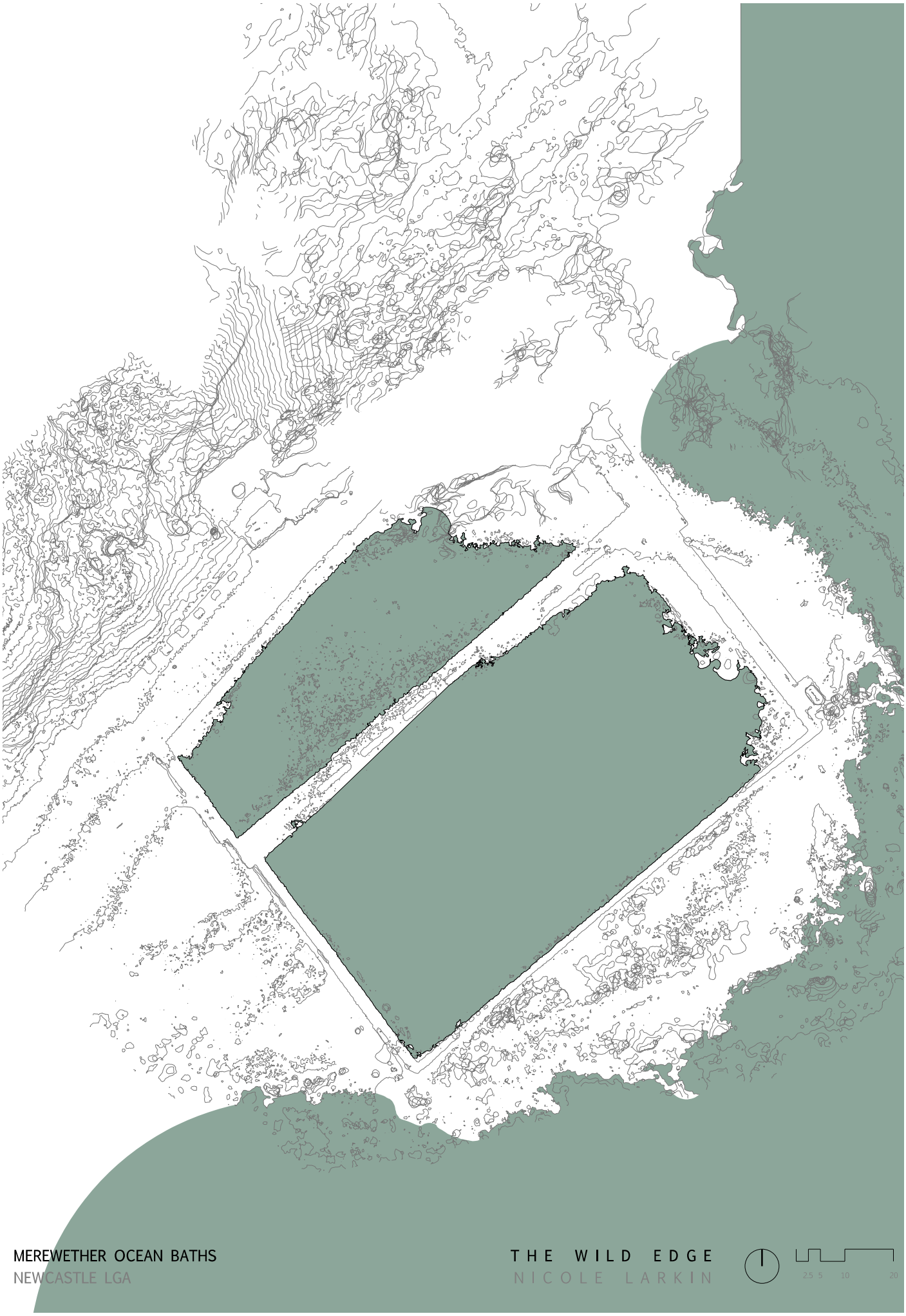


POOL LOCATION



DIGITAL MODEL

POOL	**Merewether Ocean Baths**
LATITUDE	-33.933413
LONGITUDE	151.2617075
LGA	Newcastle
POPULATION	
YEAR	1935
LOCATION	Main Beach
BEARING	
ORIENTATION	140°
PREVAILING SWELL	129°
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	Rock platform
GEOMORPHOLOGY	Sandy Beach
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Semi-Detached
POOL WALL	-
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*Yes*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Formalised
Concrete/natural bottom	*Concrete*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Ramp/Stair*
Excavated/built up form	*Built Up*



MEREWETHER OCEAN BATHS
NEWCASTLE LGA

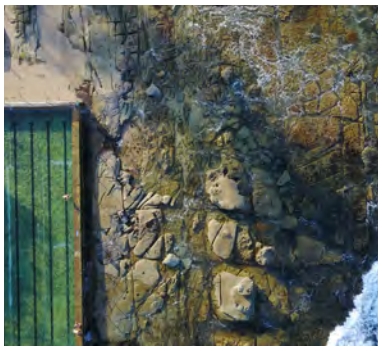
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

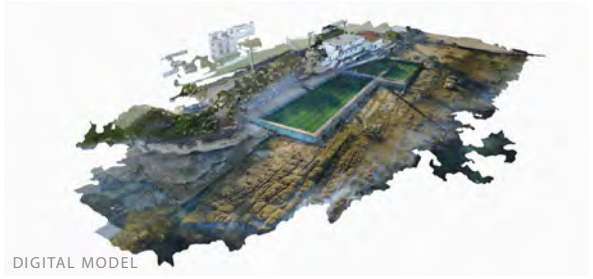
THE ENTRANCE

THE ENTRANCE OCEAN POOL, NSW






POOL LOCATION



DIGITAL MODEL

POOL	**The Entrance Ocean Baths**
LATITUDE	-33.4477753
LONGITUDE	151.4469322
LGA	Central Coast
POPULATION	
YEAR	1965
LOCATION	Main Beach
BEARING	NE
ORIENTATION	49
PREVAILING SWELL	129
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	Rock platform
GEOMORPHOLOGY	Sandy Beach
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Semi-Detached
POOL WALL	-
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Formalised
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Ramp/Stair*
Excavated/built up form	*Built Up*

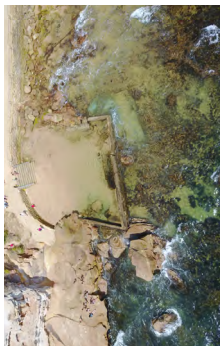
THE ENTRANCE OCEAN POOL
CLARENCE VALLEY LGA

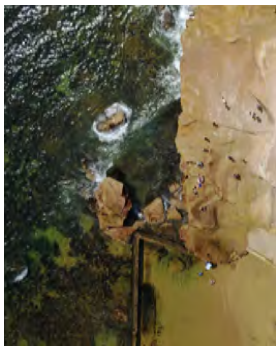
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

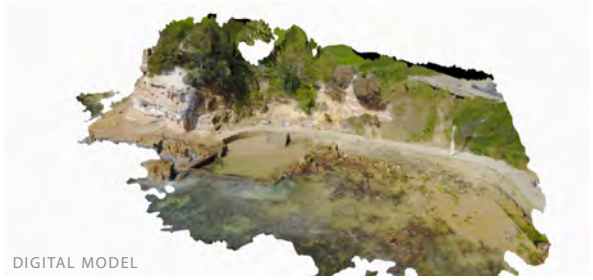
TERRIGAL

TERRIGAL ROCK POOL, NSW

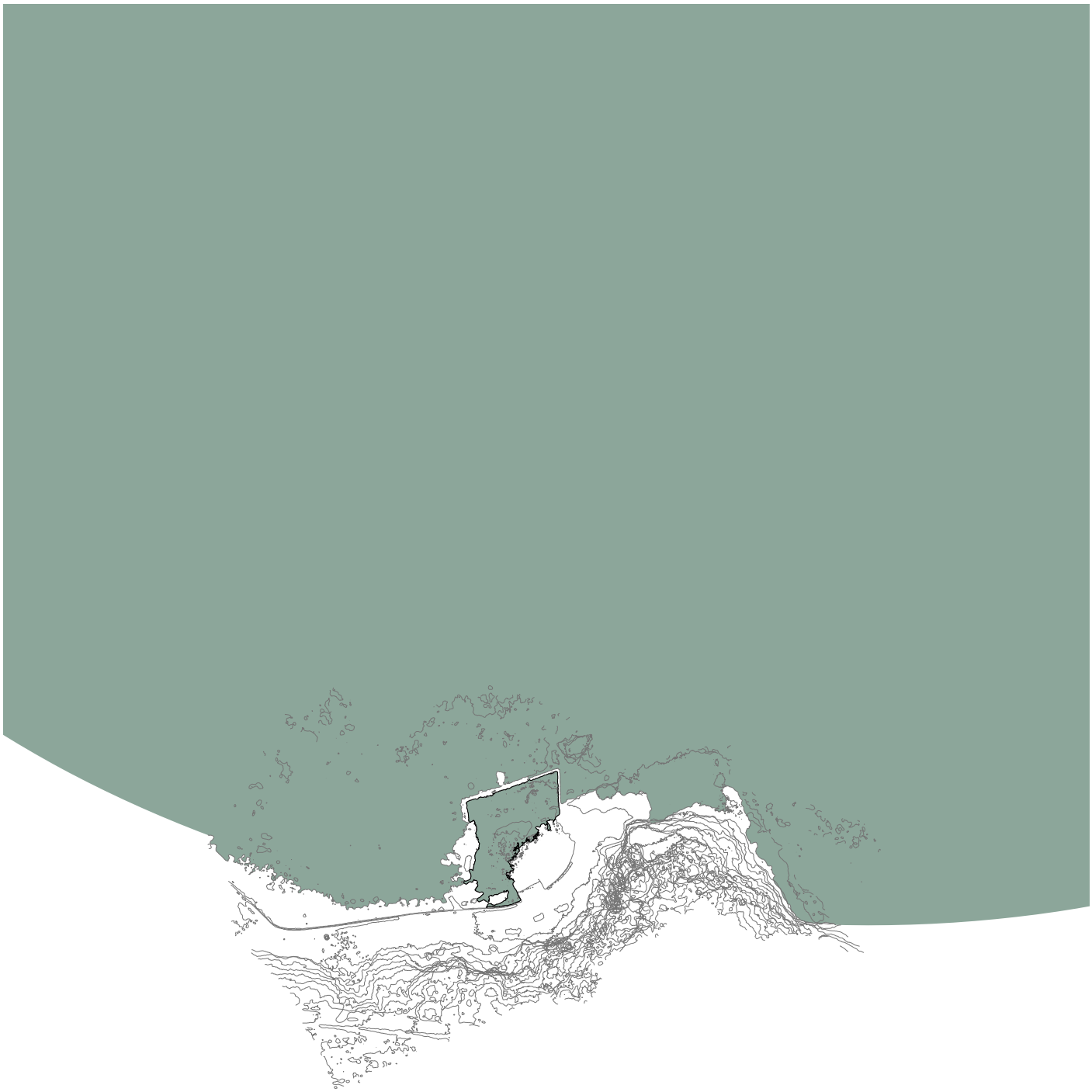


POOL LOCATION



DIGITAL MODEL

POOL	**Terrigal Rock Pool**
LATITUDE	-29.436019
LONGITUDE	153.3653319
LGA	Central Coast
POPULATION	
YEAR	
LOCATION	Main Beach
BEARING	N
ORIENTATION	2
PREVAILING SWELL	129
SITING TO HEADLAND	Tucked
COASTAL FEATURES	
FOUNDATION	Rock platform
GEOMORPHOLOGY	Sandy Beach
POOL TYPE	Partly Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	-
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



TERRIGAL ROCK POOL
CENTRAL COAST LGA

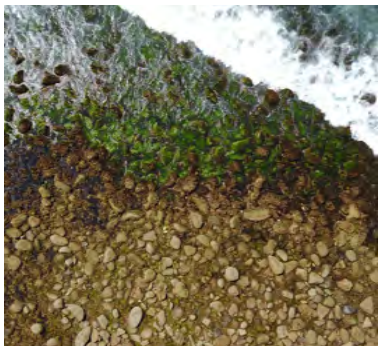
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

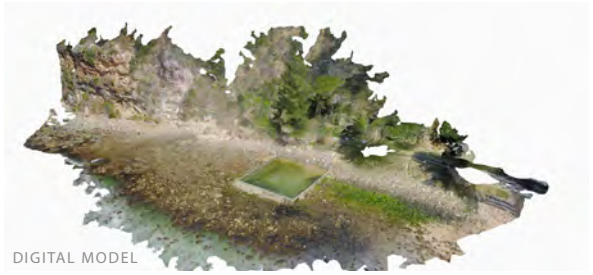
MACMASTERS

MACMASTERS BEACH ROCK POOL, NSW



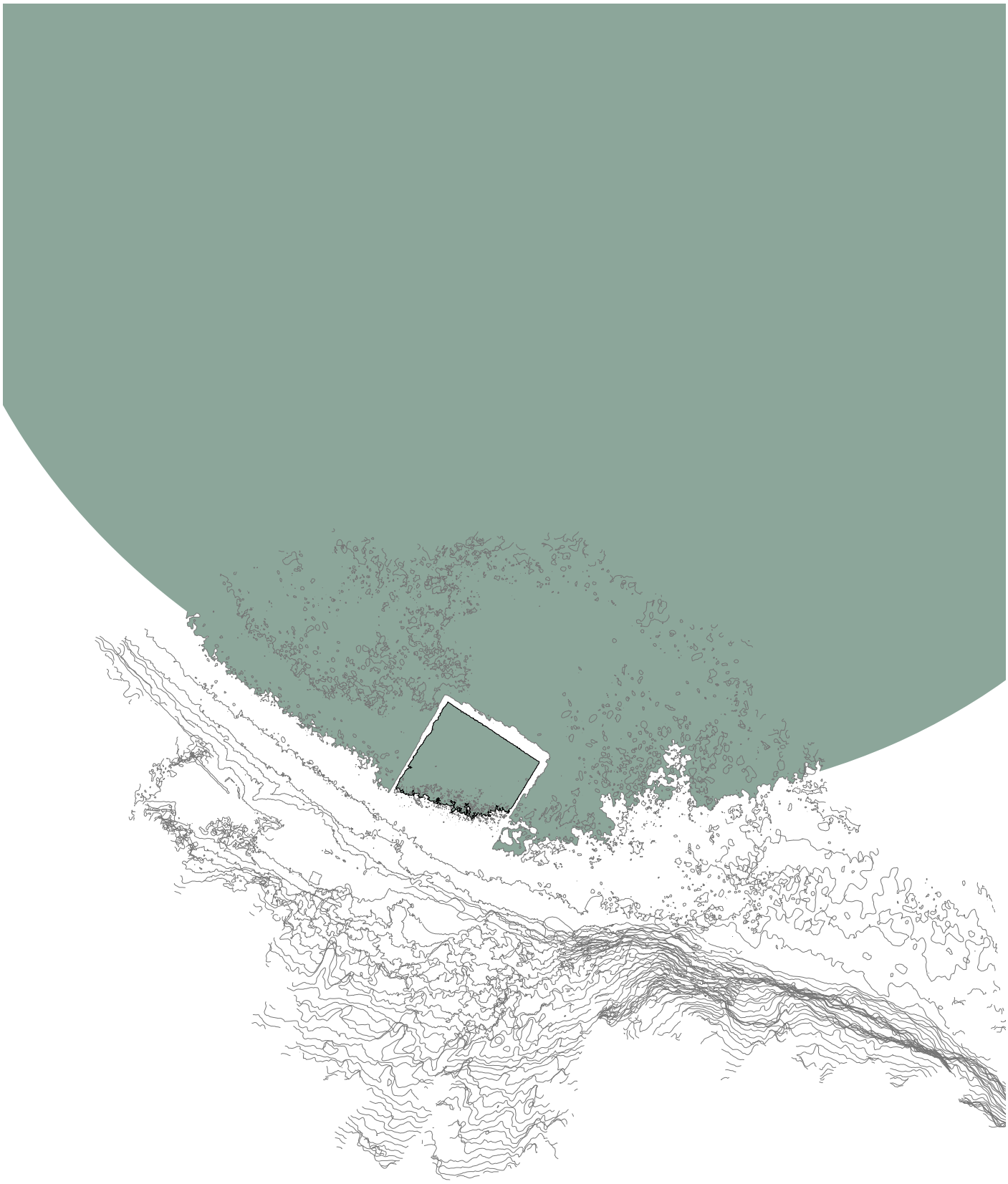



POOL LOCATION



DIGITAL MODEL

POOL	**Macmasters Beach Rock Pool**
LATITUDE	-32.0704199
LONGITUDE	152.5457776
LGA	Central Coast
POPULATION	
YEAR	1956
LOCATION	Main Beach
BEARING	NNE
ORIENTATION	32
PREVAILING SWELL	129
SITING TO HEADLAND	Tucked
COASTAL FEATURES	Boulders
FOUNDATION	Sand bottom
GEOMORPHOLOGY	Boulder Beach
POOL TYPE	Partly Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	-
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Built Up*



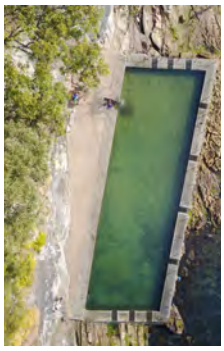
MACMASTERS BEACH ROCK POOL
CENTRAL COAST LGA

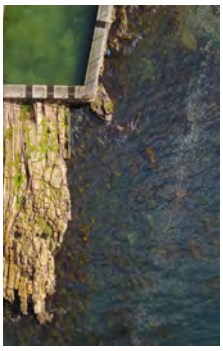
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

PEARL BEACH

PEARL BEACH ROCK POOL, NSW

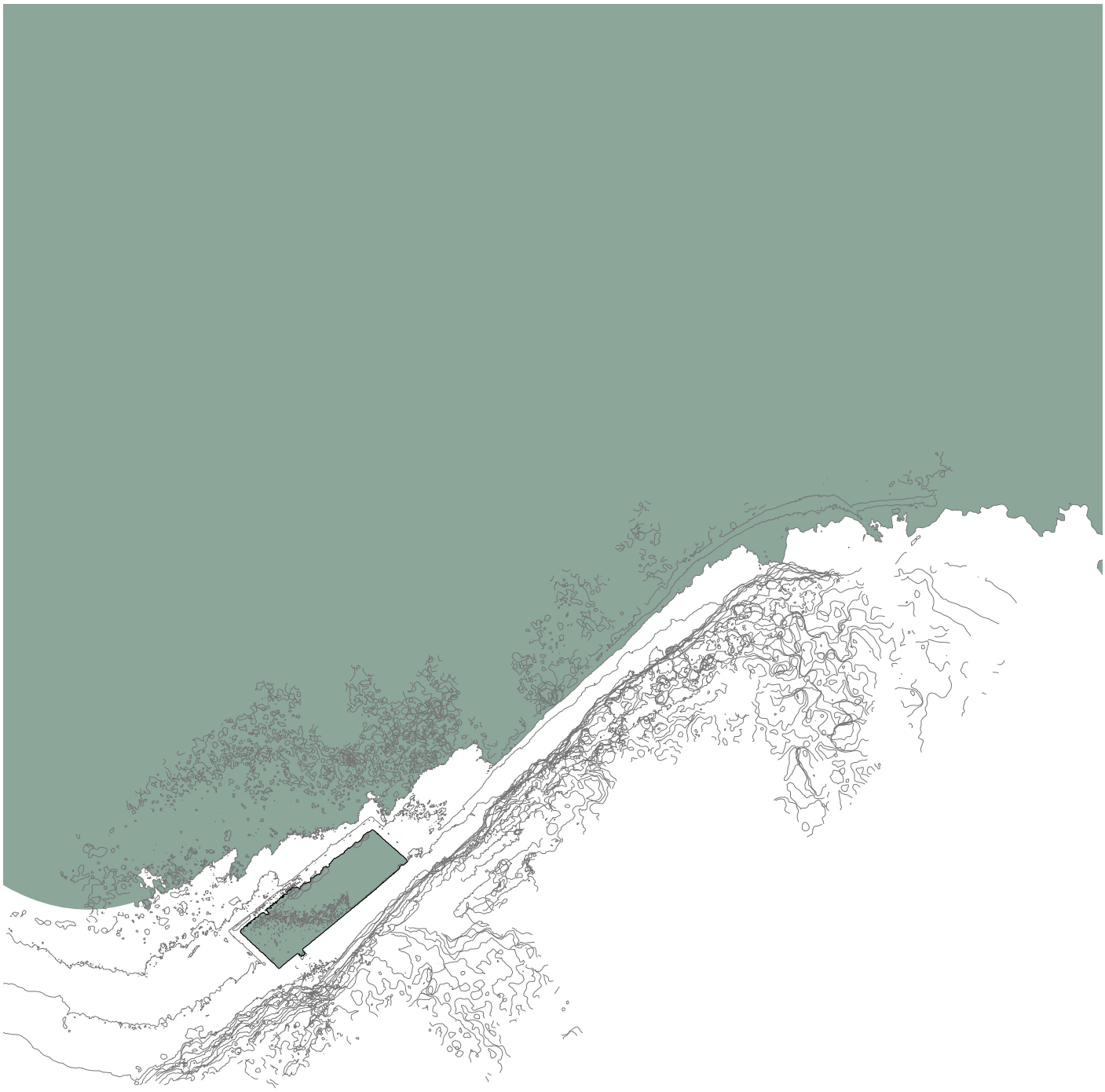




POOL LOCATION

DIGITAL MODEL

POOL	**Pearl Beach Rock Pool**
LATITUDE	-33.500986
LONGITUDE	151.4258373
LGA	Central Coast
POPULATION	
YEAR	1928
LOCATION	Main Beach
BEARING	NE
ORIENTATION	50
PREVAILING SWELL	129
SITING TO HEADLAND	Tucked
COASTAL FEATURES	
FOUNDATION	Rock platform
GEOMORPHOLOGY	Rock platform
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Semi-Detached
POOL WALL	-
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Formalised
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Ramp/Stair*
Excavated/built up form	*Built Up*



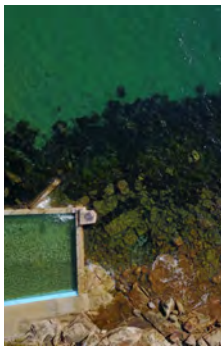
PEARL BEACH ROCK POOL
CLARENCE VALLEY LGA

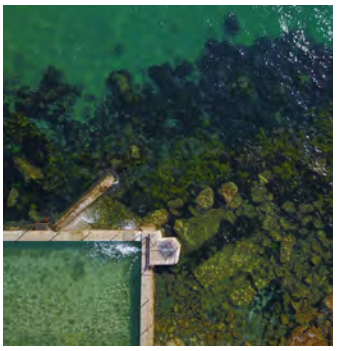
THE WILD EDGE
NICOLE LARKIN

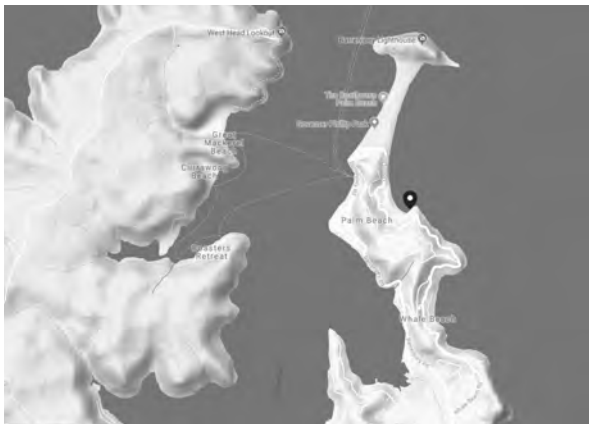
2.5 5 10 20

PALM BEACH

PALM BEACH ROCK POOL, NSW





POOL LOCATION

DIGITAL MOD

POOL	**Palm Beach Rock Pool**
LATITUDE	-34.3078805
LONGITUDE	150.9352733
LGA	Northern Beaches
POPULATION	
YEAR	1920
LOCATION	Main Beach
BEARING	
ORIENTATION	338
PREVAILING SWELL	
SITING TO HEADLAND	Tucked
COASTAL FEATURES	
FOUNDATION	Rock platform
GEOMORPHOLOGY	Sandy Beach
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Semi-Detached
POOL WALL	-
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Formalised
Concrete/natural bottom	*Concrete*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Ramp/Stair*
Excavated/built up form	*Built Up*

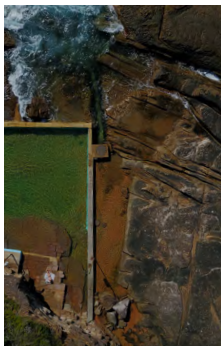
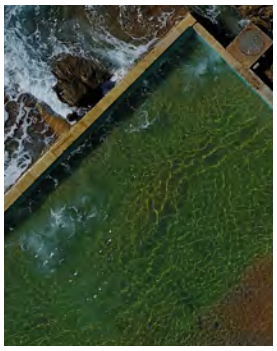
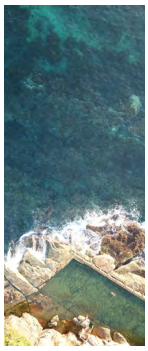
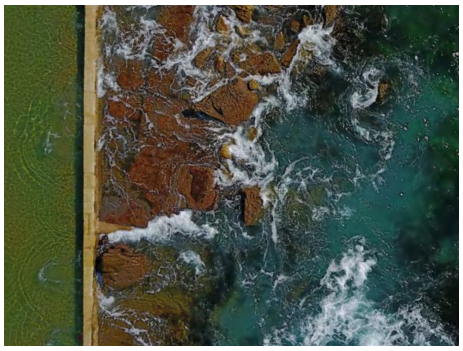
PALM BEACH ROCK POOL
NORTHERN BEACHES LGA

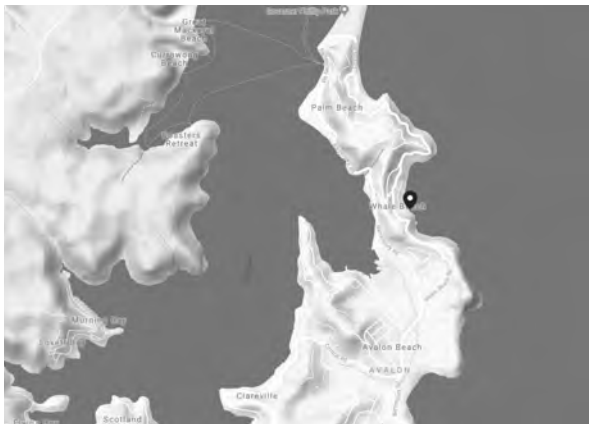
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

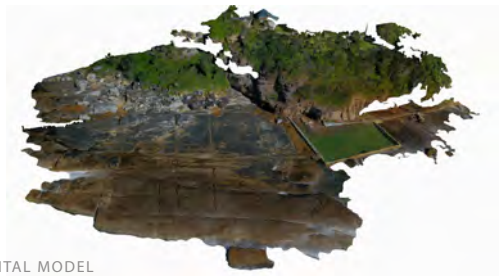
WHALE BEACH

WHALE BEACH ROCK POOL, NSW



POOL LOCATION



DIGITAL MODEL

POOL	**Whale Beach Rock Pool**
LATITUDE	-32.9295438
LONGITUDE	151.7909288
LGA	Northern Beaches
POPULATION	
YEAR	1930
LOCATION	Main Beach
BEARING	NE
ORIENTATION	37
PREVAILING SWELL	
SITING TO HEADLAND	Tucked
COASTAL FEATURES	
FOUNDATION	Rock platform
GEOMORPHOLOGY	Sandy Beach
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Semi-Detached
POOL WALL	-
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

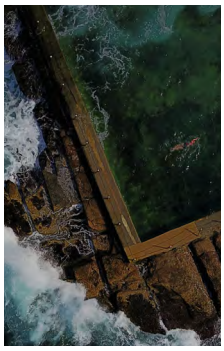
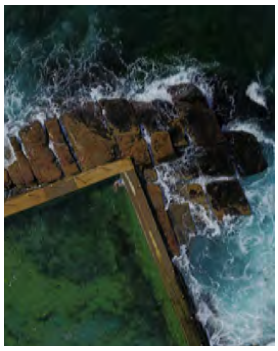
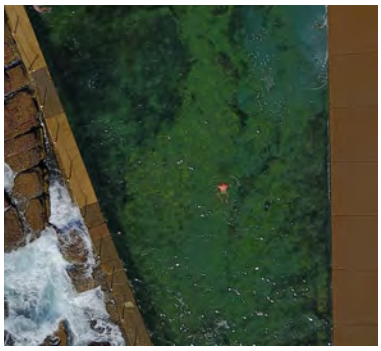
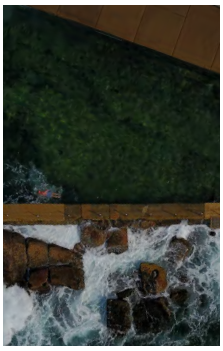
WHALE BEACH ROCK POOL
NORTHERN BEACHES LGA

THE WILD EDGE
NICOLE LARKIN

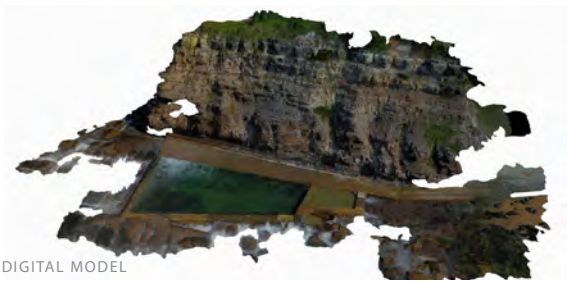
2.5 5 10 20

AVALON

AVALON ROCK POOL, NSW

POOL LOCATION



DIGITAL MODEL

POOL	**Avalon Rock Pool**
LATITUDE	-33.6583874
LONGITUDE	151.3243411
LGA	Northern Beaches
POPULATION	
YEAR	1920
LOCATION	Main Beach
BEARING	ENE
ORIENTATION	69
PREVAILING SWELL	
SITING TO HEADLAND	Tucked
COASTAL FEATURES	
FOUNDATION	Rock platform
GEOMORPHOLOGY	Sandy Beach
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Semi-Detached
POOL WALL	-
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Formalised
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Ramp/Stair*
Excavated/built up form	*Built Up*

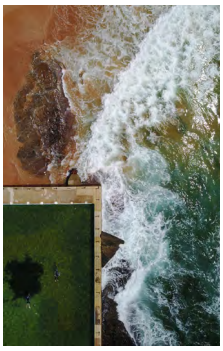
AVALON ROCK POOL
NORTHERN BEACHES LGA

THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

BILGOLA

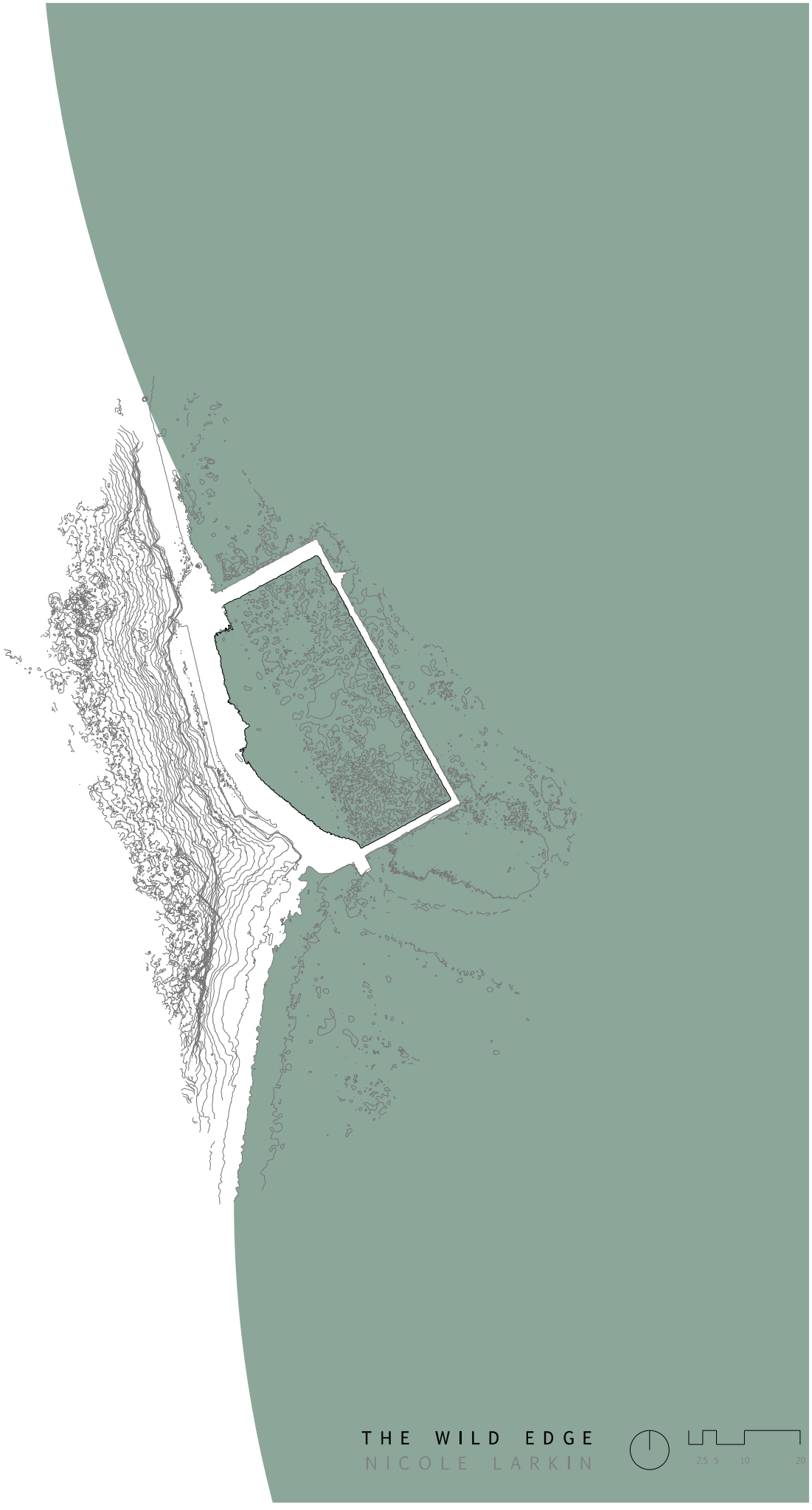
BILGOLA ROCK POOL, NSW



POOL LOCATION

DIGITAL MODEL

POOL	**Bilgola Rock Pool**
LATITUDE	-33.9430217
LONGITUDE	151.2638426
LGA	Northern Beaches
POPULATION	
YEAR	1926
LOCATION	Main Beach
BEARING	
ORIENTATION	152
PREVAILING SWELL	
SITING TO HEADLAND	Tucked
COASTAL FEATURES	
FOUNDATION	Rock platform
GEOMORPHOLOGY	Sandy Beach
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Semi-Detached
POOL WALL	-
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Formalised
Concrete/natural bottom	*Concrete*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Ramp/Stair*
Excavated/built up form	*Excavated*



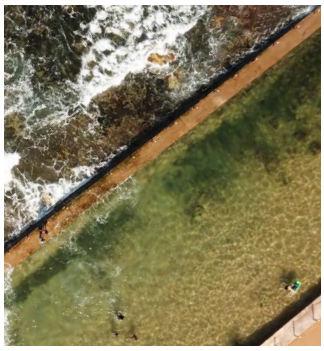
BILGOLA ROCK POOL
NORTHERN BEACHES LGA

THE WILD EDGE
NICOLE LARKIN

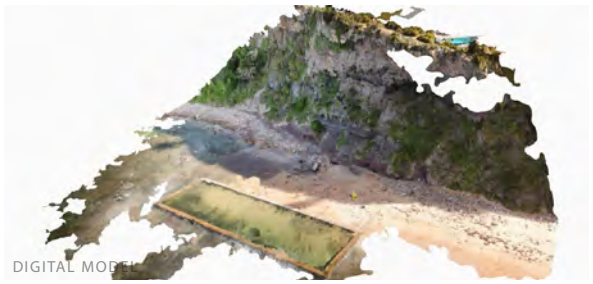
2.5 5 10 20

NEWPORT

NEWPORT OCEAN POOL, NSW

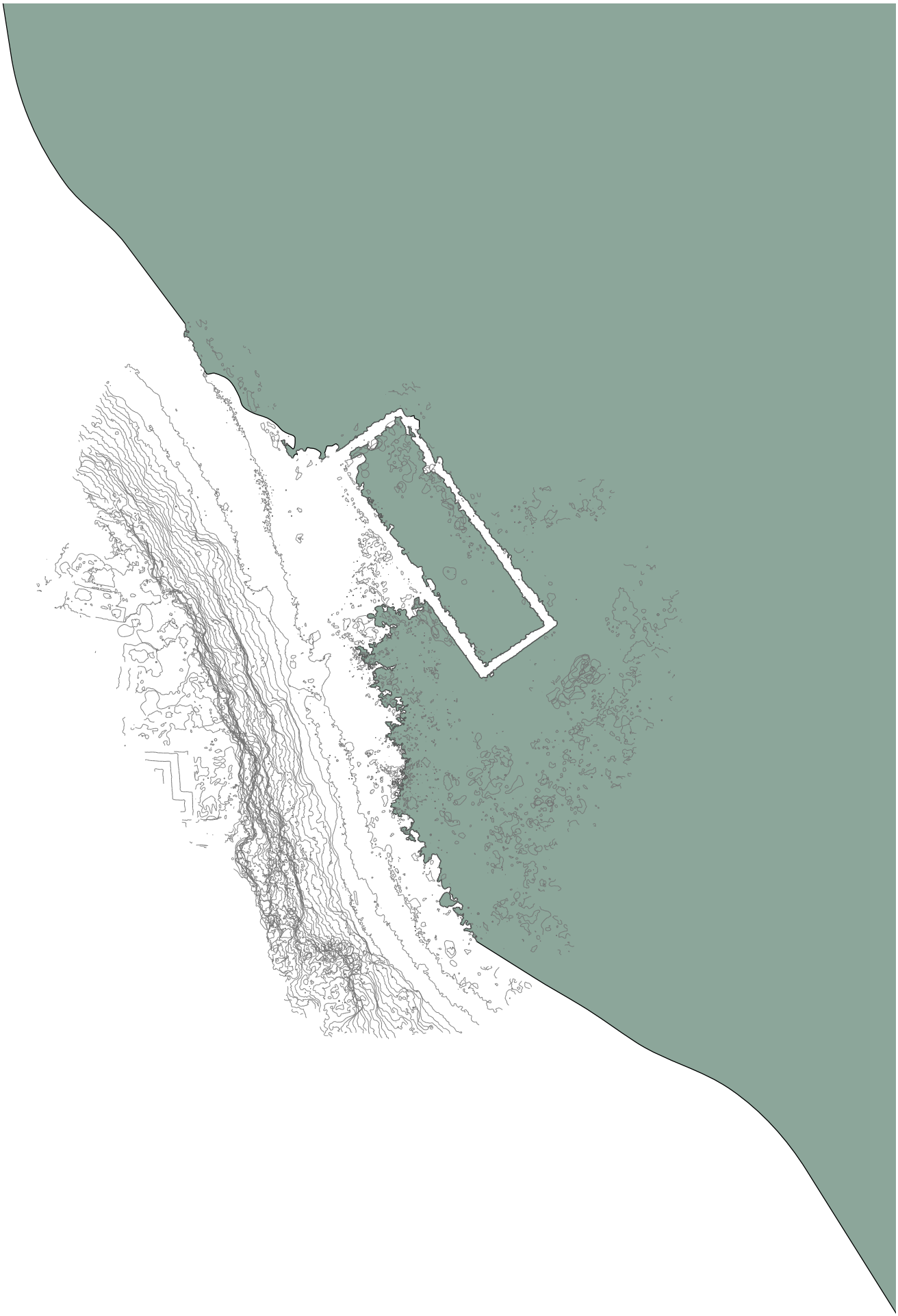


POOL LOCATION



DIGITAL MODEL

POOL	**Newport Ocean Pool**
LATITUDE	-33.613565
LONGITUDE	151.3323824
LGA	Northern Beaches
POPULATION	
YEAR	1925
LOCATION	Main Beach
BEARING	ENE
ORIENTATION	57
PREVAILING SWELL	
SITING TO HEADLAND	Tucked
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



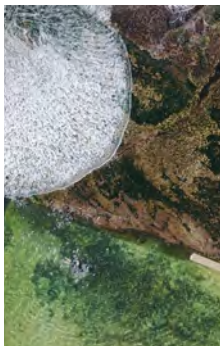
NEWPORT ROCK POOL
NORTHERN BEACHES LGA

THE WILD EDGE
NICOLE LARKIN

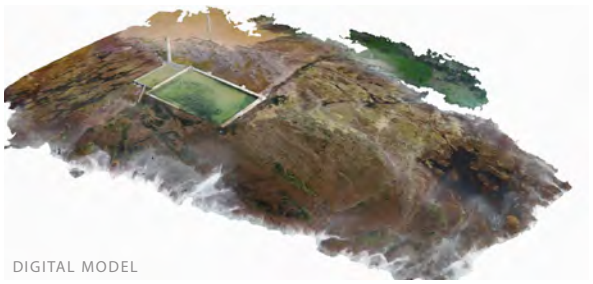
2.5 5 10 20

MONA VALE

MONA VALE OCEAN POOL, NSW

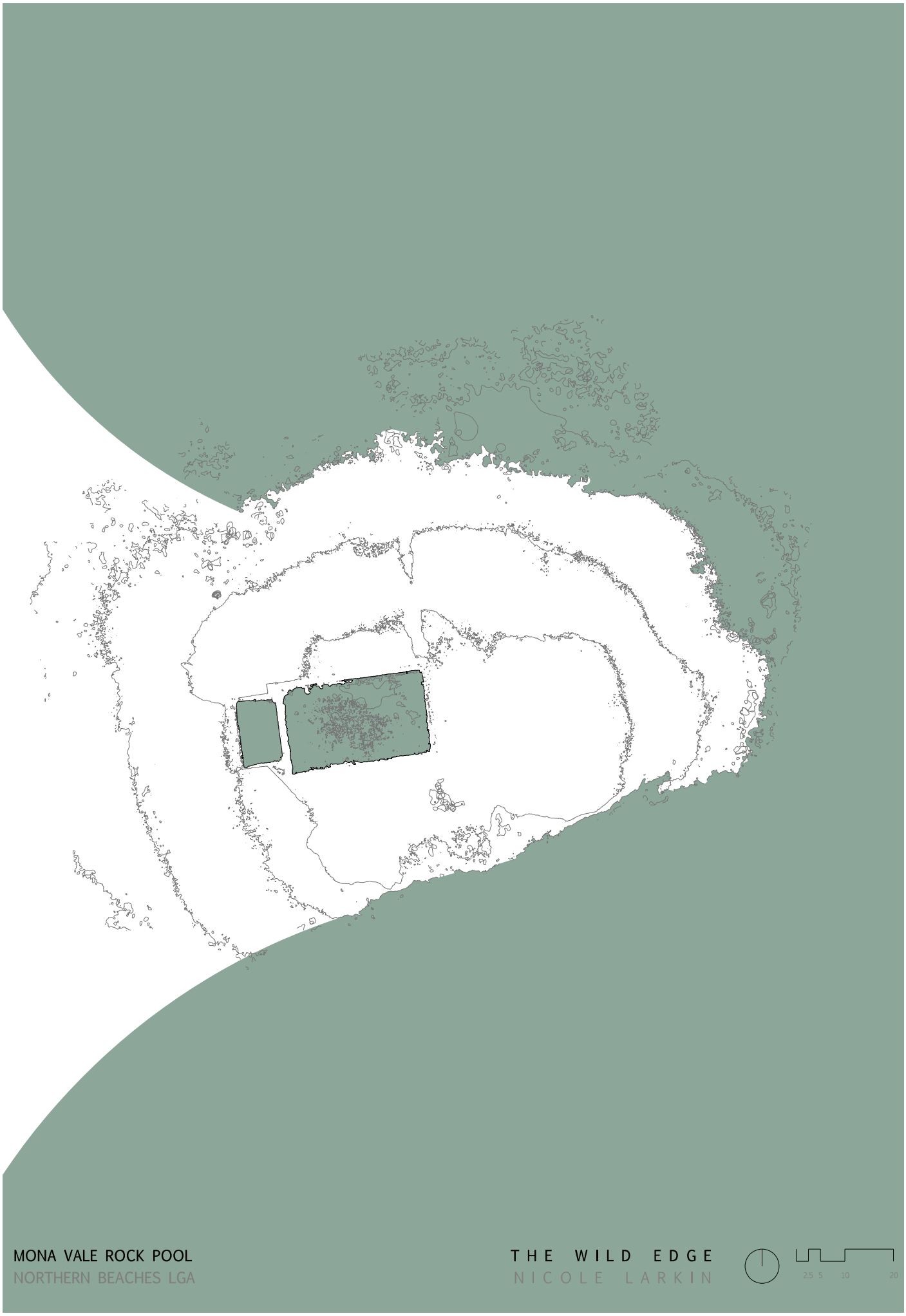



POOL LOCATION



DIGITAL MODEL

POOL	**Mona Vale Rock Pool**
LATITUDE	-34.0538327
LONGITUDE	151.1556315
LGA	Northern Beaches
POPULATION	
YEAR	1930
LOCATION	Main Beach
BEARING	
ORIENTATION	175
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



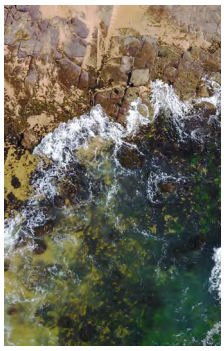
MONA VALE ROCK POOL
NORTHERN BEACHES LGA

THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

NORTH NARRABEEN

NORTH NARRABEEN OCEAN POOL, NSW




POOL LOCATION

DIGITAL MODEL

POOL	**North Narrabeen Baths**
LATITUDE	-34.2464771
LONGITUDE	150.9772968
LGA	Northern Beaches
POPULATION	
YEAR	1930
LOCATION	Main Beach
BEARING	
ORIENTATION	197
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

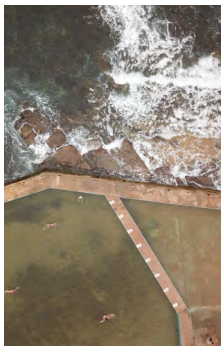
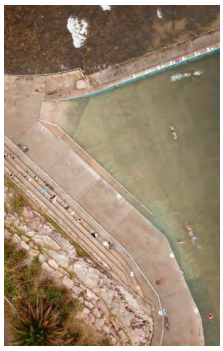
NORTH NARRABEEN ROCK POOL
NORTHERN BEACHES LGA

THE WILD EDGE
NICOLE LARKIN

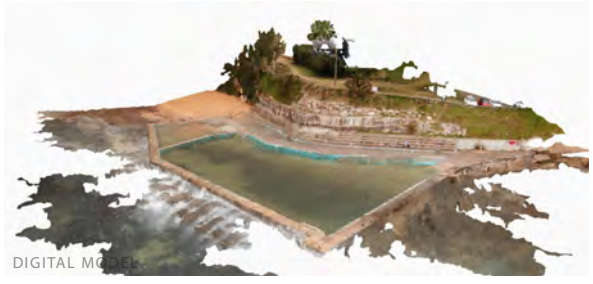
2.5 5 10 20

COLLAROY

COLLAROY OCEAN POOL, NSW

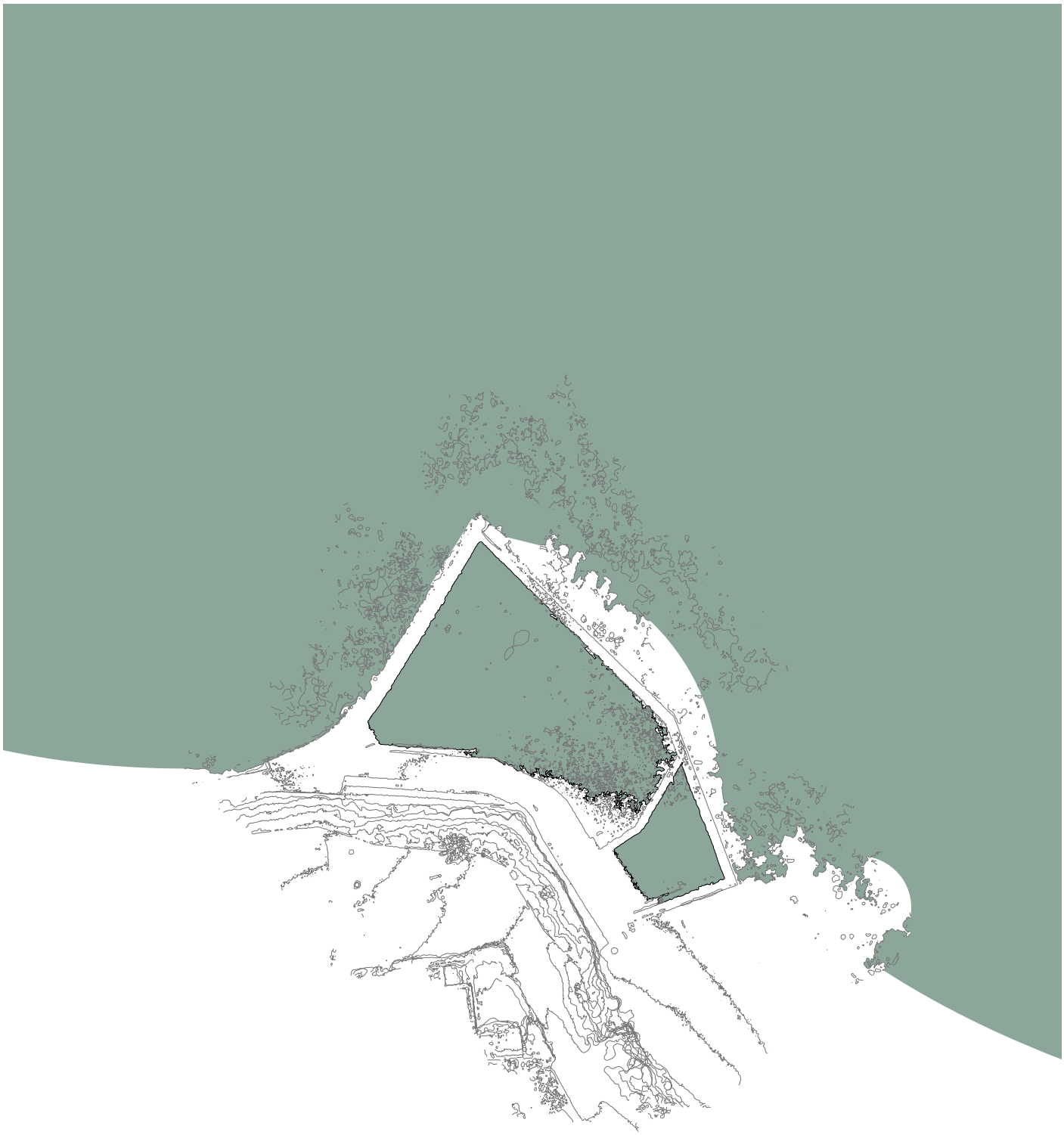



POOL LOCATION



DIGITAL MODEL

POOL	**Collaroy Ocean Pool**
LATITUDE	-32.1781642
LONGITUDE	152.5146854
LGA	Northern Beaches
POPULATION	
YEAR	1926
LOCATION	Main Beach
BEARING	NNE
ORIENTATION	33
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*Yes*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Formalised
Concrete/natural bottom	*Concrete*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Ramp/Stair*
Excavated/built up form	*Excavated*



COLLAROY OCEAN POOL
NORTHERN BEACHES LGA

THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

DEE WHY

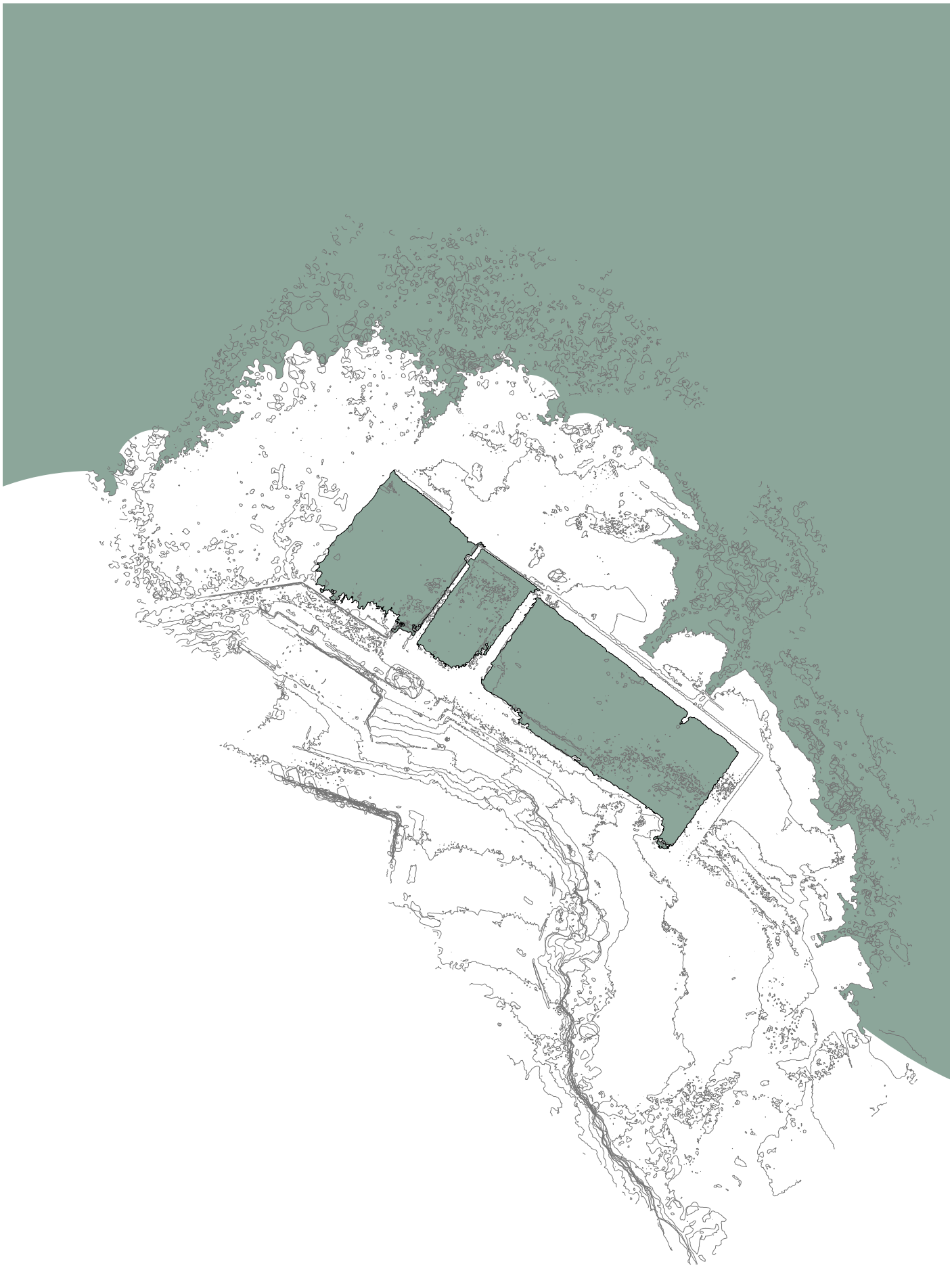
DEE WHY OCEAN POOL, NSW




POOL LOCATION

DIGITAL MODEL

POOL	**Dee Why Rock Pool**
LATITUDE	-33.9242751
LONGITUDE	151.2586565
LGA	Northern Beaches
POPULATION	
YEAR	1915
LOCATION	Main Beach
BEARING	
ORIENTATION	129
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*Yes*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Formalised
Concrete/natural bottom	*Concrete*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Ramp/Stair*
Excavated/built up form	*Excavated*



DEE WHY ROCK POOL
NORTHERN BEACHES LGA

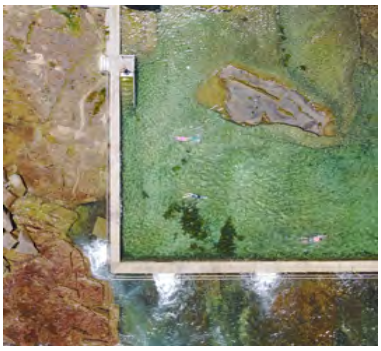
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

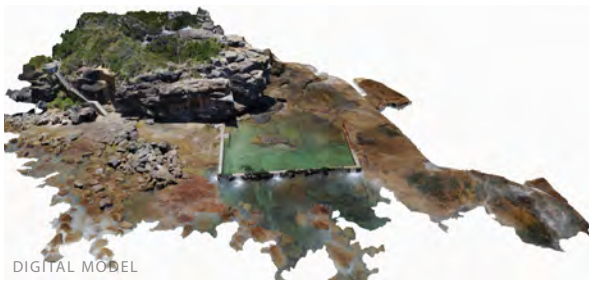
NORTH CURL CURL

NORTH CURL CURL OCEAN POOL, NSW



POOL LOCATION



DIGITAL MODEL

POOL	**North Curl Curl Rock Pool**
LATITUDE	-34.0530105
LONGITUDE	151.1561733
LGA	Northern Beaches
POPULATION	
YEAR	1900
LOCATION	Main Beach
BEARING	
ORIENTATION	165.5
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

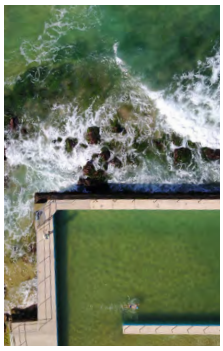
NORTH CURL CURL ROCK POOL
NORTHERN BEACHES LGA

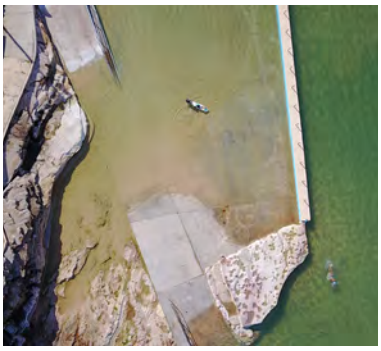
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

SOUTH CURL CURL

SOUTH CURL CURL OCEAN POOL, NSW



POOL LOCATION

DIGITAL MODEL

POOL	**South Curl Curl Rock Pool**
LATITUDE	-33.9228929
LONGITUDE	151.2578505
LGA	Northern Beaches
POPULATION	
YEAR	1926
LOCATION	Main Beach
BEARING	
ORIENTATION	128
PREVAILING SWELL	
SITING TO HEADLAND	Tucked
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*Yes*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

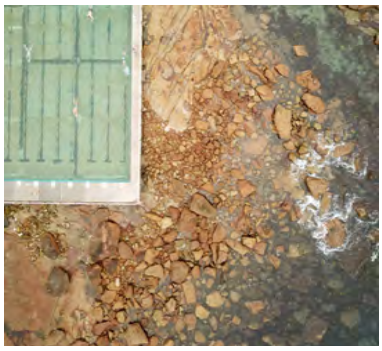
SOUTH CURL CURL ROCK POOL
NORTHERN BEACHES LGA

THE WILD EDGE
NICOLE LARKIN

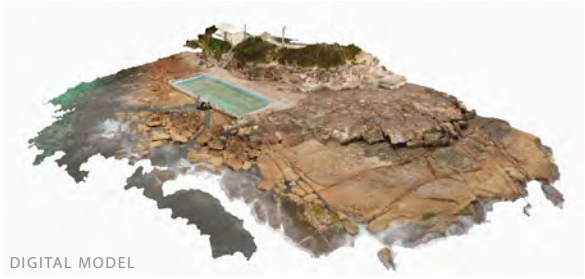
2.5 5 10 20

FRESHWATER

FRESHWATER OCEAN POOL, NSW

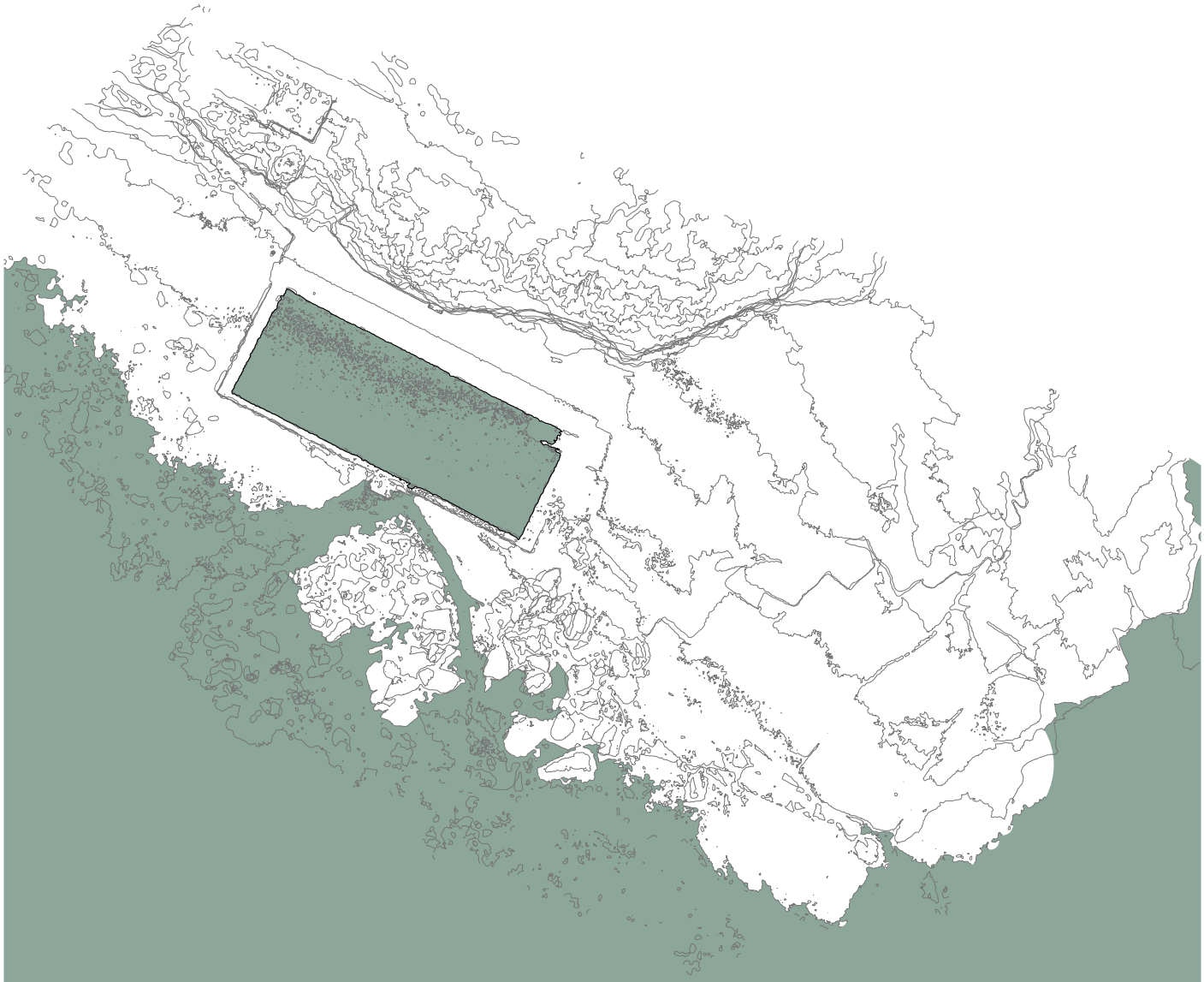


POOL LOCATION



DIGITAL MODEL

POOL	**Freshwater Ocean Pool**
LATITUDE	-34.2802069
LONGITUDE	150.9560215
LGA	Northern Beaches
POPULATION	
YEAR	1925
LOCATION	Main Beach
BEARING	
ORIENTATION	208
PREVAILING SWELL	
SITING TO HEADLAND	Tucked
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Formalised
Concrete/natural bottom	*Concrete*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Ramp/Stair*
Excavated/built up form	*Excavated*



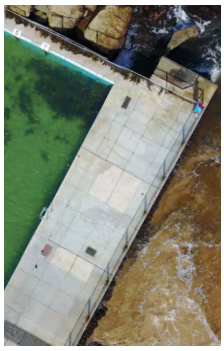
FRESHWATER ROCK POOL
NORTHERN BEACHES LGA

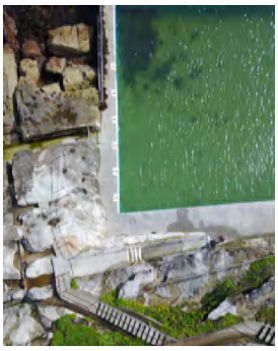
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

QUEENSCLIFF

QUEENSCLIFF OCEAN POOL, NSW






POOL LOCATION

DIGITAL MODEL

POOL	**Queenscliff Ocean Pool**
LATITUDE	-33.9052761
LONGITUDE	151.2693787
LGA	Northern Beaches
POPULATION	
YEAR	1937
LOCATION	Main Beach
BEARING	
ORIENTATION	121
PREVAILING SWELL	
SITING TO HEADLAND	Tucked
COASTAL FEATURES	River Mouth
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Formalised
Concrete/natural bottom	*Concrete*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Ramp/Stair*
Excavated/built up form	*Excavated*

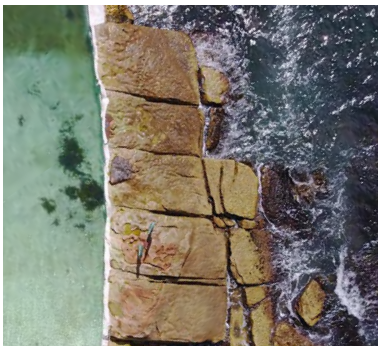
QUEENSCLIFF ROCK POOL
NORTHERN BEACHES LGA

THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

FAIRY BOWER

NORTH STEYNE OCEAN POOL, NSW



POOL LOCATION

DIGITAL MODEL

POOL	**Fairy Bower Ocean Pool**
LATITUDE	-30.3766725
LONGITUDE	153.1015232
LGA	Northern Beaches
POPULATION	
YEAR	1929
LOCATION	Rock Platform
BEARING	NNE
ORIENTATION	22
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

FAIRY BOWER SEA POOL
NORTHERN BEACHES LGA

THE WILD EDGE
NICOLE LARKIN

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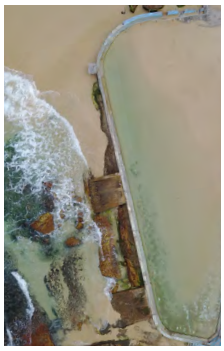
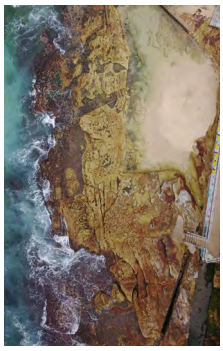
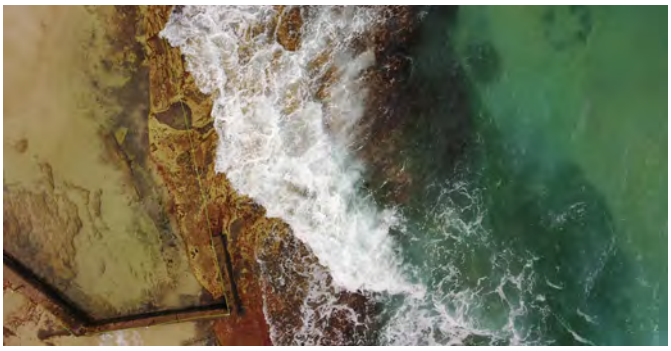
WALLY WEEKS CHILDRENS POOL

NORTH BONDI OCEAN POOLS, NSW







POOL LOCATION

DIGITAL MODEL

POOL	**Bondi kids pool**
LATITUDE	-34.2919015
LONGITUDE	150.9467049
LGA	Waverly
POPULATION	
YEAR	1947
LOCATION	Main Beach
BEARING	
ORIENTATION	264
PREVAILING SWELL	
SITING TO HEADLAND	Tucked
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*Yes*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Built Up*

NORTH BONDI CHILDREN'S POOL
WALLY WEEKS POOL
WAVERLY LGA

THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

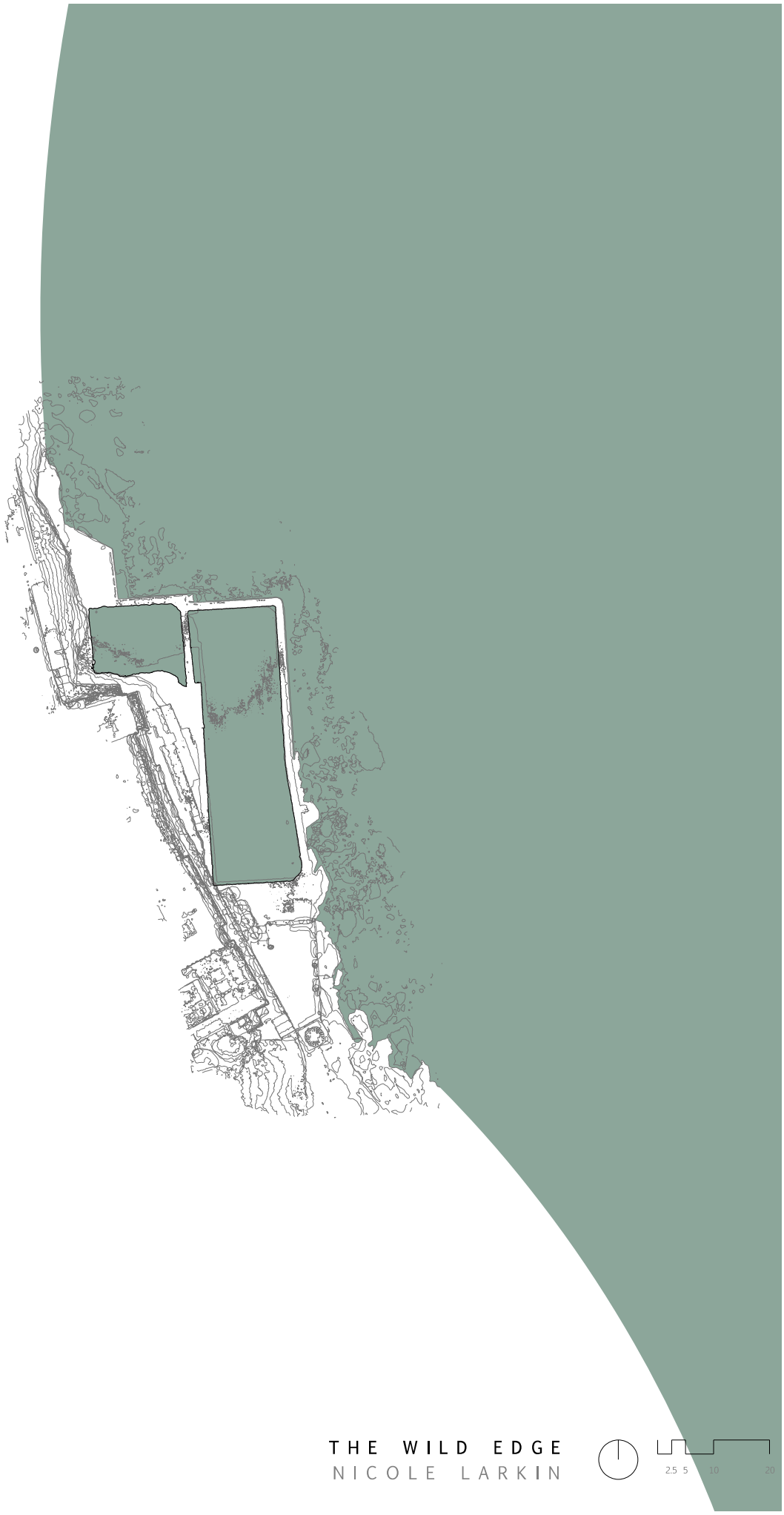
ICEBERGS

BONDI ICEBERGS OCEAN POOL, NSW

POOL LOCATION

DIG

POOL	**Bondi kids pool**
LATITUDE	-34.2919015
LONGITUDE	150.9467049
LGA	Waverly
POPULATION	
YEAR	1947
LOCATION	Main Beach
BEARING	
ORIENTATION	264
PREVAILING SWELL	
SITING TO HEADLAND	Tucked
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*Yes*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Built Up*



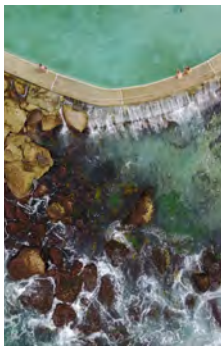
BONDI ICEBERGS POOL
WAVERLY LGA

THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

BRONTE

BRONTE BOGEY HOLE NSW



POOL LOCATION

DIGITAL MODEL

POOL	**Giles Baths**
LATITUDE	-33.8914913
LONGITUDE	151.2822969
LGA	Randwick
POPULATION	
YEAR	1902
LOCATION	Rock Platform
BEARING	
ORIENTATION	113
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

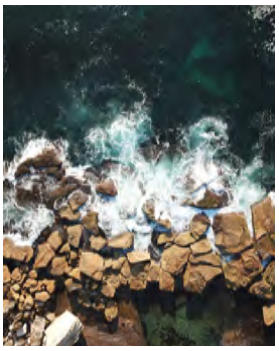
BRONTE BATHS
WAVERLY LGA

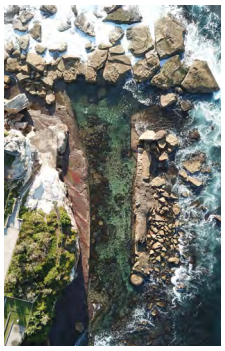
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

GILES

GILES NATHS, NSW





POOL LOCATION

DIGITAL MODEL

POOL	**Ross Jones Memorial Pool**
LATITUDE	-32.9351662
LONGITUDE	151.7816833
LGA	Randwick
POPULATION	
YEAR	1947
LOCATION	Sandy beach
BEARING	NE
ORIENTATION	40
PREVAILING SWELL	
SITING TO HEADLAND	Tucked
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Ramp/Stair*
Excavated/built up form	*Excavated*

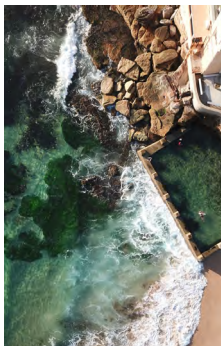
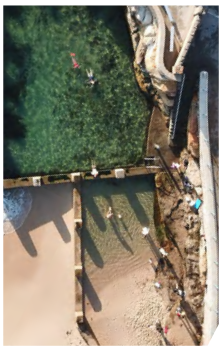
GILES BATHS
RANDWICK LGA

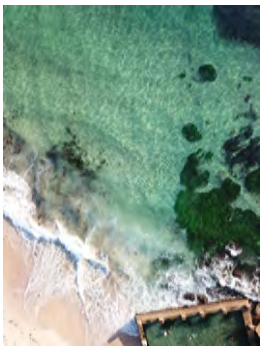
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

ROSS JONES

ROSS JONES MEMORIAL POOL, NSW

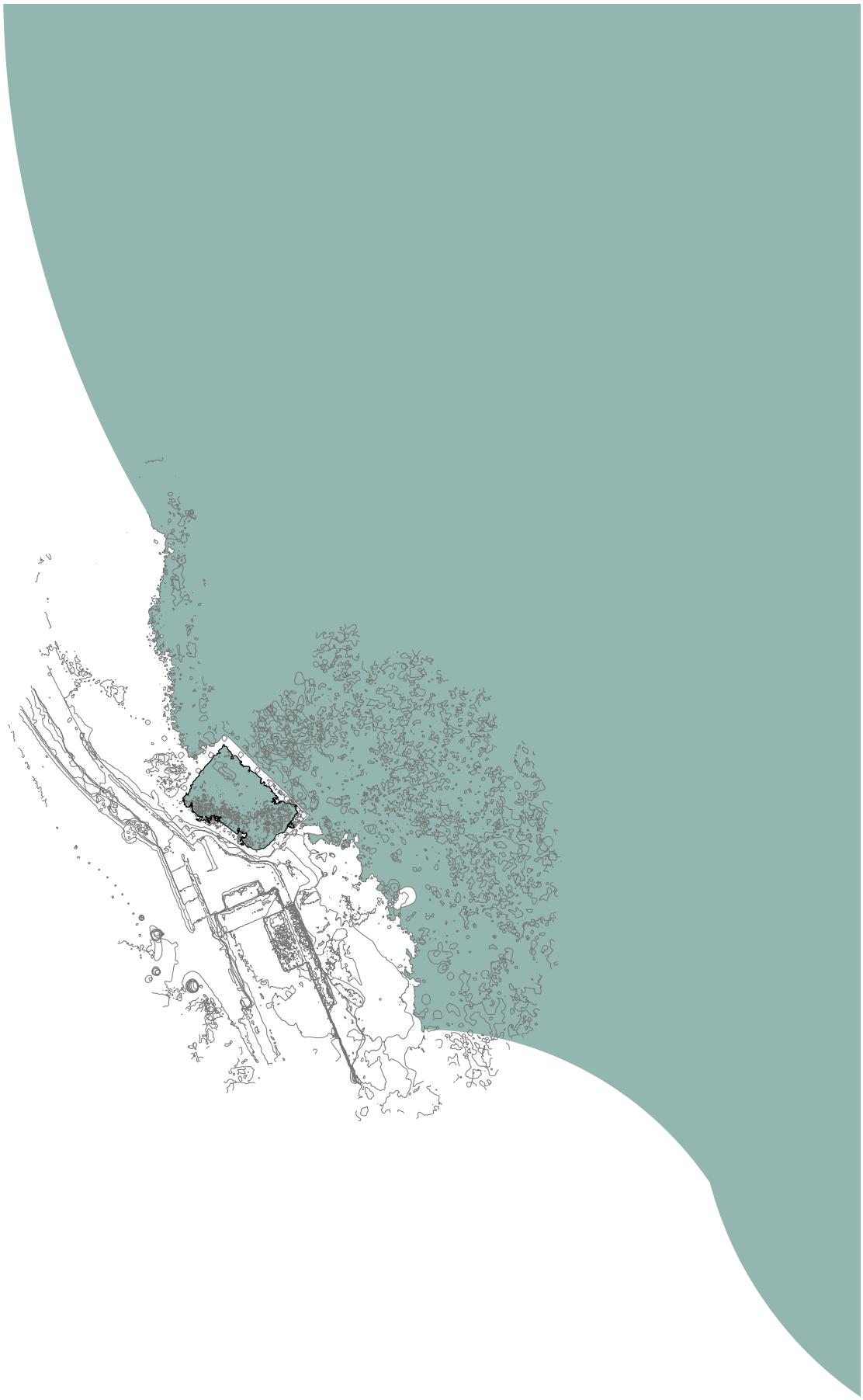





POOL LOCATION

DIGITAL MODEL

POOL	**McIvers Baths**
LATITUDE	-33.7815729
LONGITUDE	151.2946558
LGA	Randwick
POPULATION	
YEAR	1876
LOCATION	Rock Platform
BEARING	
ORIENTATION	99
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



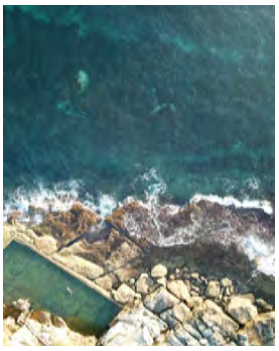
ROSS JONES MEMORIAL POOL
RANDWICK LGA

THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

MCIVER'S

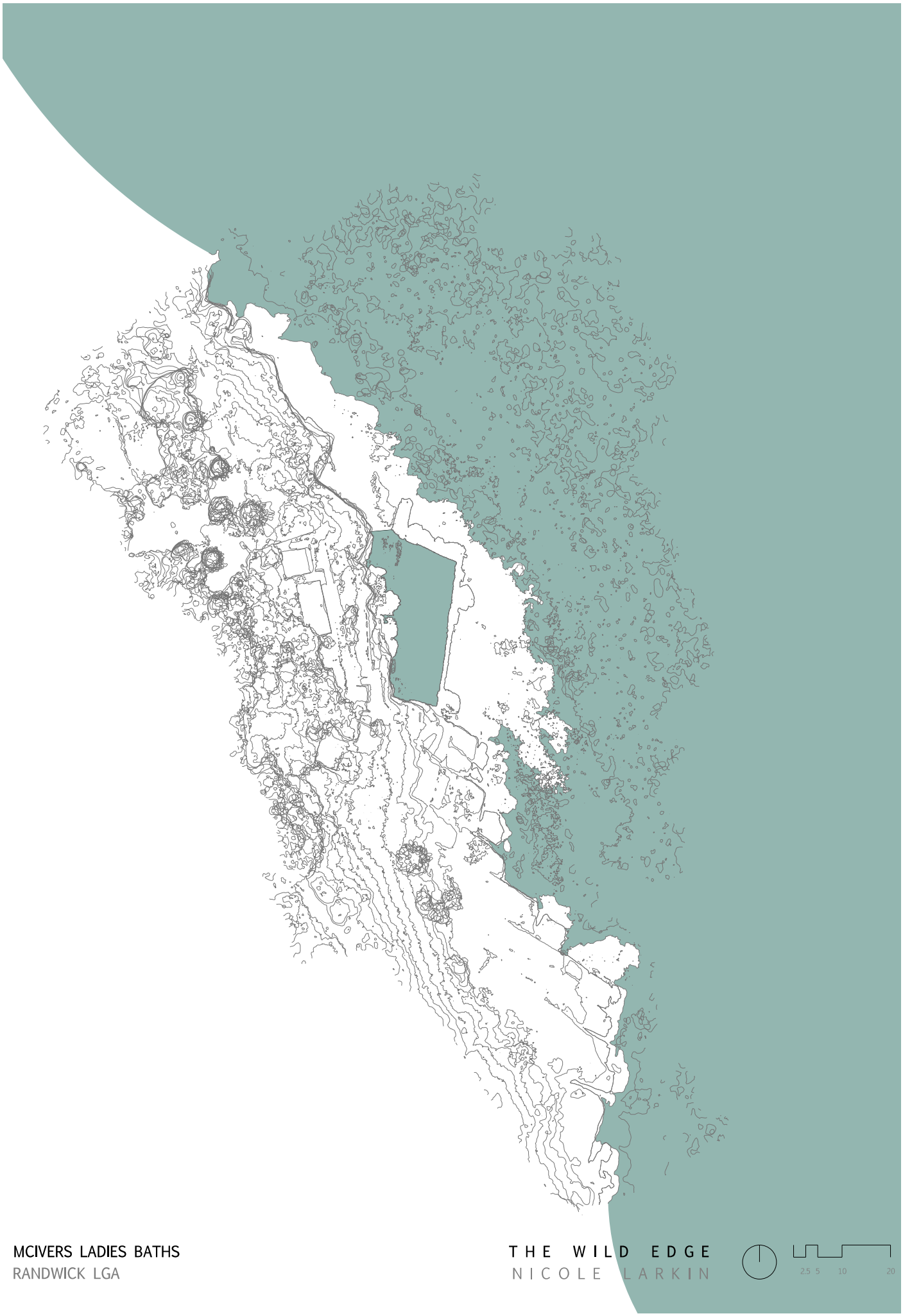
MCIVERS LADIES BATHS, NSW



POOL LOCATION

DIGITAL MODEL

POOL	**Wylie's Baths**
LATITUDE	-33.7551889
LONGITUDE	151.2990198
LGA	Randwick
POPULATION	
YEAR	1907
LOCATION	Rock Platform
BEARING	E
ORIENTATION	86
PREVAILING SWELL	
SITING TO HEADLAND	Tucked
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



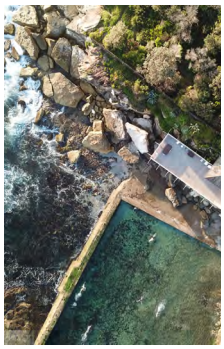
MCIVERS LADIES BATHS
RANDWICK LGA

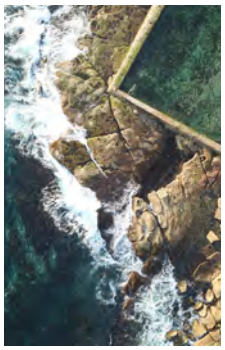
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

WYLIES

WYLIES BATHS, NSW

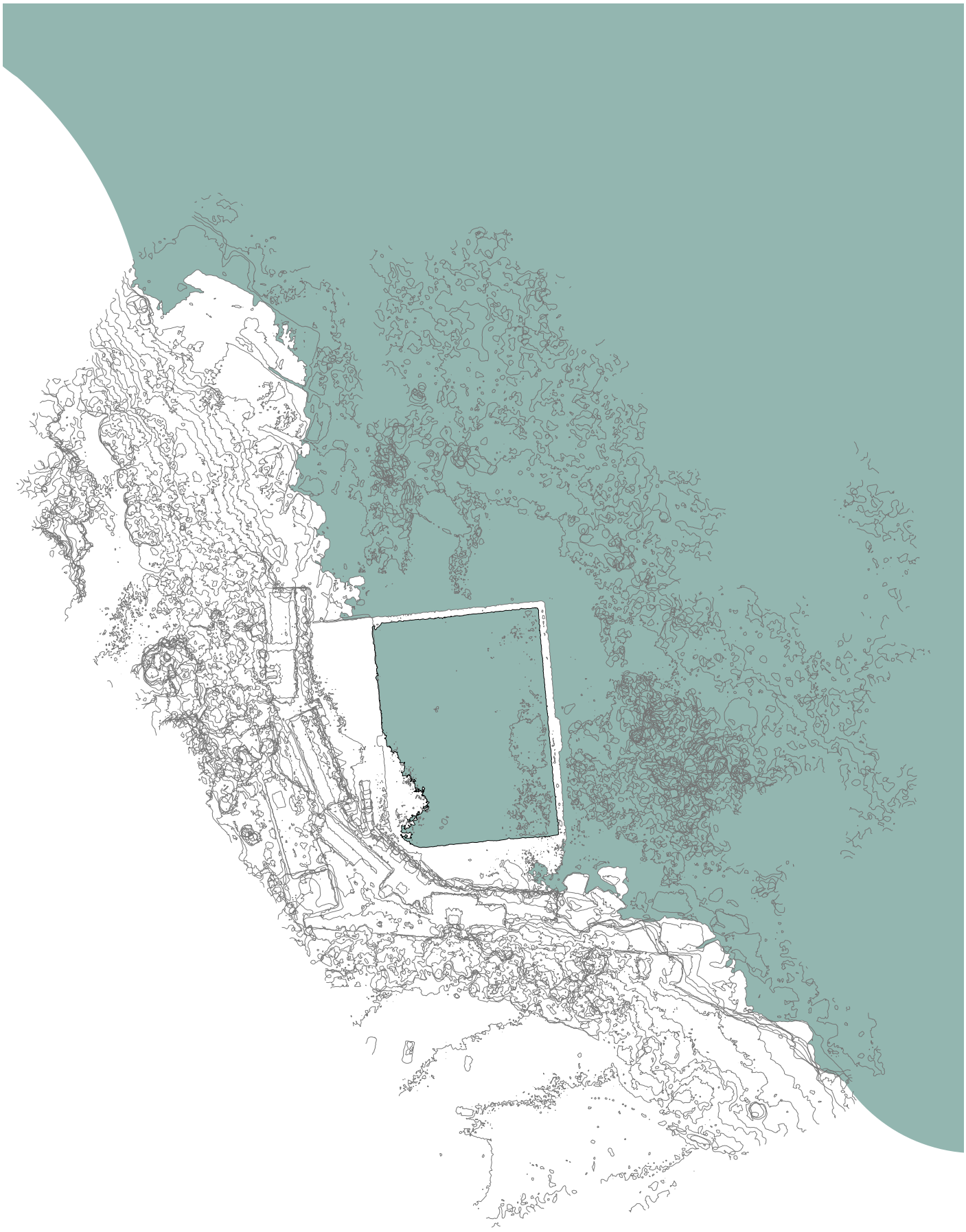


POOL LOCATION

DIGITAL MODEL

POOL	**Ivor Rowe Rockpool**
LATITUDE	-33.6786622
LONGITUDE	151.3165694
LGA	Randwick
POPULATION	
YEAR	
LOCATION	Rock Platform
BEARING	E
ORIENTATION	83
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

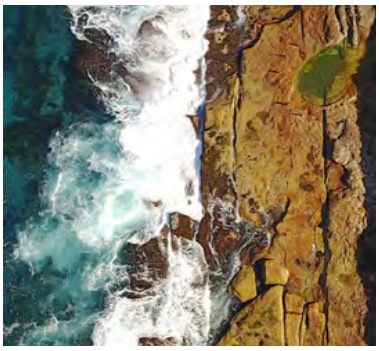


WYLIE'S BATHS
RANDWICK LGA

THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

IVOR ROWE



POOL LOCATION

DIGITAL MO

POOL	**Mahon Pool**
LATITUDE	-33.9201431
LONGITUDE	151.2605743
LGA	Randwick
POPULATION	
YEAR	1932
LOCATION	Rock Platform
BEARING	
ORIENTATION	121
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

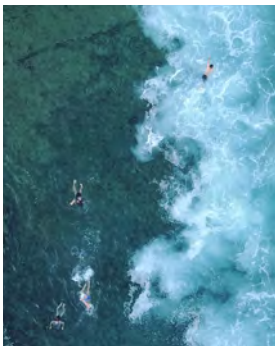
IVOR ROWE ROCKPOOL
RANDWICK LGA

THE WILD EDGE
NICOLE LARKIN

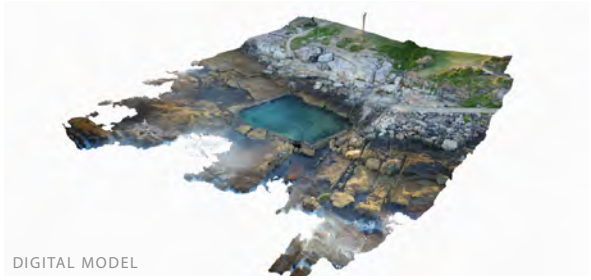
2.5 5 10 20

MAHON

MAHON OCEAN POOL, NSW



POOL LOCATION



DIGITAL MODEL

POOL	**Malabar Ocean Pool**
LATITUDE	-33.8911718
LONGITUDE	151.2823371
LGA	Randwick
POPULATION	
YEAR	1909
LOCATION	Rock Platform
BEARING	
ORIENTATION	114
PREVAILING SWELL	
SITING TO HEADLAND	Tucked
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

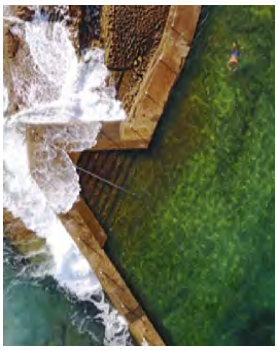
MAHON POOL
RANDWICK LGA

THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

MALABAR

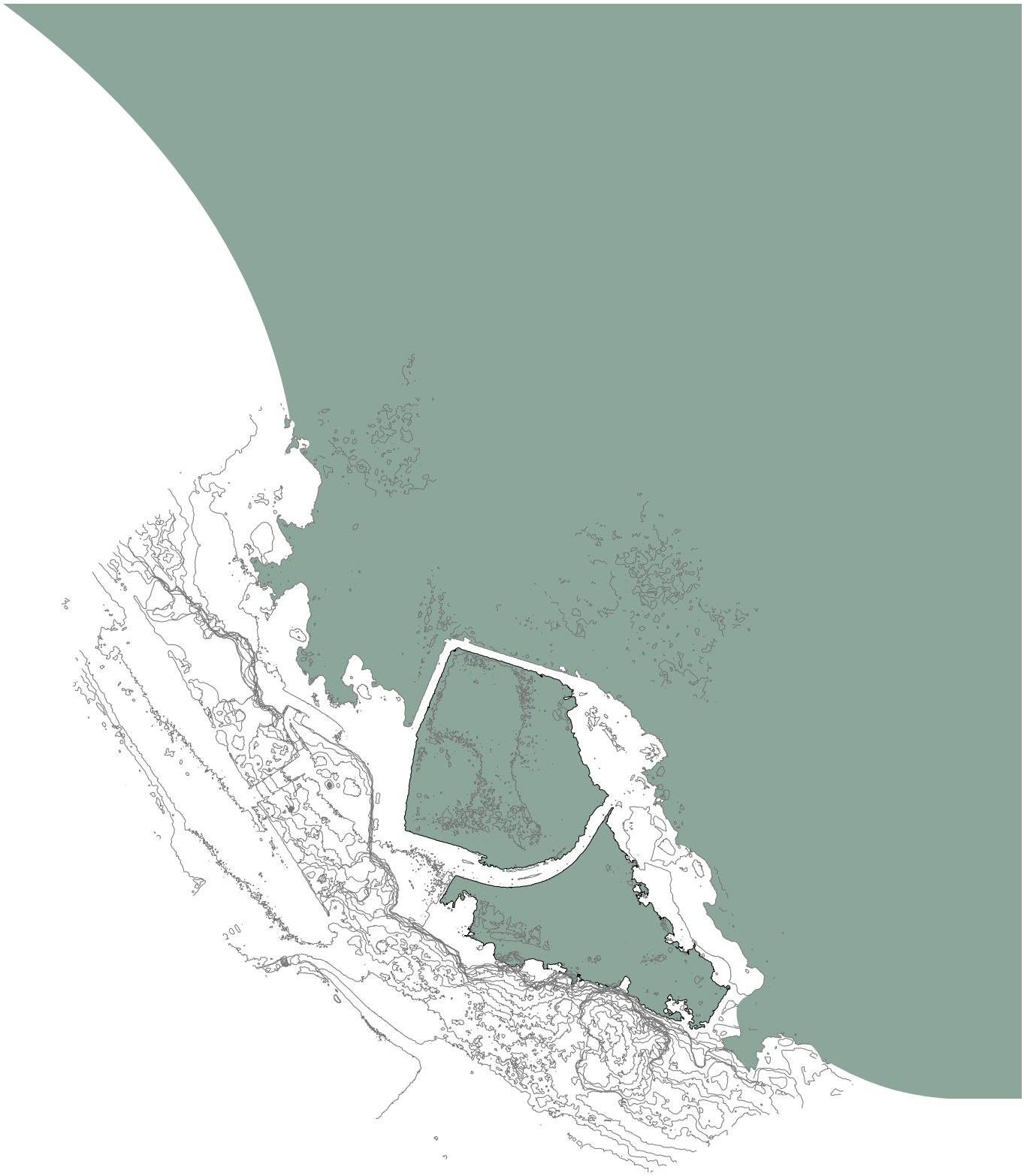
MALABAR OCEAN POOL, NSW



POOL LOCATION

DIGITAL MODEL

POOL	**North Cronulla Rock Pool**
LATITUDE	-33.7034364
LONGITUDE	151.3092899
LGA	Sutherland
POPULATION	
YEAR	1932
LOCATION	Sandy beach
BEARING	E
ORIENTATION	84
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

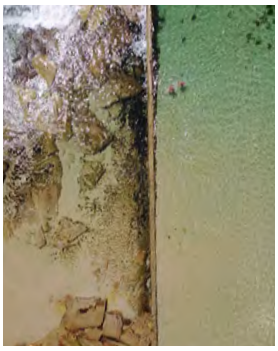


MALABAR OCEAN POOL
RANDWICK LGA

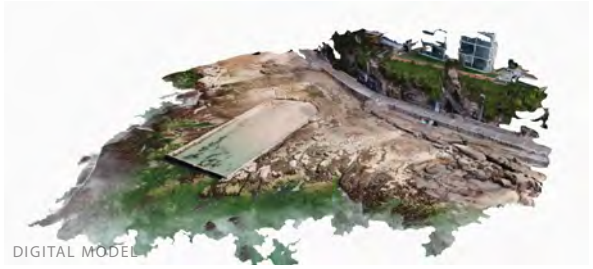
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

NORTH CRONULLA

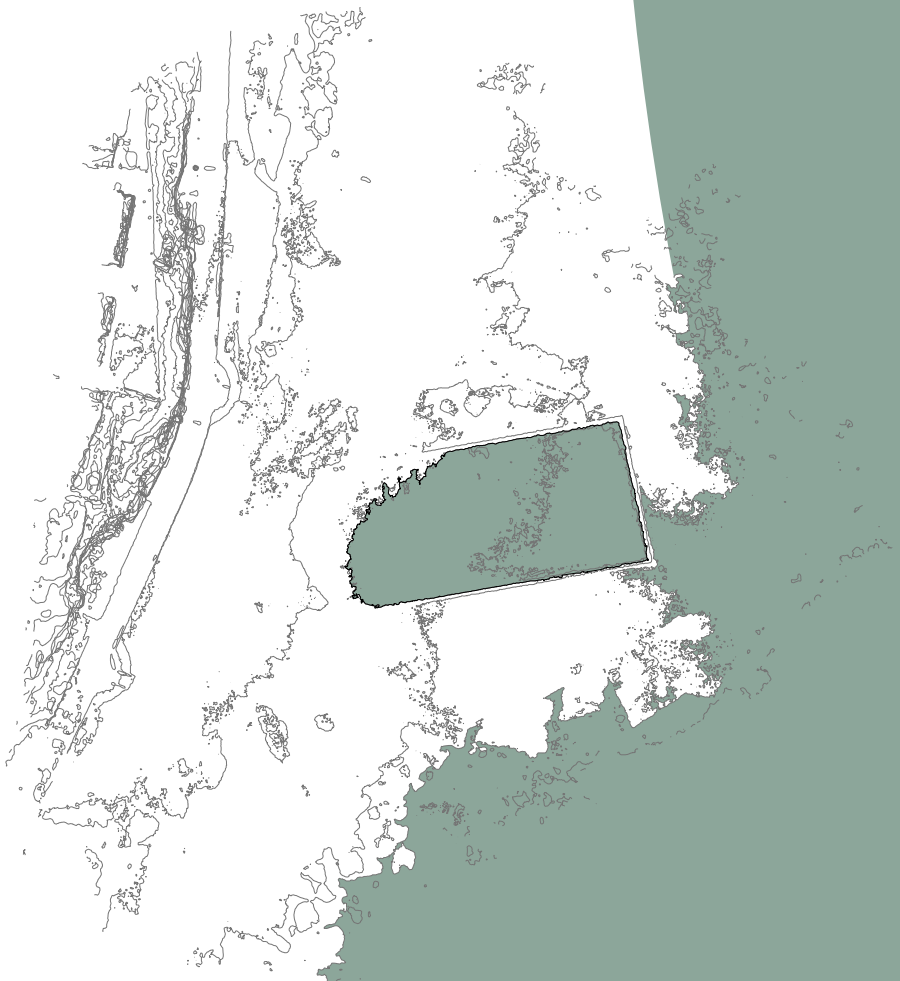


POOL LOCATION



DIGITAL MODEL

POOL	**Cronulla Rock Pool**
LATITUDE	-33.8008067
LONGITUDE	151.2943996
LGA	Sutherland
POPULATION	
YEAR	1941
LOCATION	Sandy beach
BEARING	
ORIENTATION	109
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Formalised
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

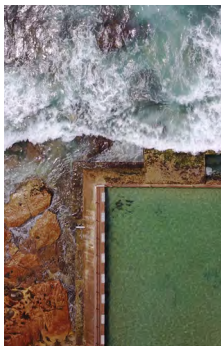
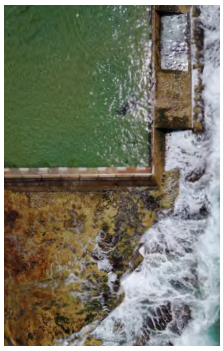
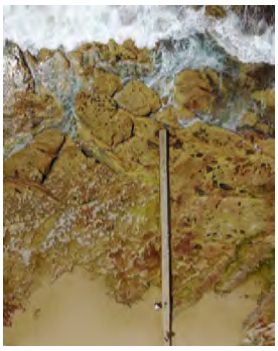


NORTH CORNULLA ROCK POOL
SUTHERLAND LGA

THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

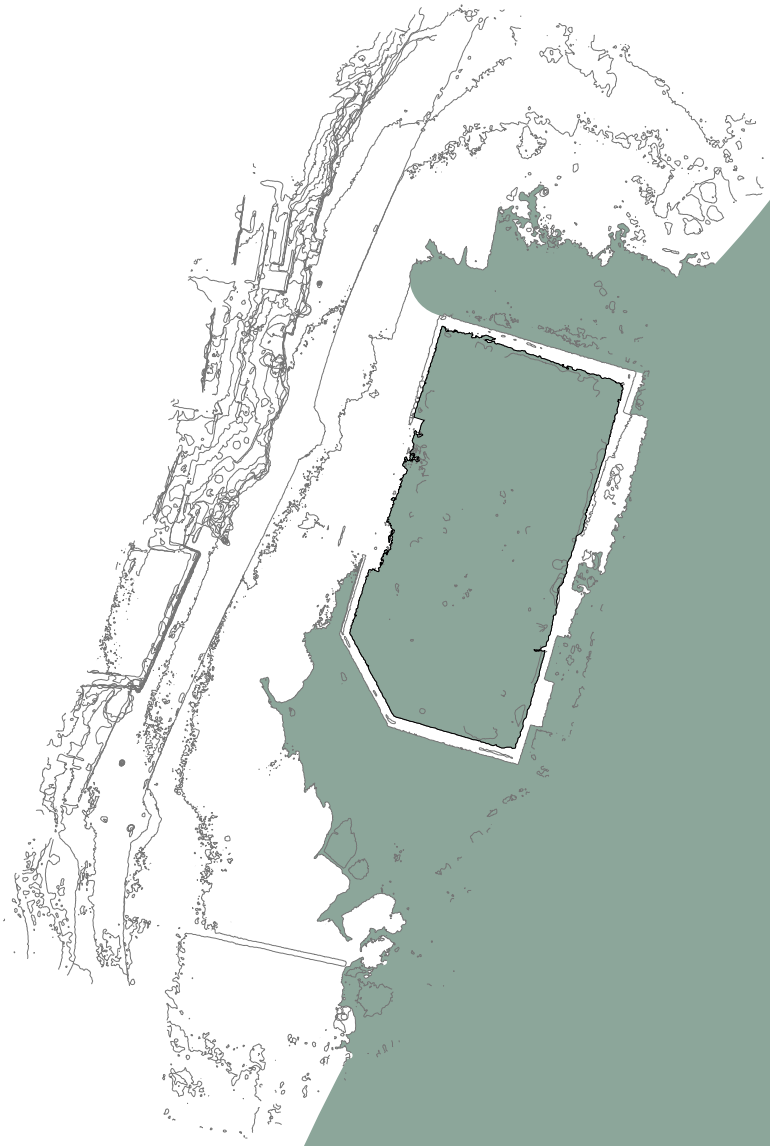
SOUTH CRONULLA


POOL LOCATION


DIGITAL MODEL

POOL	**Shelly Beach Pool**
LATITUDE	-33.647292
LONGITUDE	151.3275772
LGA	Sutherland
POPULATION	
YEAR	1938
LOCATION	Rock Platform
BEARING	ENE
ORIENTATION	66
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

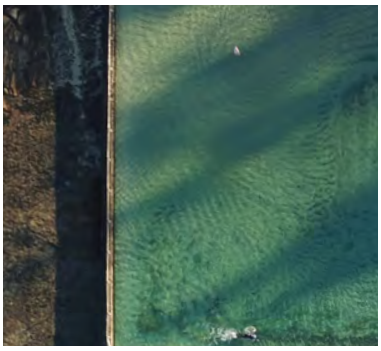


SOUTH CRONULLA ROCK POOL
SUTHERLAND LGA

THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

SHELLEY BEACH



POOL LOCATION

DIGITAL MODEL

POOL	**Oak Park Pool**
LATITUDE	-33.8950965
LONGITUDE	151.2745929
LGA	Sutherland
POPULATION	
YEAR	1909
LOCATION	Rock Platform
BEARING	
ORIENTATION	114
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

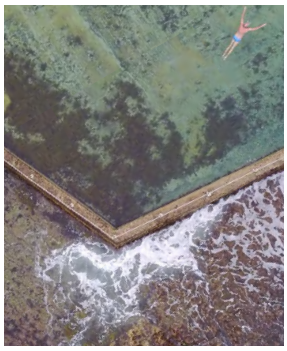
SHELLEY BEACH
SUTHERLAND LGA

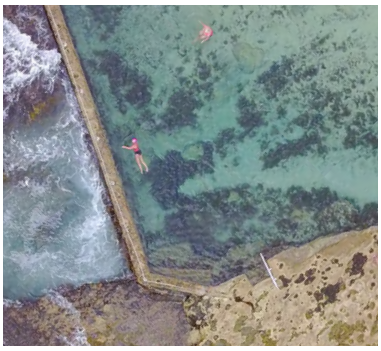
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

OAK PARK

OAK PARK OCEAN POOL, NSW





POOL LOCATION

DIGITAL MODEL

POOL	**Bulgo Beach Pool**
LATITUDE	-33.7335525
LONGITUDE	151.3046443
LGA	Wollongong
POPULATION	
YEAR	1960
LOCATION	Rock Platform
BEARING	E
ORIENTATION	85
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

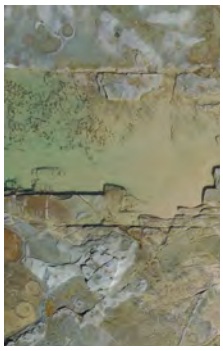
OAK PARK POOL
SUTHERLAND LGA

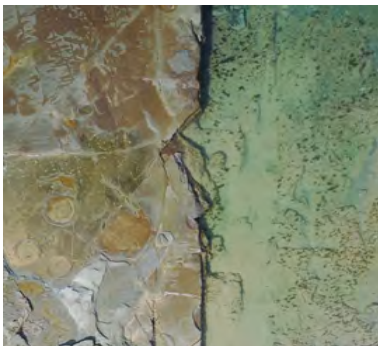
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

BULGO

BULGO OCEAN POOL, NSW



POOL LOCATION

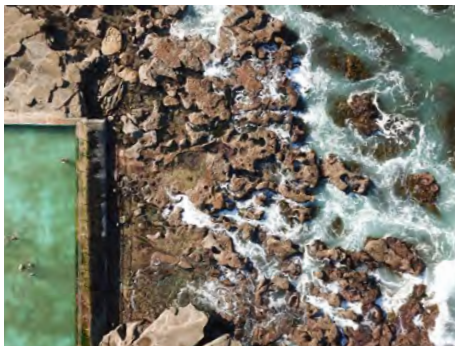
DIGITAL MODEL

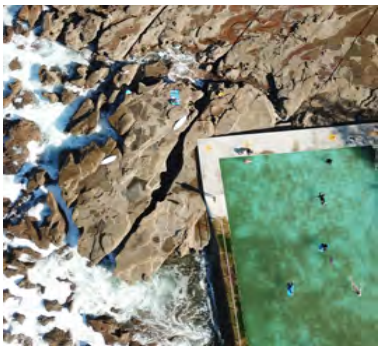
POOL	**Coalcliff Baths**
LATITUDE	-33.7676004
LONGITUDE	151.3018495
LGA	Wollongong
POPULATION	
YEAR	1923
LOCATION	Rock Platform
BEARING	E
ORIENTATION	86
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Formalised
Concrete/natural bottom	*Concrete*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

BULGO BEACH POOL
WOLLONGONG LGA

THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20





POOL LOCATION

DIGITAL MODEL

POOL	**Wombarra Baths**
LATITUDE	-32.9517949
LONGITUDE	151.7557597
LGA	Wollongong
POPULATION	
YEAR	1937
LOCATION	Sandy beach
BEARING	NE
ORIENTATION	40
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

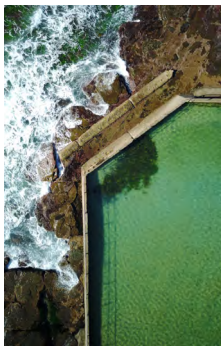
COALCLIFF ROCK POOL
WOLLONGONG LGA

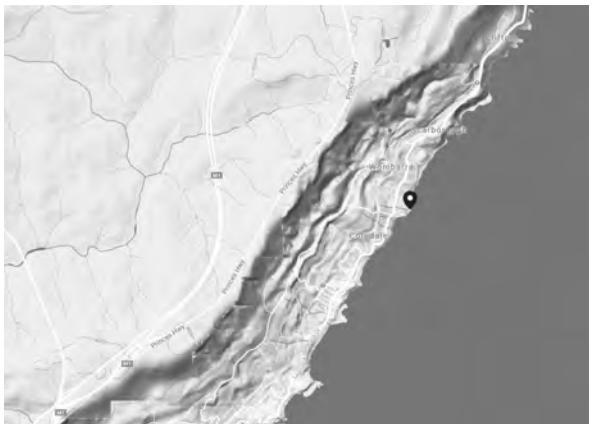
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

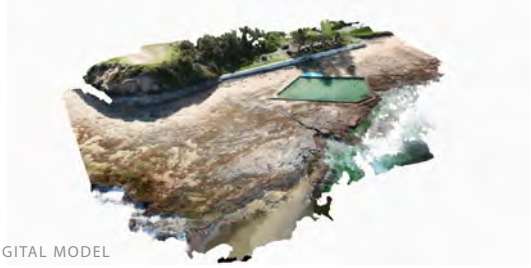
WOMBARRA

WOMBARRA OCEAN POOL, NSW



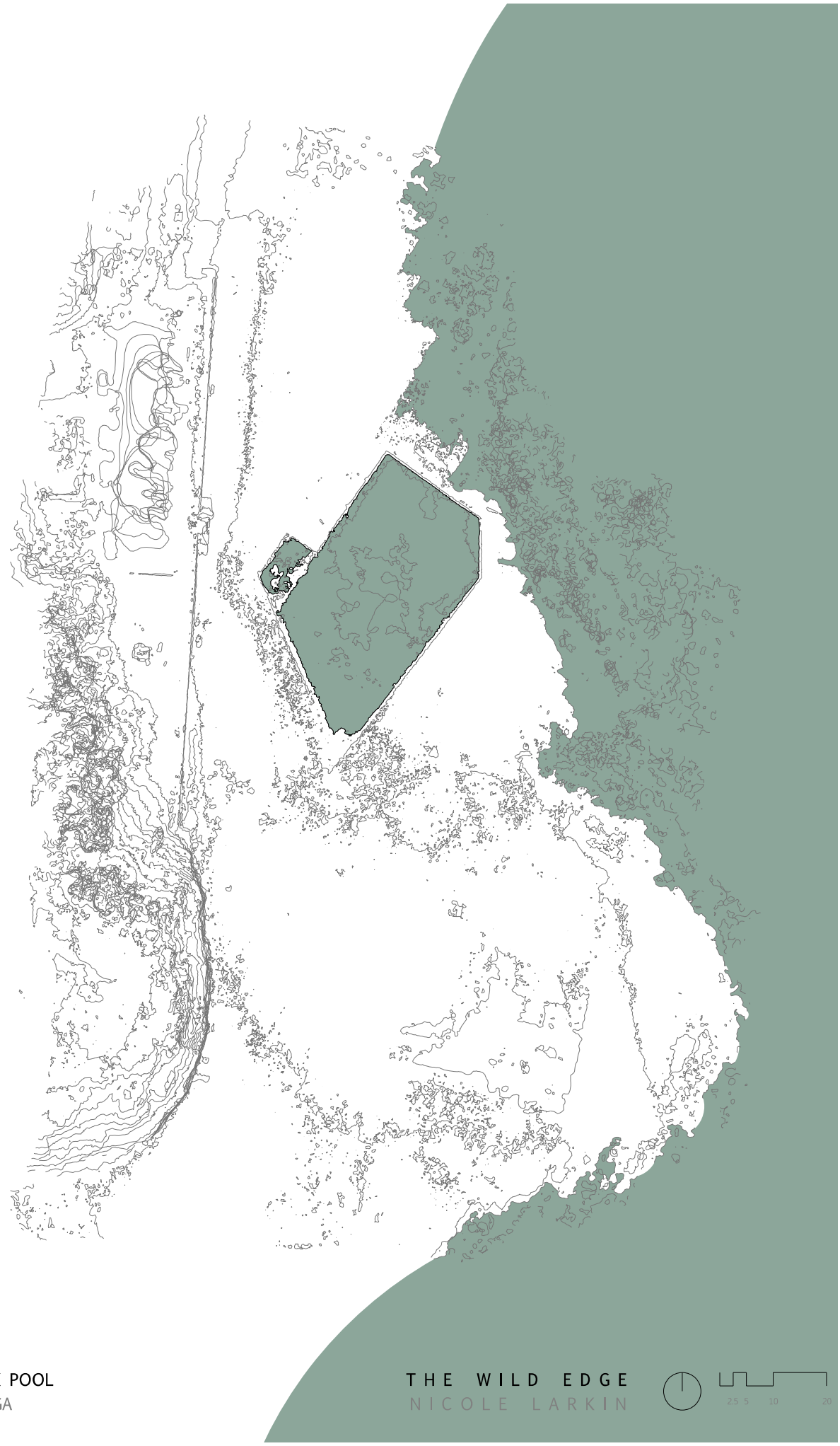



POOL LOCATION



DIGITAL MODEL

POOL	**Coledale Baths**
LATITUDE	-34.0705502
LONGITUDE	151.1569149
LGA	Wollongong
POPULATION	
YEAR	1921
LOCATION	Rock Platform
BEARING	
ORIENTATION	180
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*Yes*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



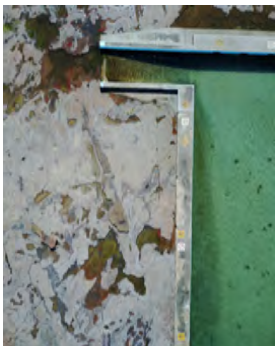
WOMBARRA ROCK POOL
WOLLONGONG LGA

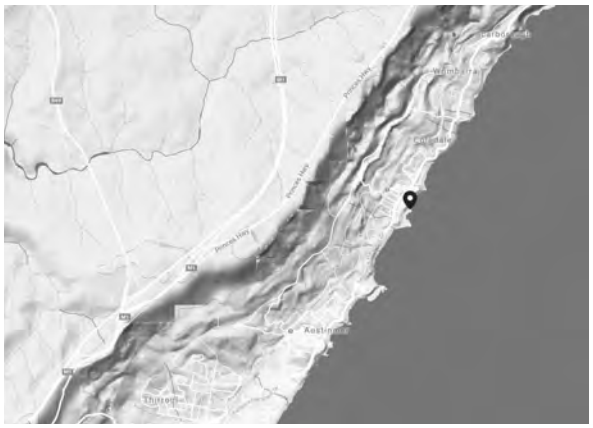
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

COLEDALE

COLEDALE OCEAN POOL, NSW

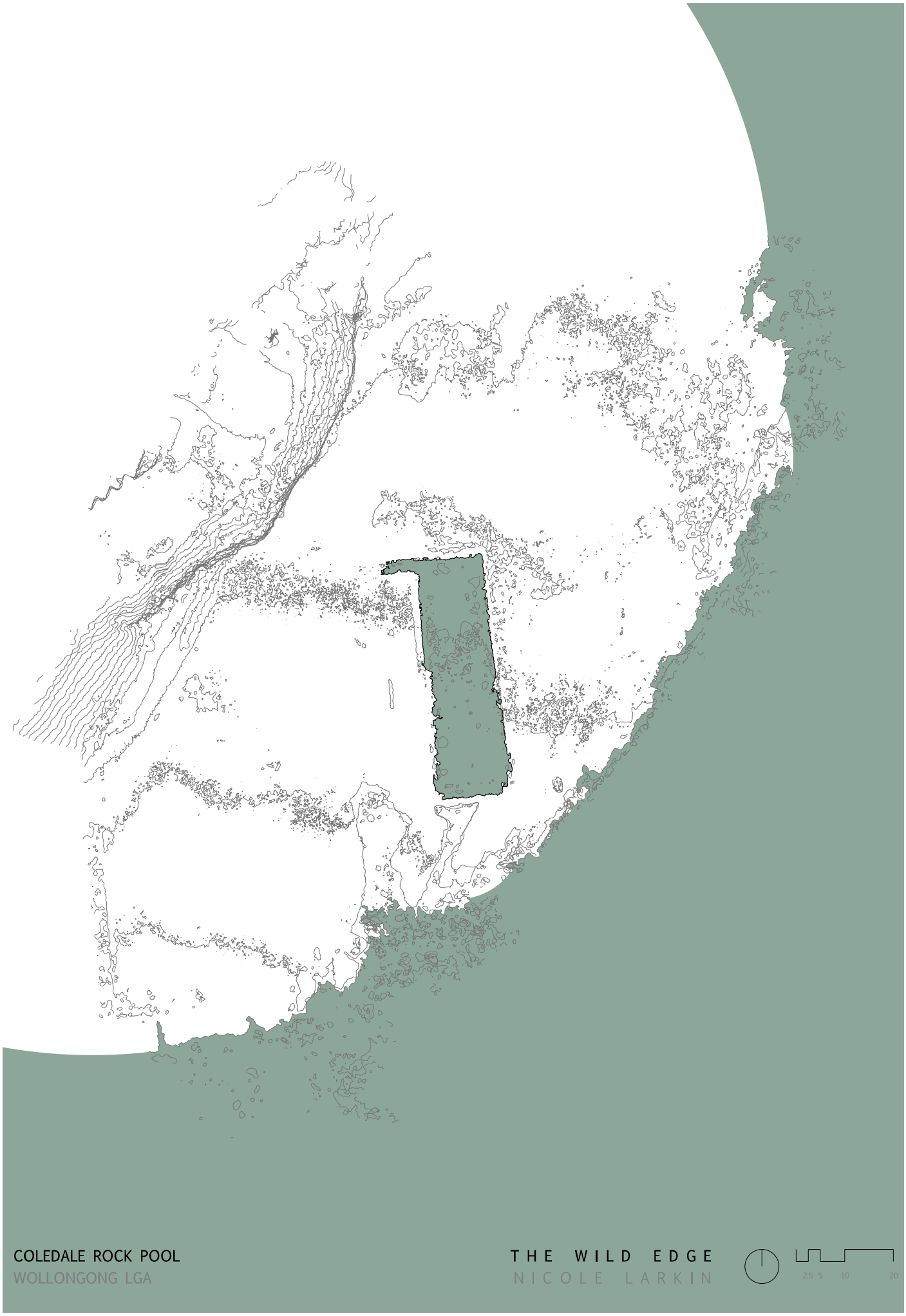




POOL LOCATION

DIGITAL

POOL	**Austinmer Baths**
LATITUDE	-33.7862834
LONGITUDE	151.2895113
LGA	Wollongong
POPULATION	
YEAR	1914
LOCATION	Sandy beach
BEARING	
ORIENTATION	105
PREVAILING SWELL	
SITING TO HEADLAND	Prominent
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



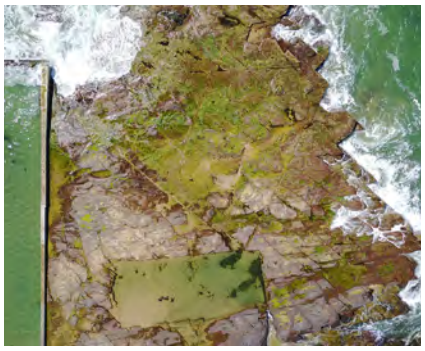
COLEDALE ROCK POOL
WOLLONGONG LGA

THE WILD EDGE
NICOLE LARKIN

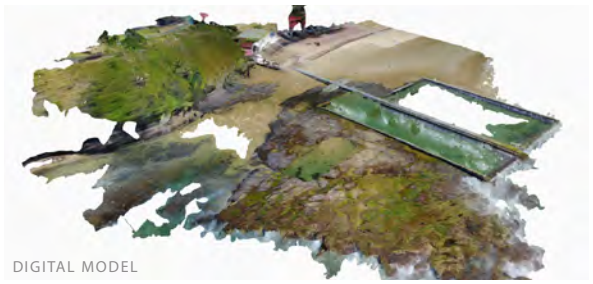
2.5 5 10 20

AUSTINMER

AUSTINMER OCEAN POOL, NSW

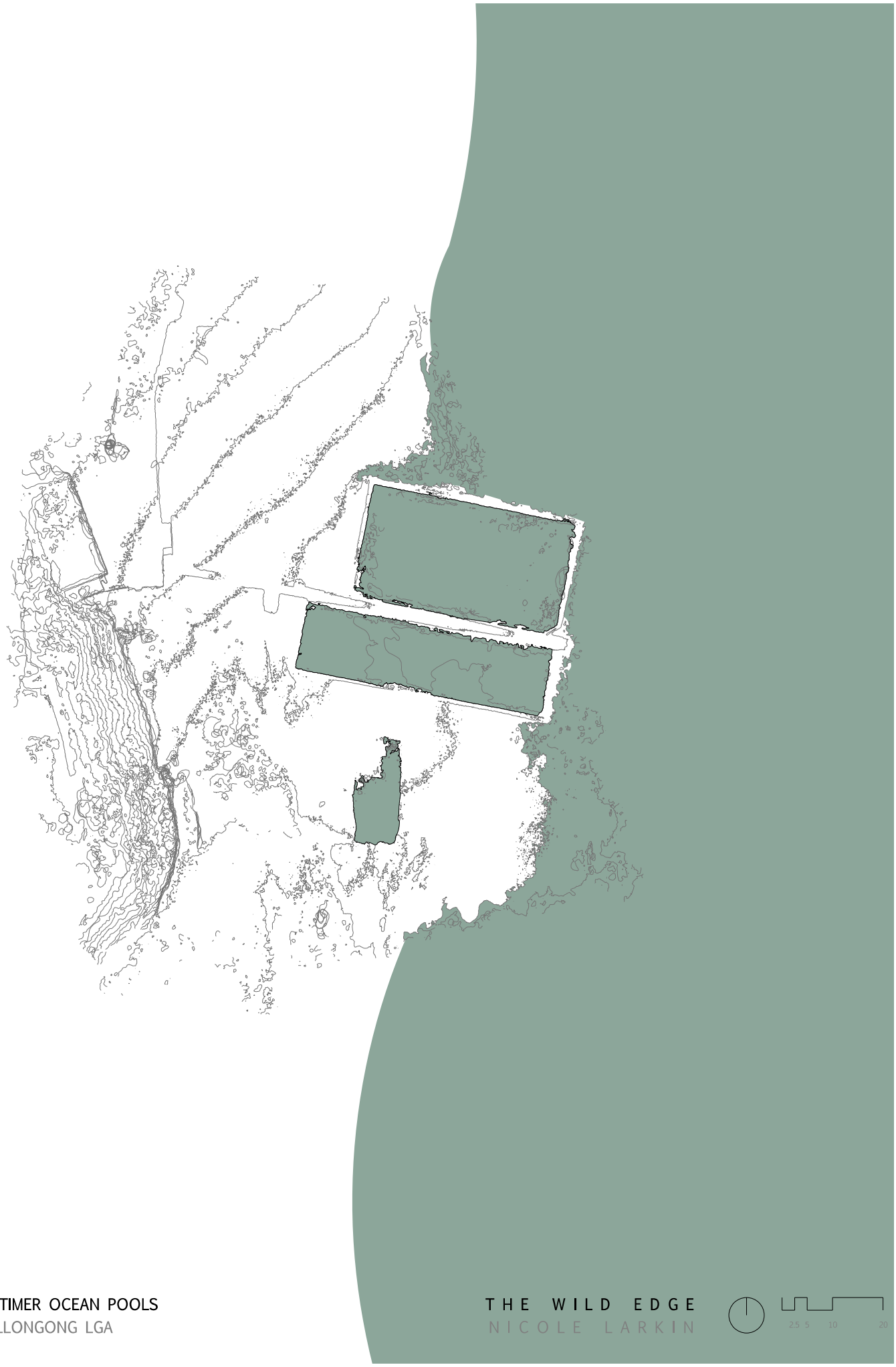


POOL LOCATION



DIGITAL MODEL

POOL	**Bulli Ocean Bath**
LATITUDE	-34.339618
LONGITUDE	150.9265012
LGA	Wollongong
POPULATION	
YEAR	1903
LOCATION	
BEARING	
ORIENTATION	
PREVAILING SWELL	
SITING TO HEADLAND	
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



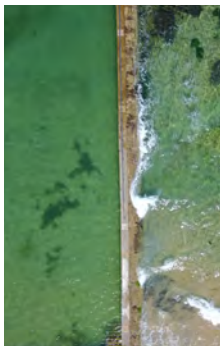
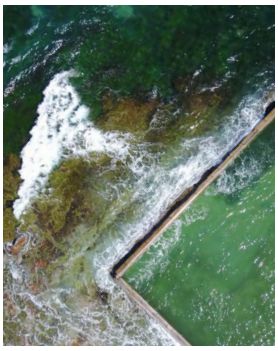
AUSTIMER OCEAN POOLS
WOLLONGONG LGA

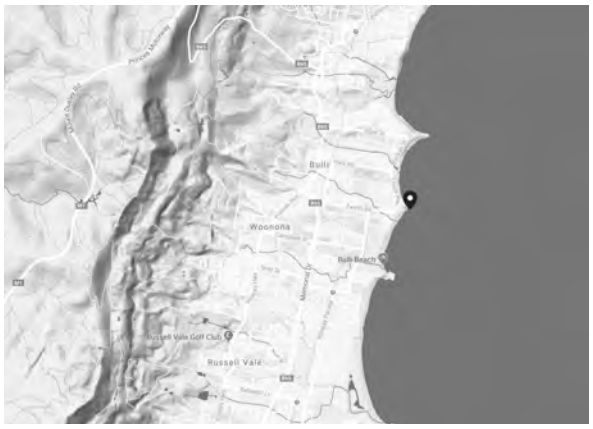
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

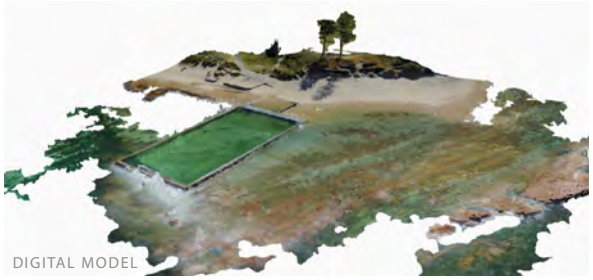
BULLI

BULLI ROCK POOL, NSW

POOL LOCATION



DIGITAL MODEL

POOL	**Woonona Baths**
LATITUDE	-34.3474754
LONGITUDE	150.9232396
LGA	Wollongong
POPULATION	
YEAR	1925
LOCATION	
BEARING	
ORIENTATION	
PREVAILING SWELL	
SITING TO HEADLAND	
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

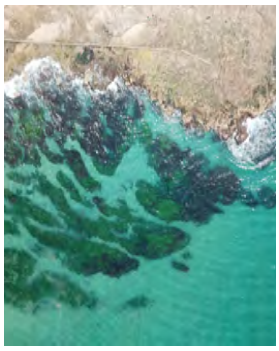
BULLI ROCK POOL
WOLLONGONG LGA

THE WILD EDGE
NICOLE LARKIN

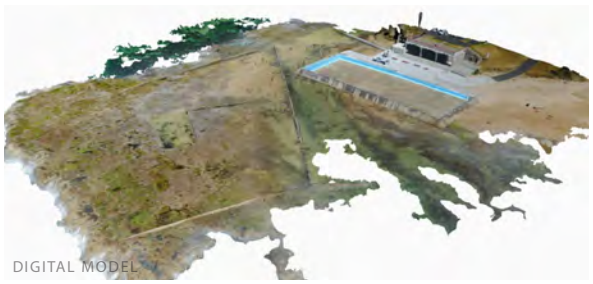
2.5 5 10 20

WOONONA

WOONONA ROCK POOL, NSW



POOL LOCATION



DIGITAL MODEL

POOL	**Bellambi Baths**
LATITUDE	-34.3656945
LONGITUDE	150.9241998
LGA	Wollongong
POPULATION	
YEAR	1965
LOCATION	
BEARING	
ORIENTATION	
PREVAILING SWELL	
SITING TO HEADLAND	
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*Yes*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

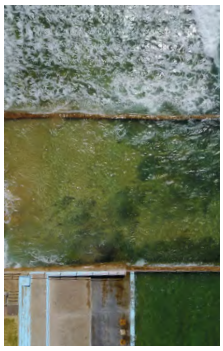
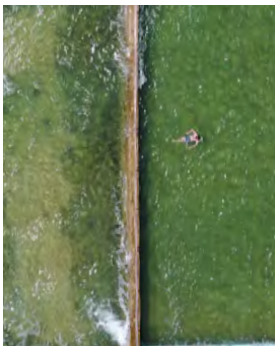
WOONONA ROCK POOL
WOLLONGONG LGA

THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

BELLAMBI

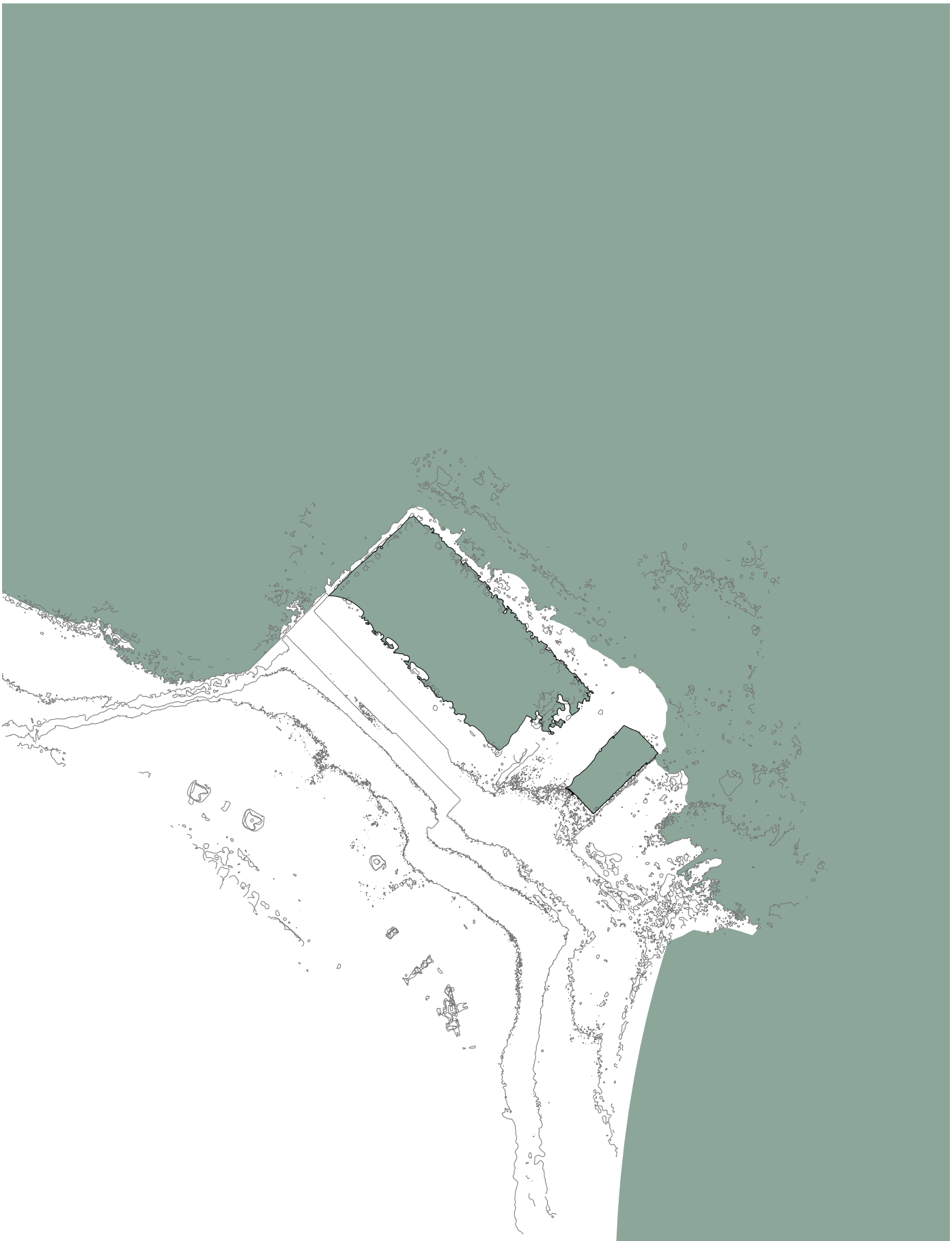
BELLAMBI OCEAN POOL, NSW


POOL LOCATION


DIGITAL MODEL

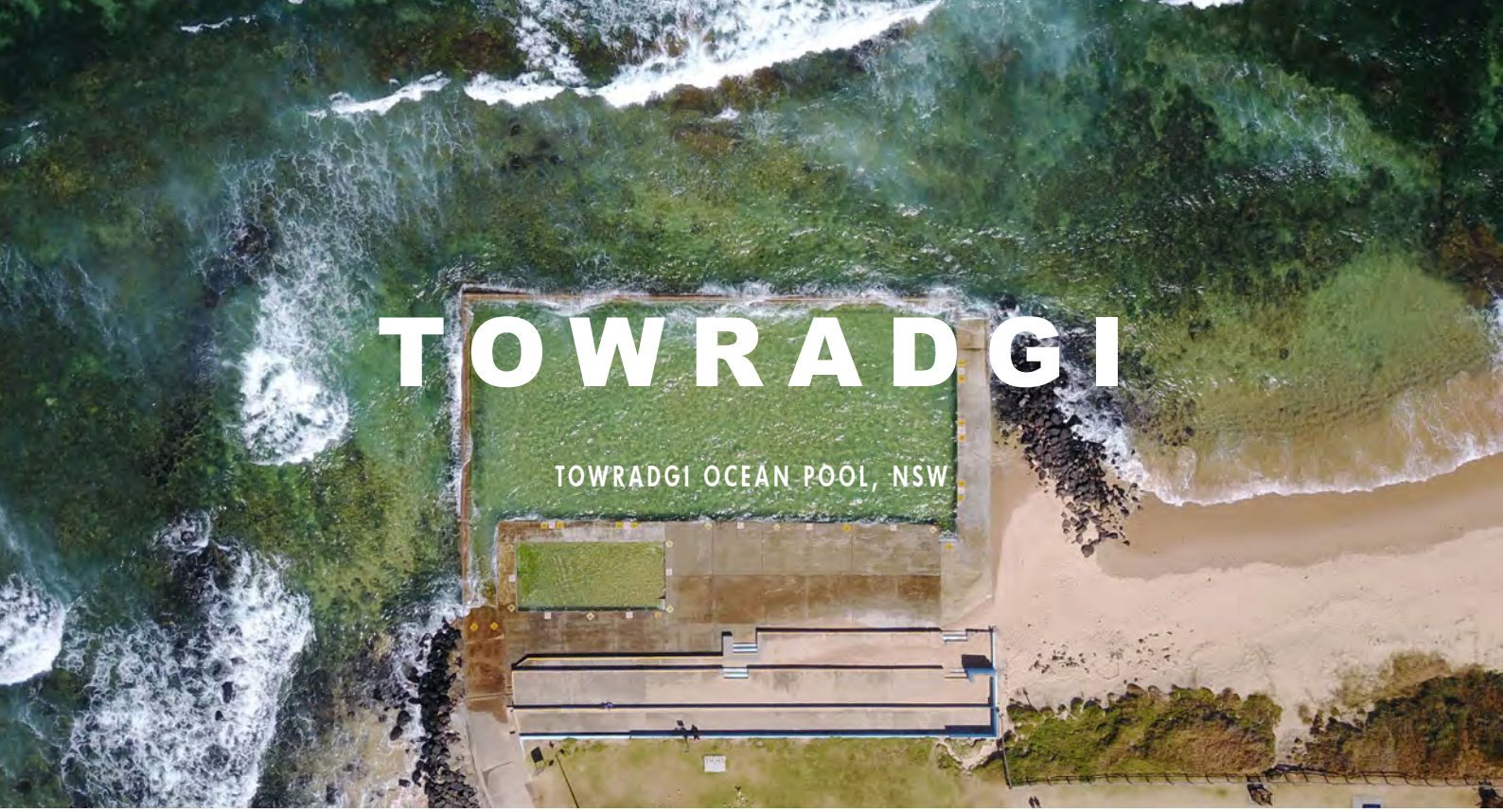
POOL	**Towradgi Ocean Pool**
LATITUDE	-34.386008
LONGITUDE	150.9154451
LGA	Wollongong
POPULATION	
YEAR	1964
LOCATION	
BEARING	
ORIENTATION	
PREVAILING SWELL	
SITING TO HEADLAND	
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*Yes*
NATURAL/FORMALISED	Formalised
Concrete/natural bottom	*Concrete*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



BELLAMBI ROCK POOL
WOLLONGONG LGA

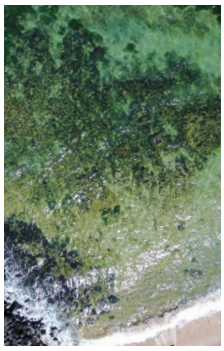
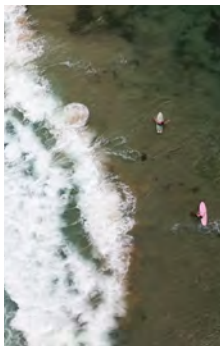
THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

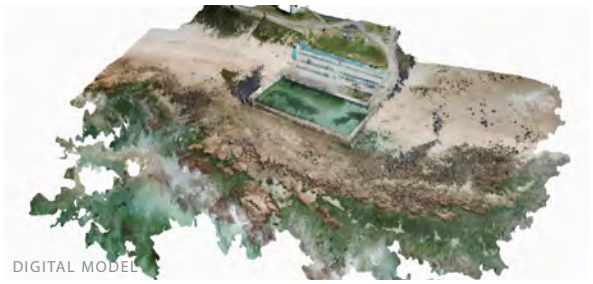


TOWRADGI

TOWRADGI OCEAN POOL, NSW

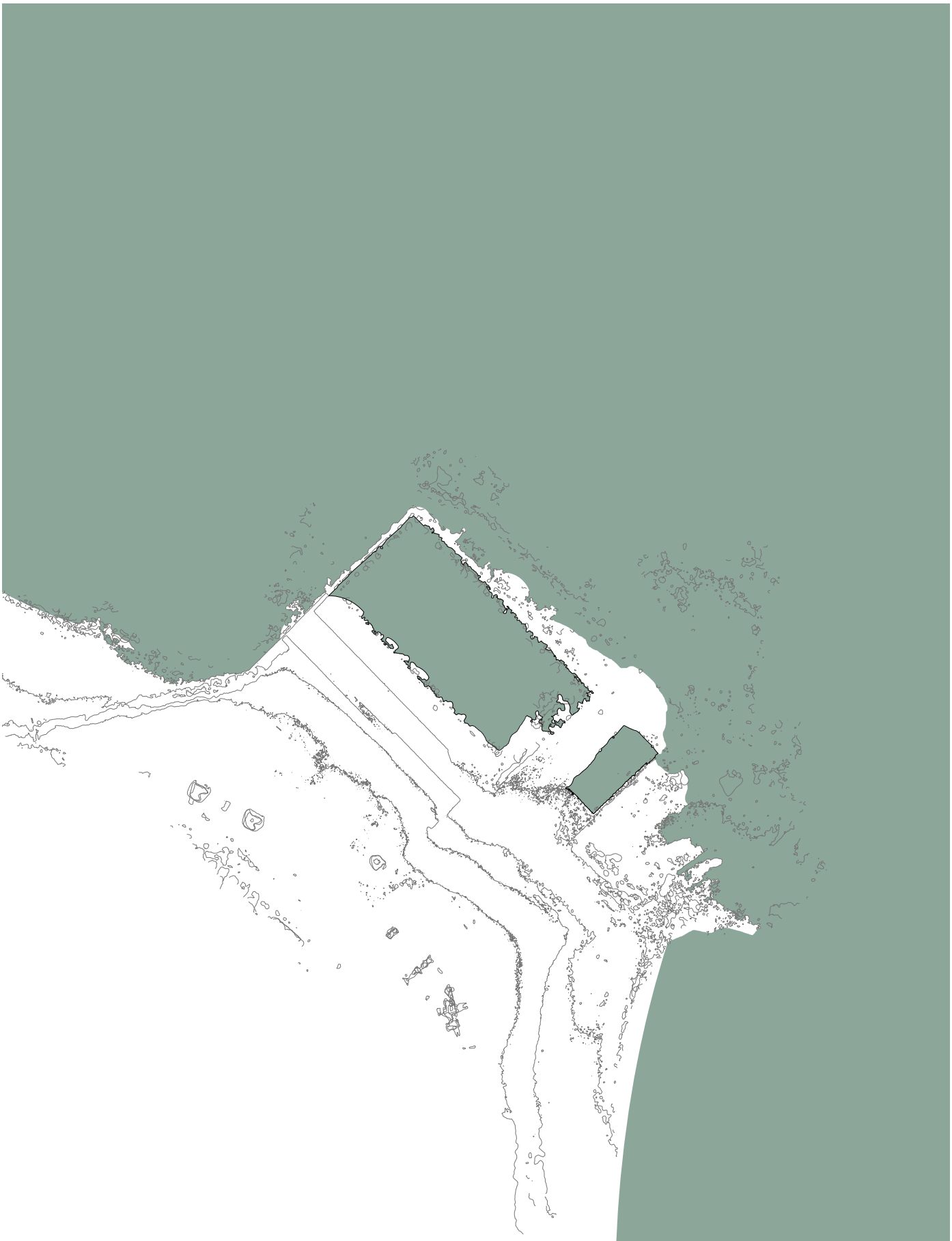



POOL LOCATION



DIGITAL MODEL

POOL	**Nuns Pool**
LATITUDE	-34.4221842
LONGITUDE	150.9102993
LGA	Wollongong
POPULATION	
YEAR	1829
LOCATION	
BEARING	
ORIENTATION	
PREVAILING SWELL	
SITING TO HEADLAND	
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



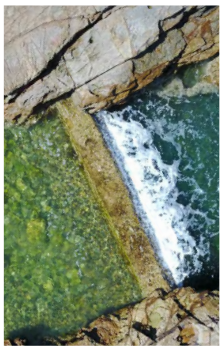
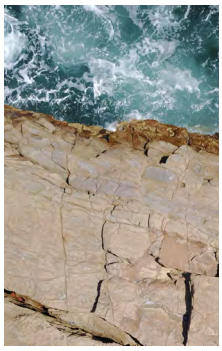
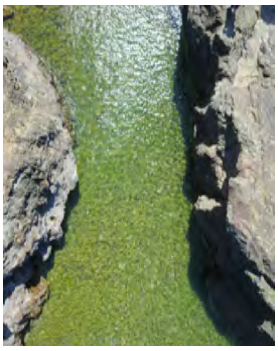
BELLAMBI ROCK POOL
WOLLONGONG LGA

THE WILD EDGE
NICOLE LARKIN

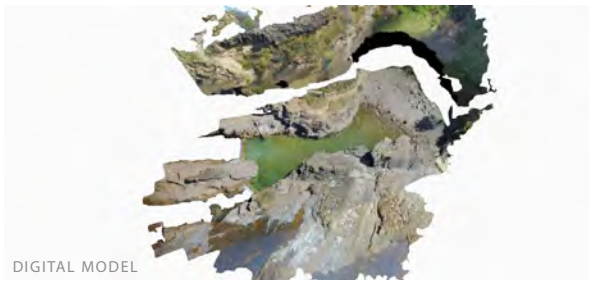
2.5 5 10 20

NUN'S POOL

WOOLONGONG NUN'S POOL, NSW


POOL LOCATION



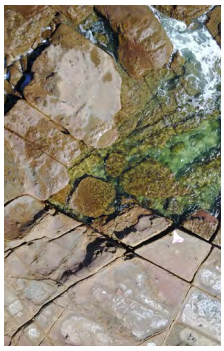
DIGITAL MODEL

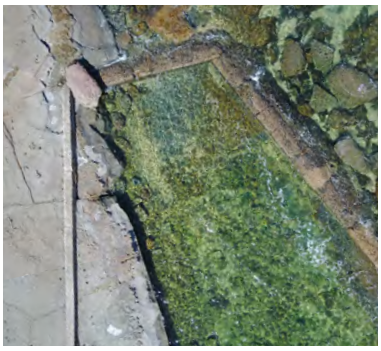
POOL	**Ladies Baths**
LATITUDE	-34.4228369
LONGITUDE	150.9094477
LGA	Wollongong
POPULATION	
YEAR	1887
LOCATION	
BEARING	
ORIENTATION	
PREVAILING SWELL	
SITING TO HEADLAND	
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*


NUNS POOL
WOLLONGONG LGA
THE WILD EDGE
NICOLE LARKIN
2.5 5 10 20

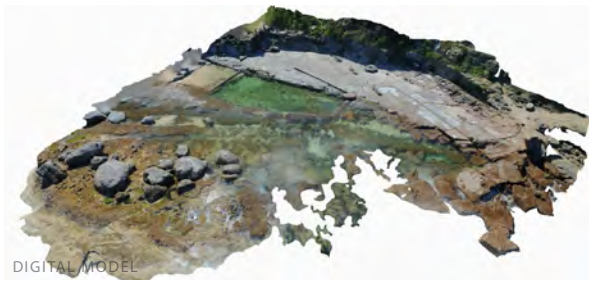
LADIES BATHS

WOOLONGONG LADIES BATHS, NSW



POOL LOCATION



DIGITAL MODEL

POOL	**Fishermans Beach Baths**
LATITUDE	-34.483783
LONGITUDE	150.9150642
LGA	Wollongong
POPULATION	
YEAR	1950
LOCATION	
BEARING	
ORIENTATION	
PREVAILING SWELL	
SITING TO HEADLAND	
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

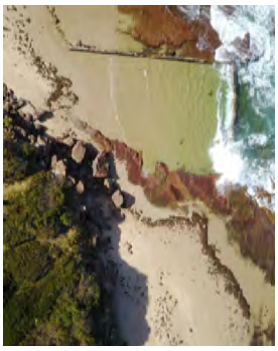
LADIES BATHS
WOLLONGONG LGA

THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

FISHERMANS BATHS

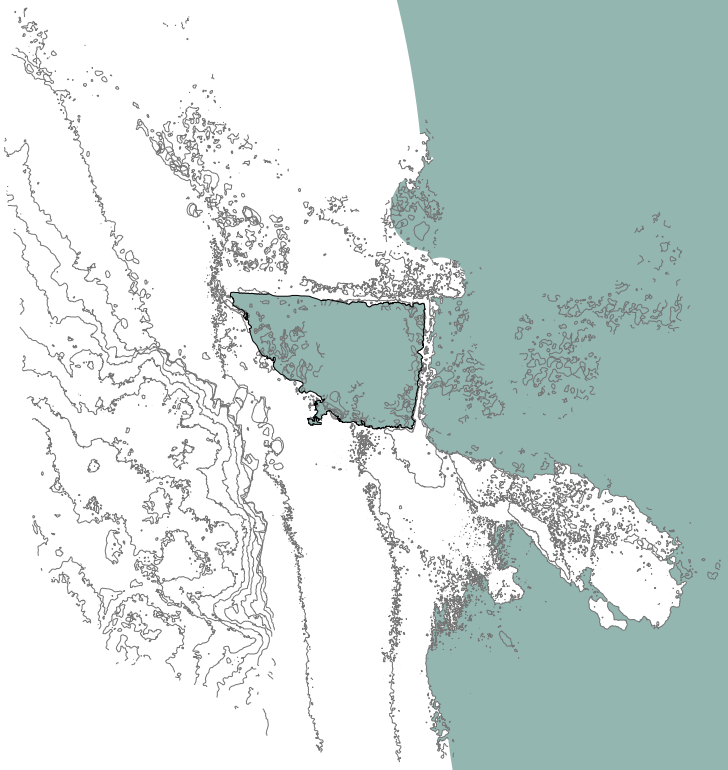
PORT KEMBLA, NSW



POOL LOCATION

DIGITAL MODEL

POOL	**Pheasant Point Baths**
LATITUDE	-34.6680327
LONGITUDE	150.8575442
LGA	Kiama
POPULATION	
YEAR	1877
LOCATION	
BEARING	
ORIENTATION	
PREVAILING SWELL	
SITING TO HEADLAND	
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



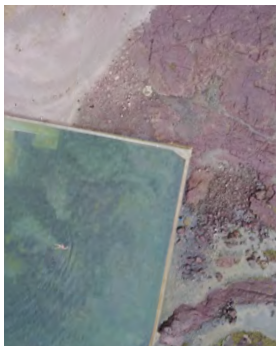
PORT KEMBLA FISHERMAN'S POOL
KIAMA LGA

THE WILD EDGE
NICOLE LARKIN

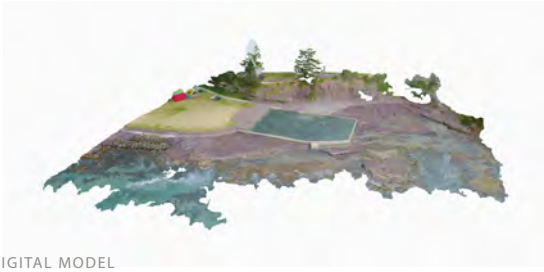
2.5 5 10 20

PHEASANT POINT

PHEASANT POINT KIAMA, NSW

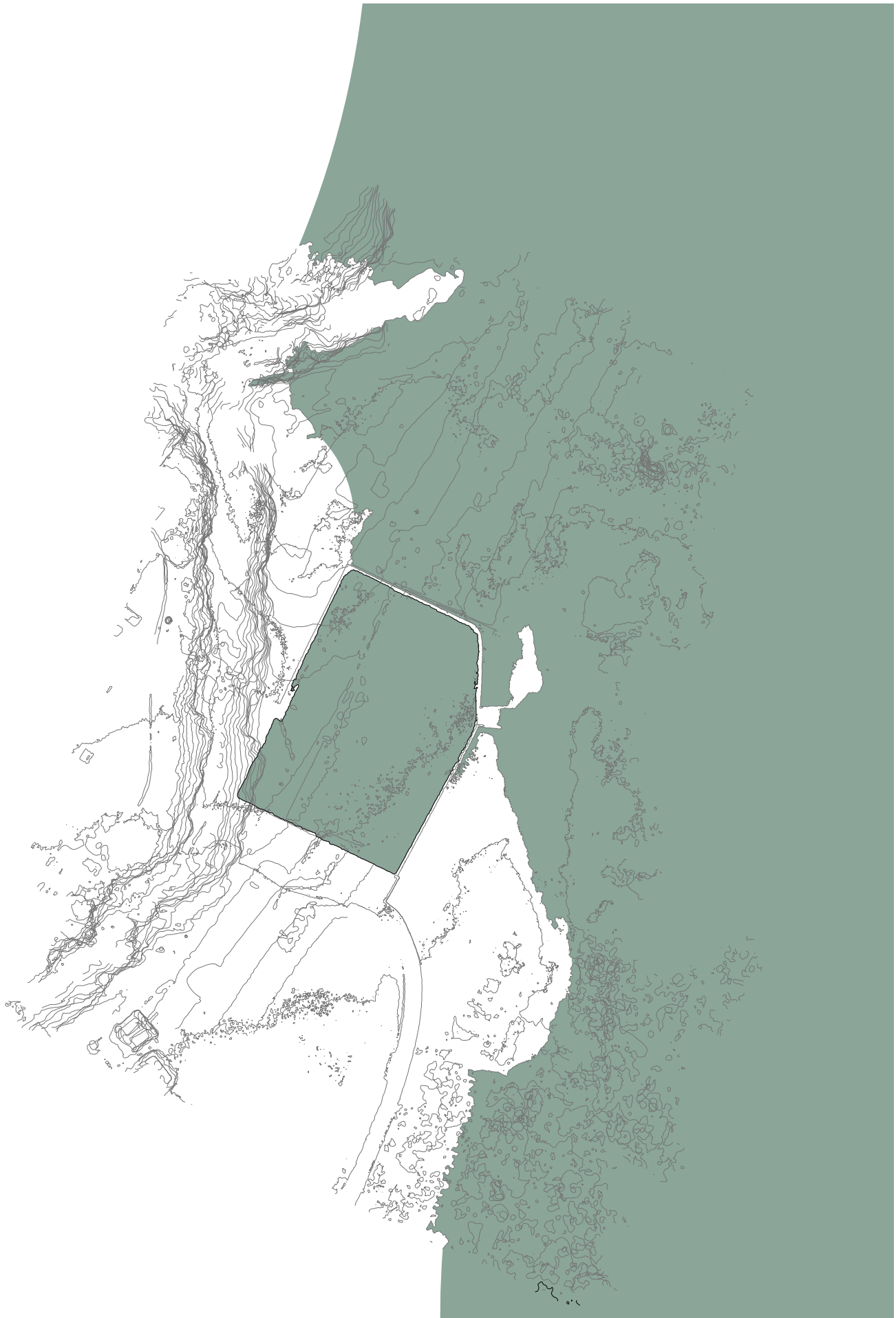


POOL LOCATION



DIGITAL MODEL

POOL	**Blowhole Point Baths**
LATITUDE	-34.6699078
LONGITUDE	150.8622274
LGA	Kiama
POPULATION	
YEAR	1880
LOCATION	
BEARING	
ORIENTATION	
PREVAILING SWELL	
SITING TO HEADLAND	
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



PHEASANT POINT POOL

KIAMA LGA

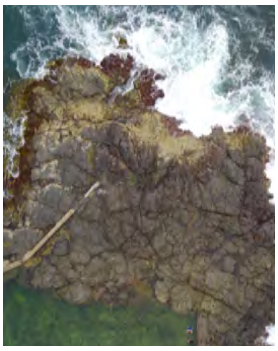
THE WILD EDGE

NICOLE LARKIN

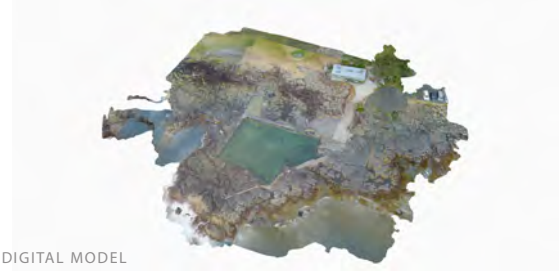
2.5 5 10 20

BLOWHOLE POINT

BLOWHOLE POINT KIAMA, NSW

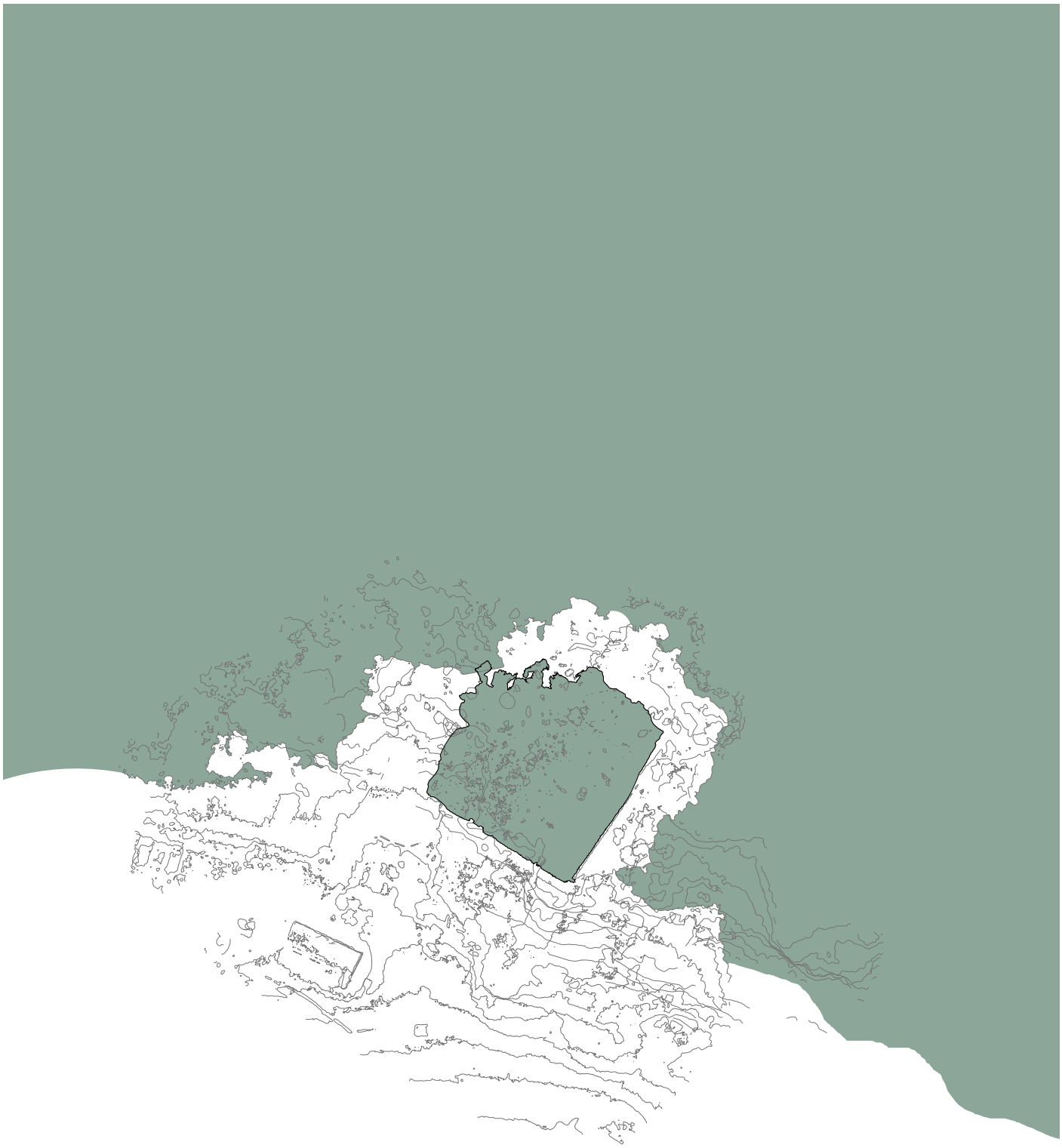


POOL LOCATION



DIGITAL MODEL

POOL	**Werri Beach Baths**
LATITUDE	-34.7439928
LONGITUDE	150.8361697
LGA	Kiama
POPULATION	
YEAR	1942
LOCATION	
BEARING	
ORIENTATION	
PREVAILING SWELL	
SITING TO HEADLAND	
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



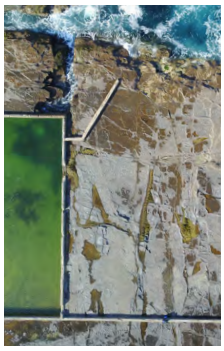
BLOWHOLE POINT ROCK POOL
KIAMA LGA

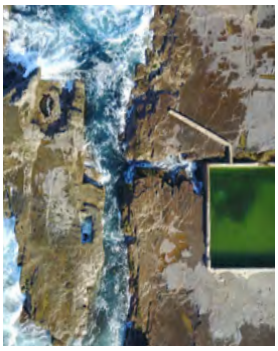
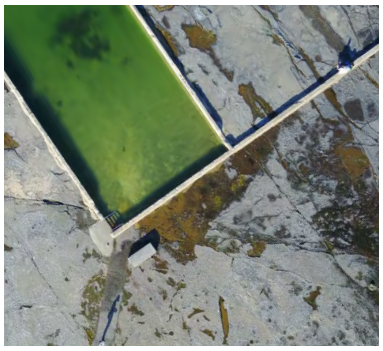
THE WILD EDGE
NICOLE LARKIN

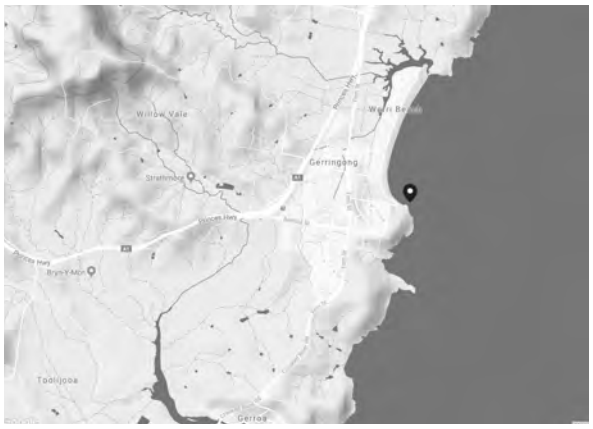
2.5 5 10 20

OURIE POOL

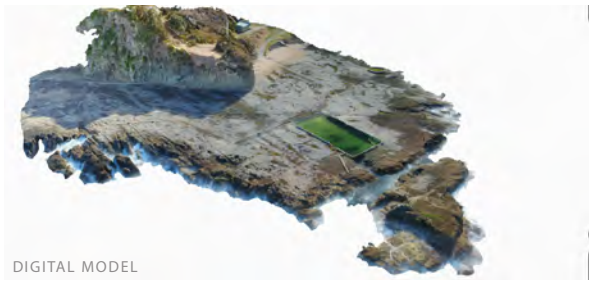
WERRI BEACH GERRINGONG, NSW





POOL LOCATION



DIGITAL MODEL

POOL	**Werri Beach Baths**
LATITUDE	-34.7439928
LONGITUDE	150.8361697
LGA	Kiama
POPULATION	
YEAR	1942
LOCATION	
BEARING	
ORIENTATION	
PREVAILING SWELL	
SITING TO HEADLAND	
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Activated
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*Yes*
Visibile/accessiblefrom pathway	*Yes*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Rectalinea*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

OURIE POOL, WERRI BEACH
KIAMA LGA

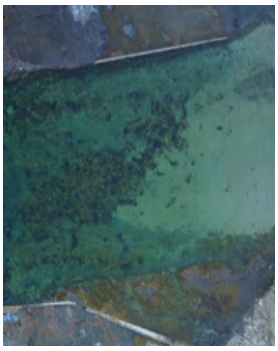
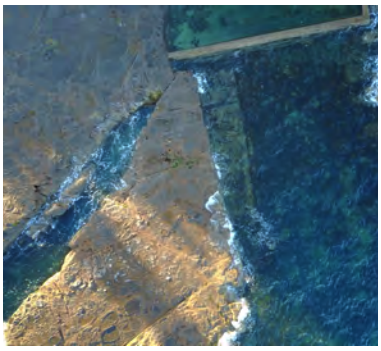
THE WILD EDGE
NICOLE LARKIN

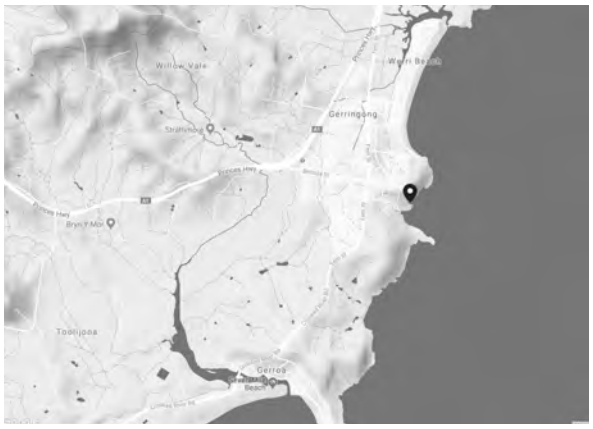
2.5 5 10 20

BOAT HARBOUR BATHS

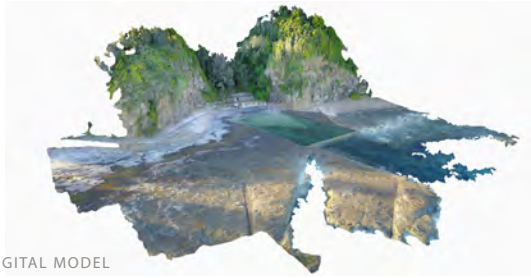
WERRI BOAT HARBOUR GERRINGONG, NSW



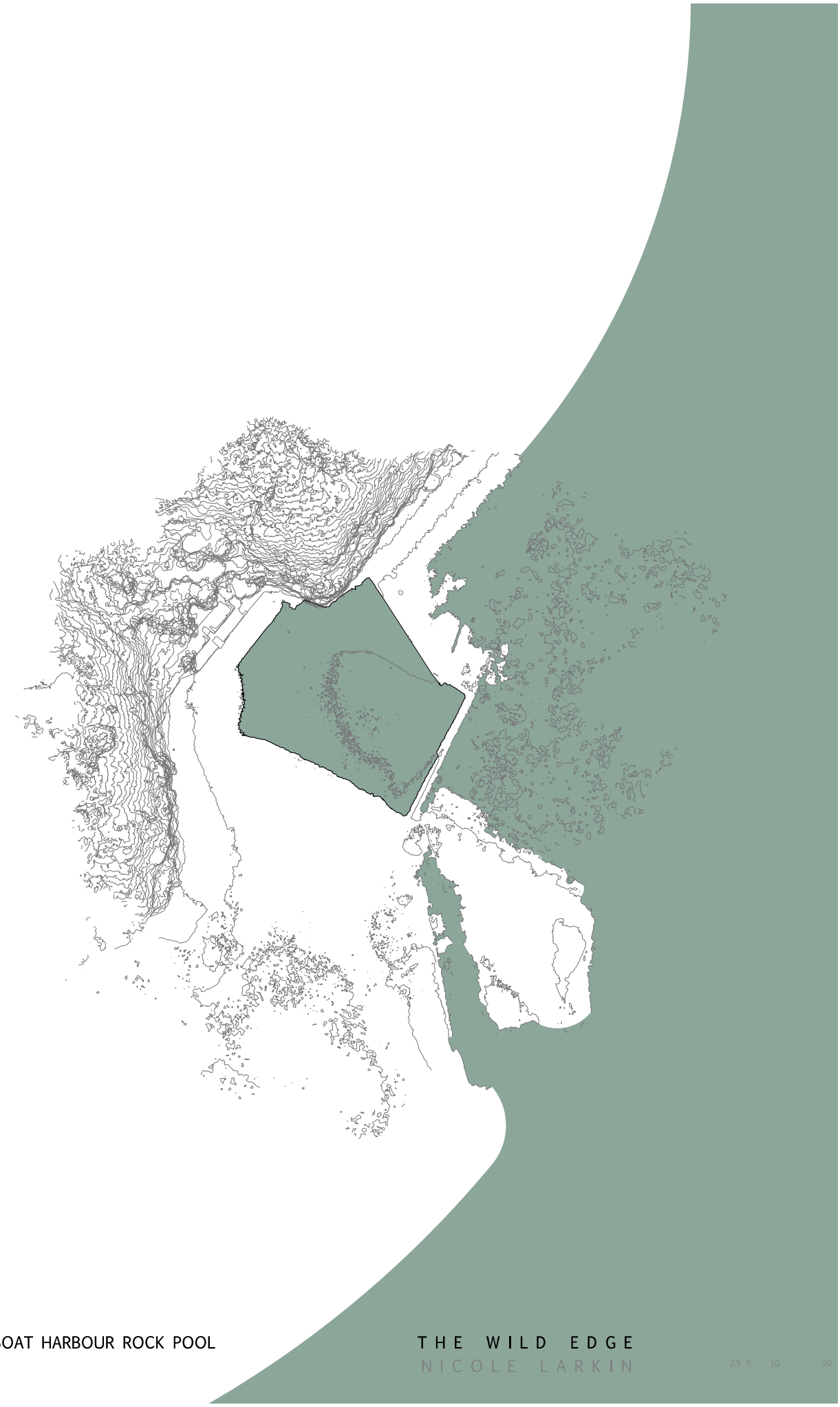


POOL LOCATION



DIGITAL MODEL

POOL	**Bermagui - Blue Pool**
LATITUDE	-36.4295095
LONGITUDE	150.0841749
LGA	Bega Valley Shire
POPULATION	
YEAR	1938
LOCATION	
BEARING	
ORIENTATION	
PREVAILING SWELL	
SITING TO HEADLAND	
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



GERRINGONG BOAT HARBOUR ROCK POOL

KIAMA LGA

THE WILD EDGE

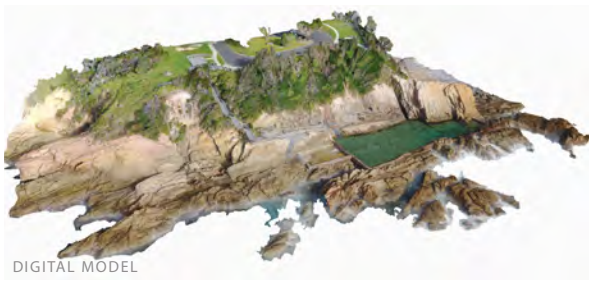
NICOLE LARKIN

2.5 5 10 20

BLUE POOL

BERMAGUI BLUE POOL, NSW

POOL LOCATION



DIGITAL MODEL

POOL	**Bermagui - Blue Pool**
LATITUDE	-36.4295095
LONGITUDE	150.0841749
LGA	Bega Valley Shire
POPULATION	
YEAR	1938
LOCATION	
BEARING	
ORIENTATION	
PREVAILING SWELL	
SITING TO HEADLAND	
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL LOCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*

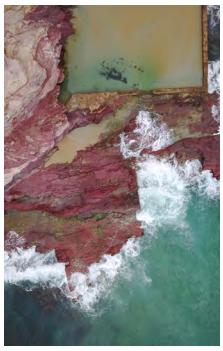
BERMAGUI BLUE POOL
BEGA VALLEY LGA

THE WILD EDGE
NICOLE LARKIN

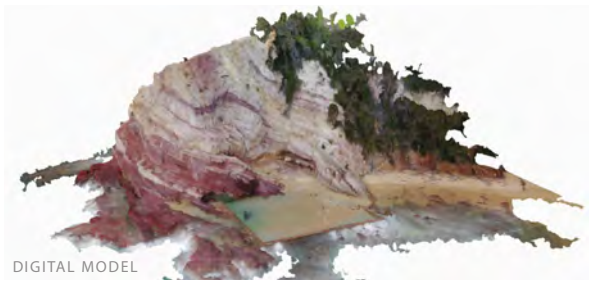
2.5 5 10 20

AISLINGS

YAMBA OCEAN BATHS, NSW

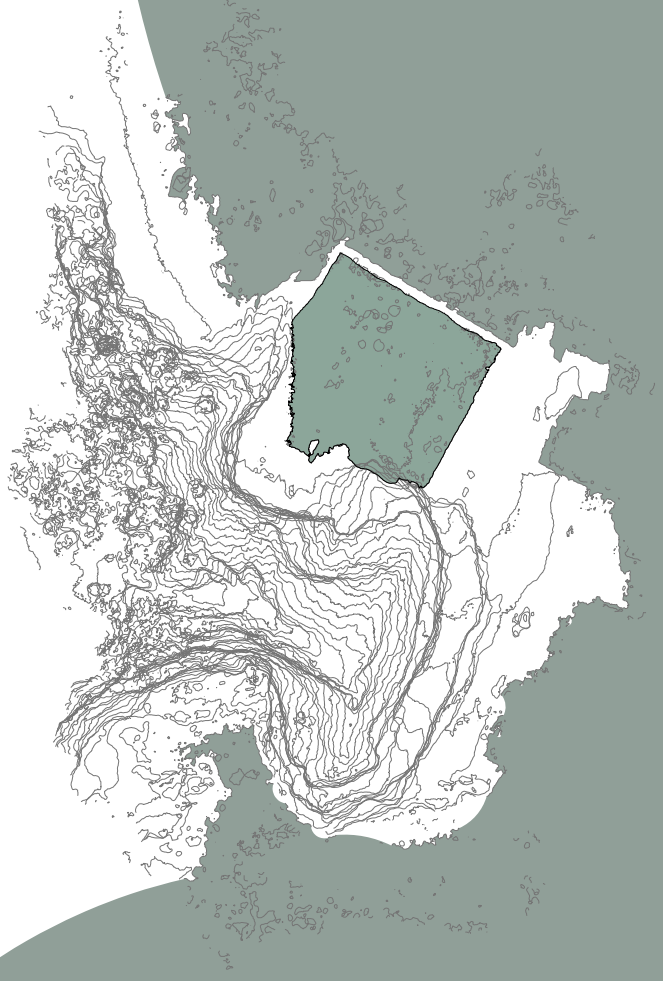


POOL LOCATION



DIGITAL MODEL

POOL	**Eden Rock Pool**
LATITUDE	-37.0630903
LONGITUDE	149.9101129
LGA	Bega Valley Shire
POPULATION	
YEAR	1960
LOCATION	
BEARING	
ORIENTATION	
PREVAILING SWELL	
SITING TO HEADLAND	
COASTAL FEATURES	
FOUNDATION	
GEOMORPHOLOGY	
POOL TYPE	Enclosed
INTERTIDAL OCATION	Attached
POOL WALL	
SECLUDED/ACTIVATED	Secluded
Visibile/accessible from road	*No*
Visibile/accessiblefrom beach	*No*
Visibile/accessiblefrom pathway	*No*
Visibile/accessiblefrom SLS club	*No*
NATURAL/FORMALISED	Natural
Concrete/natural bottom	*Natural*
Natural/rectalinea geometry	*Natural*
Ramp/stair or sand entry	*Sand*
Excavated/built up form	*Excavated*



ASLINGS BEACH ROCK POOL
BEGA VALLEY LGA

THE WILD EDGE
NICOLE LARKIN

2.5 5 10 20

5.0

Appendix

Woonona Ocean Pool, Illawarra NSW

5.1

Historical Context

Ocean pools within NSW are acknowledged for the significant role they have played in nurturing Australia's beach culture, swimming culture, and the surf lifesaving movement. While many pools remain in use today, over time some of these structures have deteriorated in the harsh marine environment and ultimately abandoned to the elements. Nonetheless whether they are active or 'ghost' pools, they are vestiges of our past, present and future affinity with the coastal landscape. Pools with histories extending earlier than the 1800's may have had origins as naturally forming rock pools or fish traps. (Further research into tidal pools in existence prior to colonisation forms the basis of a potential future area of study on the history of ocean pools in NSW.)

Late 1800's

Through the late 1800's in NSW swimming in the open ocean was only permitted before sunrise and after sunset. As bathing was usually undertaken without a swimming costume during this era, the restriction aimed to protect conservative social values of the time. Ocean pools were gender segregated and functioned to provide privacy for participants who wished to swim discretely in designated women's or men's baths. The ban was lifted in the early 1900's, provided swimmers wore approved costumes and ocean pools became open to all users. McIver's Baths in Coogee remains the only pool today which is exclusively for women and children.

1900's - 1950's

In 1906 regional shire councils were created which subsequently led to the construction of ocean pools up and down the NSW coastline. This was followed by the formation of the surf lifesaving movement and professional competitive swimming clubs. During the inter-war years, Ladies Amateur Swimming Clubs operated at ocean pools on Sydney's northern and eastern beaches and both the number of pools and swimming clubs they hosted were on the rise.

During the depression unemployment relief and public works schemes allowed new, regional and less affluent coastal communities to acquire previously unaffordable ocean pools. With the assistance of community fundraising, Warringah Shire developed nine ocean pools by the time North Narrabeen was opened in 1930.

1950's - 1990's

From the 1970s through to the 1990s, the pollution of Sydney's eastern beaches hampered support for the development of new ocean pools and fuelled concerns for the environment. Even amid water quality concerns, year-round usage of Sydney's existing ocean pools was nonetheless increasing due to enthusiasm for fitness swimming and winter swimming clubs. Improved access to other public or private pools did not eliminate demands for access to ocean pools.

2000's to Current Day

Perceived threats to Sydney's ocean pools triggered extensive campaigns to ensure they continued to operate and meet the expectations of their patrons and supporters. The National Trust commissioned a survey of Sydney's ocean and harbour pools to document their significance and advocate for their conservation in 1991. Randwick Council engaged AJC architects to restore Wylie's Baths in 1994 after the baths were recognised and listed on the state heritage register. Bondi Icebergs winter swimming club also went to great efforts to upgrade their home pool and take charge of its future. Icebergs continues to be a icon featured by multiple media companies including an exhibition match in the emptied lap pool during the 2019 Australian Open.

'Ocean baths' https://dictionaryofsydney.org,
Marie Louise McDermott

5.2

Research Context

'In 1896 the Municipal Baths Act empowered councils to extend their control into the sea beyond the high water mark. This led to the rudimentary construction of the majority of the pools (in NSW) between the 1920s and 1940s, well prior to the current understanding of structural design for the coastline and application of quantitative coastal engineering principles.'

'Case Studies in Improving Design Criteria for Ocean Swimming Pools' MHL, 2010

Ocean Pool Design

- '*Survey of Man-Made Tidal Swimming Pools Along the South African Coast'* Bosman and DJP Sholtz, 1985.
  During the 90's in South Africa, Bosman and Sholtz conducted questionnaires with local users at 80 ocean pools along the country's coastline. As coastal engineers their objective was to establish a set of best practice guidelines for ocean pool design. The findings presented useful analysis and recommendations on sea wall heights, optimum orientation, siting within the intertidal zone, maintenance and safety. Their report also classified four sub-types of pool based on its form and whether the pool was detached or attached to the main dune. Many of the insights from this paper can inform ocean pool design in Australia. A useful addition to this report would take into consideration the typical siting of a pool on a flat rock platform which is a common formation along the NSW coastline.

- *'Case Studies in Improving Design Criteria for Ocean Swimming Pools' IFW Jayewardene, R Jacobs, DW Cameron, and L Skountzos. - MHL 2010*
  Manly Hydraulic Lab (MHL) have done extensive work for local government authorities in NSW and across Australia. As an organisation they have specialised in testing techniques to improve ocean pools and make them safer. This publication outlines critical design considerations to take into account when upgrading ocean pools and provides case studies on 6 existing pools in which some of these recommendations are carried out. Considerations such as this inform how ocean pools built prior to modern coastal engineering design can be modified to continue to meet the communities needs and expectations. Another aspect of this research yet to be explored is coastal engineering design guidelines for new ocean pools. This is currently being pursued by the UNSW Water Research Laboratory by principal Coastal Engineer James Carley.

Heritage Significance

'Survey of harbour-side & ocean pools of the Sydney metropolitan region' Christa Ludlow, EJE Landscape. 1994

This survey was commissioned by the National Trust to identify and assess the heritage significance of Sydney's ocean and harbourside pools. It chronicles the history of bathing in Sydney and contextualises the historical, associative, aesthetic and social themes surrounding ocean pools. Each pool canvassed in this survey was assesssed for heritage significance against these themes. They form the ICOMOS BURRA charter criteria for heritage significance in Australia. The charter provides a formal framework in Australia for establishing structures as valued assets in the community. The report identifies key community values within the typology, namely; the aesthetic appeal of ocean pools within our natural coastal landscape. This finding can inform design principles for new ocean pools where the guiding intent is to maintain and conserve the natural landscape as much as possible. This is discussed further in section 1.3

Areas for future research development

Coastal resilience is a field of design concerned with addressing the challenges of climate adaptation along our coasts. It deals primarily with issues of inundation and mitigating storm surges. Coastal resilience design strategies follow a graded approach;

1. Attenuation and dissipation
2. Protection
3. Planning/Retreat

This continues to be an area of review and research for this project. In developing an understanding around this area the objective is to use these strategies to inform ocean pool design guidelines in responding to and facilitating for climate adaptation.

5.3

Existing Planning Framework Summary

'Management objectives for the NSW coastline aim to protect and enhance natural coastal processes and coastal environmental values including natural character, scenic value, biological diversity and ecosystem integrity and resilience. They also recognise the coastal zone as a vital economic zone towards supporting sustainable coastal economies.'

Coastal Management Act 2016

Planning Assesssment Pathways (NSW)

There are nine different planning approval pathways in NSW. The size and scale of the development determines which of the assesssment pathways is appropriate.

- Exempt Development
- Complying Development
- Local Development
- Regional Development
- State Significant Development
- State Significant Infrastructure
- Part 3A Development (Transitional)
- Development without consent
- Designated Fishing Activities

The Environmental Protection & Assesssment (EPA) Act 1979 sets out the laws under which development in NSW takes place. The main parts of the EPA Act that relate to development assesssment and approval are Part 4 (Development Assesssment) and Part 5 (Environmental Assesssment).

Development Without Consent

Development without consent can apply to activities undertaken by government departments or agencies as part of their everyday responsibilities. Many of these activities are carried out under State Environmental Planning Policy (Infrastructure) 2007 (ISEPP).

Management of Existing Ocean Pools

Much of the infrastructure in NSW (both built and natural) is maintained by Local Government Authorities (LGAs). Under the ISEPP, councils can conduct the necessary works to maintain these assets without obtaining consent. This includes required maintenance, rectification and upgrades which may be required to structures such as ocean pools.

Proposed Ocean Pools

The coastal management framework in NSW underwent significant reforms in response to existing and future coastal management challenges and opportunities. Today key legislation and planning policies that are applicable to coastal development in NSW include;

- Coastal Management Act (CMA) 2016
  The CMA is applicable to land within the 'coastal zone' and sets out management objectives for these areas.
- Coastal Management SEPP (CMSEPP) 2018
  The CMSEPP establishes the applicable controls for development within the' coastal zone'.
- Coastal Management Programs (CMPs)
  CMPs are compiled by LGAs and set the long-term strategy for the coordinated management of the coast, with a focus on achieving the objectives of the CMA.
- Marine Estate Management Act 2014
- NSW Marine Estate Management Strategy 2018-2028

This framework provides pathways for the assesment and approval of potential ocean poolsin NSW

Note: coastal zone maps referred to by the CMA and CMSEPP are available from the following site: NSW State Environmental Planning Policy (Coastal Management) 2018 – maps

Source: https://www.planningportal.nsw.gov.au

Coalcliff Ocean Pool, Illawarra Coast
Amenities and access to the pool was upgraded in 2017

Proposed Structures within the Coastal Zone (CMA 2016)

The NSW Coastal Management Framework sets out principles for proposed development within the coastal zone. It includes high level objectives which outline the intended outcomes for coastal management in NSW. Proposed coastal developments are intended to align with these objectives to ensure a sustainable, resilient coastline now and into the future. The key principles are listed below;

1. *Protect and enhance coastal environmental values including natural character, scenic value, biological diversity and ecosystem integrity and resilience*
2. *Recognise the coastline as a vital economic zone*
3. *Support sustainable coastal economies*
4. *Improve the resilience of coastal assets against the impacts of an uncertain climate future*
5. *Facilitate ecologically sustainable development*
6. *Promote sustainable land use*
7. *Support the social and cultural values of the coastal zone*
8. *Maintain public access, amenity, use and safety.*

CMSEPP 2018 Controls

The CMSEPP sets out key controls which relate to the development of structures such as ocean pools within the 'coastal zone'. The coastal zone comprises of four areas including;

(a) coastal wetland and littoral rainforest areas
(b) coastal vulnerability areas
(c) coastal environment areas
(d) coastal use areas

The Coastal Environment Area (c) spans inland from the foreshore and stretches the length of the state's coastline. As such it is applicable to any proposed structure along the foreshore of NSW. While other areas listed above may also apply, the Coastal Environment area is focused on in the following summary as it applies most broadly to all foreshore development.

CMSEPP 'Coastal Environment Area' Controls
(Summary - Part 2, Division 3, Clause 13)

Under this clause consent may only be granted if the assesing authority has considered if the development is likely to cause adverse impacts. This addresses how the development is designed, sited and will be managed to avoid, minimise or mitigate any adverse impacts identified. It calls for the following factors to be taken into consideration;

1. *Integrity and resilience of the biophysical, hydrological and ecological environment*
2. *Environmental values and natural coastal processes*
3. *Water quality of the marine estate*
4. *Marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms*
5. *Existing public open space and safe access to the foreshore, beach, headland or rock platform*
6. *Aboriginal cultural heritage, practices and places*
7. *Use of the surf zone*

There is scope to further strengthen the desired outcomes of this policy in addition to demonstrating consideration for potential adverse impacts by requiring proposed developments complt with controls. Other planning policies which operate in this manner include evelopment control plans which serve to regulate planning policy for local councils. Applied in the context of coastal management, a detailed development control plan paves the way for design-led processes and solutions to achieve desired envrionmental and community outcomes.

Assesssment Pathways

Additional relevant NSW Planning Guidelines

The NSW Office of Environment and Heritage Coastal Management website provides an exhaustive list of planning and design guidelines and resources in relation to coastal development in NSW. Link : NSW OEH Coastal Management

Source: https://www.planningportal.nsw.gov.au

5.4

Scope of study

The focus of this study is centred on open-facing ocean pools within the intertidal zone of NSW.

Selection Criteria

A broad list of all tidal, harbour and ocean pools was compiled by merging a range of databases from sources including; A Survey of Harbour-side Pools (EJE Landscape 1991);

- NSW Ocean Baths website compiled BY Marie-Louise McDermott; and
- 'Spreadsheet of pool visitations' (Lauren Smith, National Geographic Australia)

Outcomes

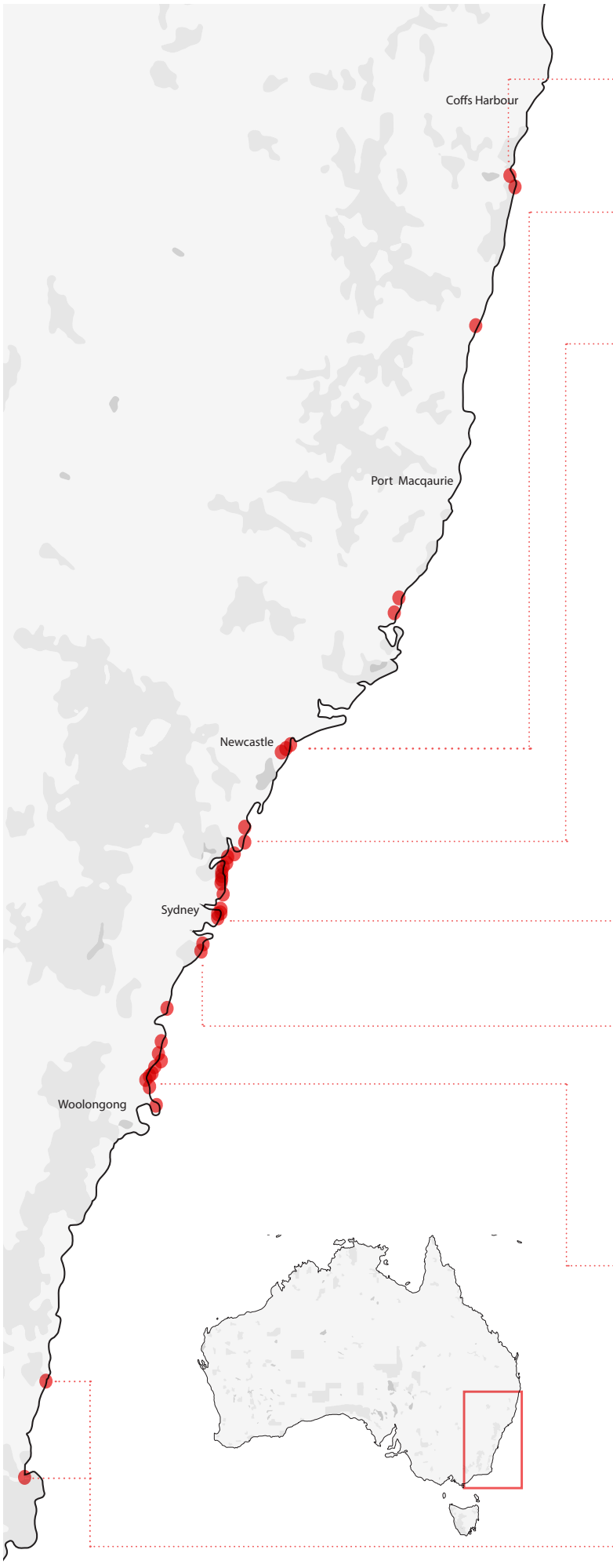
The outcomes of the project include the following:

1. Scope matrix of ocean pools included in study
2. Documentation of pools as 3D models
3. Generation of accurate plan drawings to scale
4. Aerial photographs of each pool
5. Data sheets of characteristics for each pool

Formulation of selection criteria

From approximately 120 salt water swimming enclosures in NSW, 60 pools were selected for this study based on a definitive set of criteria as per he following;

- The pool must be within the state of New South Wales
- The pool must be an enclosure (Excludes netted areas, wharf structures and ring of rock pools)
- The pool must be face the open ocean (Excludes harbor pools)
- The pool must be a salt water pool circulated by ocean water (Excludes fresh water/chlorinated pools/heated pools)
- The pool must have an instance of human intervention (Excludes natural rock pools)
- The pool must not be formalised
- The location of the pool must be within the intertidal zone and cannot be set back or elevated above dune line



Map indicating Ocean Pool locations in NSW

NSW Ocean Pools - Photographer Nicole Larkin

5.5

Methodology

Capturing an accurate depiction of NSW's ocean pools is a challenging prospect. Documenting and mapping the pools by traditional surveying methods proved both onerous and limited in accuracy. Advancements in mapping software and UAV (Unmanned Aerial Vehical) technology made it possible to efficiently map the pools as digital 3D models. Through this method the topography and built form of each pool is captured in a CAD (computed aided design) format for use by design and planning professionals. This innovative branch of surveying and mapping software is called photogrammetry.

What is photogrammetry?

Photogrammetry uses aerial photos to create spatial data. It is defined as *'the science of measuring data contained within a photograph, and is therefore by definition a part of remotesensing.' - Institution of Surveyors NSW*

It involves taking photographs in a grid pattern over a given area. Information such as the camera angle and location of where each photo is taken allows the software to triangulate points in space, which can then be used to create surfaces. When paired with a UAV each photo records GPS and elevational data at the location and height where it is taken. This is used to position each photo correctly using a world co-ordinate system, accurately locating the area surveyed in space.

How was it used in this application?

For this project a UAV was used to fly over each pool in a set grid pattern taking photos at regular intervals. These photos were then uploaded to a cloud based platform for processing. For each pool it was possible to generate an accurate, geo-located point cloud and mesh model of the surveyed area.

The accuracy of these models captured a high level of detail on the rock platform including cliff under-crofts as well as the headland, beach and surrounding context.

Testing

To establish this work method a series of software packages and UAV models were tested. Over time it was possible to build proficiency in both piloting the selected UAV and software which comprised of a DJI Mavic Pro and Pix4D.

Field work

Over a six week period in Oct-Nov 2017 each of the ocean pools in NSW was visited and surveyed. This involved travelling from the northern-most pool in Yamba and working south through down to Eden on the Victorian border. In addition to this the pools were also documented through a series of aerial photographs and film footage. Data collected was uploaded and processed daily onto the cloud based software platform which also allowed each model to be displayed online.

Data Collection Limitations

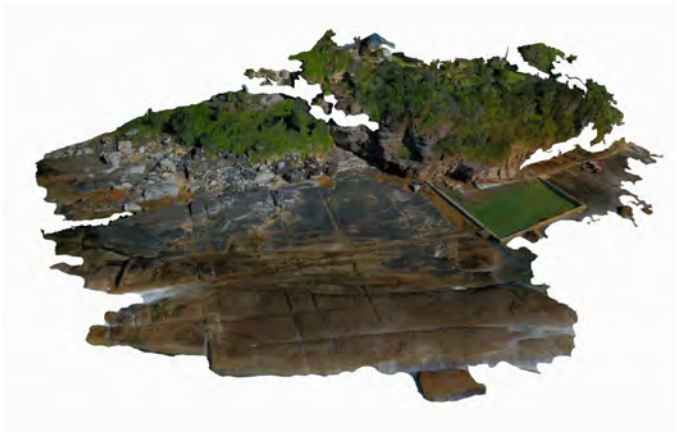
Photogrammetry cannot map the surface of water due to its constant movement and reflection of light on the surface. Nonetheless if water is sufficiently calm and the sun is at an oblique angle in the sky, it is possible to capture the bottom of the pool and surrounding sea bed. As such, best results were attained during low tide when the sea was calm in the early morning or late afternoon.

Publication

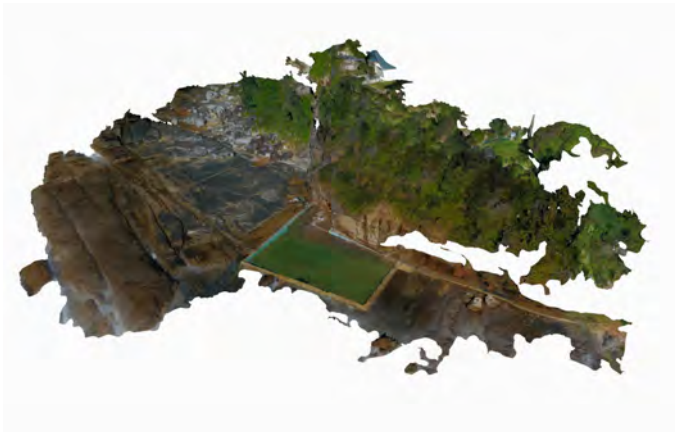
The data from this project has been made freely available online via the website www.nicolelarkin.com. It includes embedded 3D models, downloadable scale drawings and data sheets.

Image 1-3. 'Point Cloud' model. The grid of dots above show the location of each photo taken on site. The mapping software uses these photos to triangulate the location of millions of points along the topography.

Image 4-5. The collection of points is processed into a single surface to create a digital model of the topography and built form including the pool bottom.



1.



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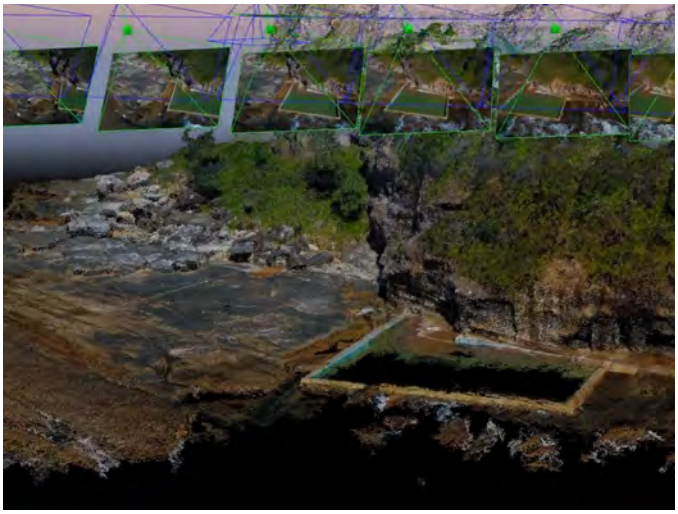

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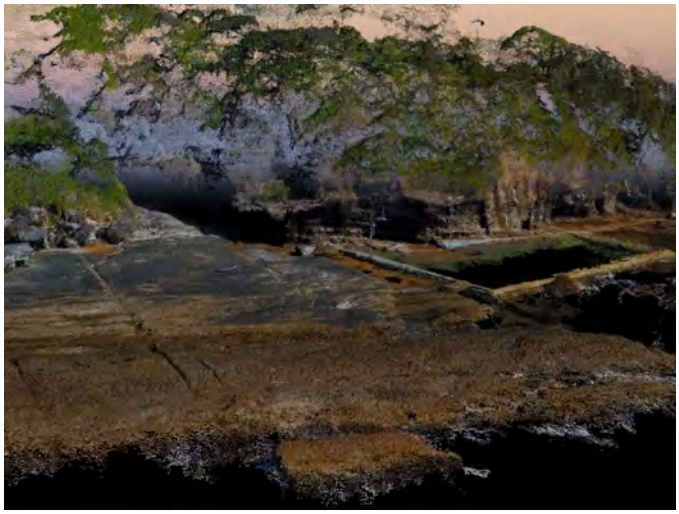

4.

5.6

Index of data

POOL	Yamba Rock Pool	Angourie Blue Pool	Sawtell Memorial Rock Pool	Black Head Ocean Pool	Forster Ocean Pool	Newcastle Ocean Baths	Bogey Hole
LATITUDE	-33.5998221	-33.3500874	-34.0646144	-33.637573	-29.4792061	-33.9256627	-33.9685359
LONGITUDE	151.3279527	151.5034953	151.1560232	151.3320994	153.3636153	151.2593955	151.254546
LGA	Clarence Valley	Clarence Valley	Coffs Harbour	Mid Coast	Mid Coast	Newcastle	Newcastle
YEAR	1969	1900	1962	1941	1936	1922	1819
LOCATION	Main Beach	Secondary	Secondary	Main Beach	Main Beach	Main Beach	Secondary
BEARING	NE	NE	-	ENE	N	-	-
ORIENTATION	55°	45°	180°	60°	9°	136.5°	160°
PREVAILING SWELL	124°	124°	124°	129°	129°	129°	129°
SITING TO HEADLAND	Tucked	Tucked	Tucked	Tucked	Main Beach	Prominent	Prominent
COASTAL FEATURES	-	-	River Mouth	River Mouth	River Mouth	-	-
FOUNDATION	Rock platform	Rock platform	Rock platform	Rock platform	Sand bottom	Rock platform	Rock platform
GEOMORPHOLOGY	Sandy Beach	Rock platform	Sandy Beach	Rock platform	Sandy Beach	Sandy Beach	Cliff
POOL TYPE	Enclosed	Enclosed	Partly Enclosed	Enclosed	Partly Enclosed	Enclosed	Enclosed
INTERTIDAL LOCATION	Semi-Detached	Semi-Detached	Attached	Semi-Detached	Attached	Semi-Detached	Attached
POOL WALL	-	No wall	-	-	-	-	No wall
SECLUDED/ACTIVATED	Activated	Activated	Secluded	Activated	Activated	Activated	Secluded
Visible/accessible from road	No	No	Yes	No	No	Yes	No
Visible/accessible from beach	Yes	Yes	No	Yes	Yes	Yes	No
Visible/accessible from pathway	Yes	Yes	No	Yes	Yes	Yes	Yes
Visible/accessible from SLS club	Yes	No	No	Yes	Yes	Yes	No
NATURAL/FORMALISED	Formalised	Natural	Natural	Formalised	Natural	Formalised	Natural
Concrete/natural bottom	Concrete	Natural	Natural	Natural	Natural	Concrete	Natural
Natural/rectalinea geometry	Rectalinea	Natural	Natural	Rectalinea	Natural	Rectalinea	Natural
Ramp/stair or sand entry	Ramp/Stair	Sand	Ramp/Stair	Ramp/Stair	Sand	Ramp/Stair	Sand
Excavated/built up form	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated
	01	02	03	04	05	06	07

Coldedale Ocean Pool, South Coast NSW - Photographer Nicole Larkin

Merewether Ocean Baths	The Entrance Ocean Baths	Terrigal Rock Pool	Macmasters Beach Rock Pool	Pearl Beach Rock Pool	Palm Beach	Whale Beach Rock Pool	Avalon Rock Pool	Bilgola Baths
-33.933413	-33.4477753	-29.436019	-32.0704199	-33.500986	-34.3078805	-32.9295438	-33.6583874	-33.9430217
151.2617075	151.4469322	153.3653319	152.5457776	151.4258373	150.9352733	151.7909288	151.3243411	151.2638426
Newcastle	Central Coast	Central Coast	Central Coast	Central Coast	Northern Beaches	Northern Beaches	Northern Beaches	Northern Beaches
1935	1965	-	1956	1928	1920	1930	1920	1926
Main Beach	Main Beach	Main Beach	Main Beach	Main Beach	Main Beach	Main Beach	Main Beach	Main Beach
	NE	N	NNE	NE		NE	ENE	
140°	49°	2°	32°	50°	338°	37°	69°	152°
129°	129°	129°	129°	129°				
Prominent	Prominent	Tucked	Tucked	Tucked	Tucked	Tucked	Tucked	Tucked
			Boulders					
Rock platform	Rock platform	Rock platform	Sand bottom	Rock platform	Rock platform	Rock platform	Rock platform	Rock platform
Sandy Beach	Sandy Beach	Sandy Beach	Boulder Beach	Rock platform	Sandy Beach	Sandy Beach	Sandy Beach	Sandy Beach
Enclosed	Enclosed	Partly Enclosed	Partly Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed
Semi-Detached	Semi-Detached	Attached	Attached	Semi-Detached	Semi-Detached	Semi-Detached	Semi-Detached	Semi-Detached
-	-	-	-	-	-	-	-	-
Activated	Activated	Activated	Activated	Secluded	Activated	Secluded	Activated	Activated
Yes	No	No	No	No	No	No	No	No
Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Yes	Yes	Yes	No	No	No	No	Yes	No
Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Formalised	Formalised	Natural	Natural	Formalised	Formalised	Natural	Formalised	Formalised
Concrete	Natural	Natural	Natural	Natural	Concrete	Natural	Natural	Concrete
Rectalinea	Rectalinea	Natural	Rectalinea	Rectalinea	Rectalinea	Rectalinea	Natural	Rectalinea
Ramp/Stair	Ramp/Stair	Sand	Sand	Ramp/Stair	Ramp/Stair	Sand	Ramp/Stair	Ramp/Stair
Built Up	Built Up	Excavated	Built Up	Built Up	Built Up	Excavated	Built Up	Excavated
08	09	10	11	12	13	14	15	16

5.6

Index of data

POOL	Newport Ocean Pool	Mona Vale Rock Pool	North Narrabeen Baths	Collaroy Ocean Pool	Dee Why Rock Pool	North Curl Curl Rock Pool	South Curl Curl Rock Pool
LATITUDE	-33.613565	-34.0538327	-34.2464771	-32.1781642	-33.9242751	-34.0530105	-33.9228929
LONGITUDE	151.3323824	151.1556315	150.9772968	152.5146854	151.2586565	151.1561733	151.2578505
LGA	Northern Beaches	Northern Beaches	Northern Beaches	Northern Beaches	Northern Beaches	Northern Beaches	Northern Beaches
YEAR	1925	1930	1930	1926	1915	1900	1926
LOCATION	Main Beach	Main Beach	Main Beach	Main Beach	Main Beach	Main Beach	Main Beach
BEARING	ENE	-	-	NNE	-	-	-
ORIENTATION	57°	175°	197°	33°	129°	165.5°	128°
PREVAILING SWELL	-	-	-	-	-	-	-
SITING TO HEADLAND	Tucked	Prominent	Prominent	Prominent	Prominent	Prominent	Tucked
COASTAL FEATURES	-	-	-	-	-	-	-
FOUNDATION	-	-	-	-	-	-	-
GEOMORPHOLOGY	-	-	-	-	-	-	-
POOL TYPE	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed
INTERTIDAL LOCATION	Attached	Attached	Attached	Attached	Attached	Attached	Attached
POOL WALL	-	-	-	-	-	-	-
SECLUDED/ACTIVATED	Secluded	Activated	Secluded	Activated	Activated	Secluded	Activated
Visible/accessible from road	No	No	No	Yes	Yes	No	Yes
Visible/accessible from beach	Yes	Yes	Yes	Yes	Yes	No	Yes
Visible/accessible from pathway	No	Yes	No	Yes	Yes	No	Yes
Visible/accessible from SLS club	No	Yes	No	Yes	No	No	Yes
NATURAL/FORMALISED	Natural	Natural	Natural	Formalised	Formalised	Natural	Natural
Concrete/natural bottom	Natural	Natural	Natural	Concrete	Concrete	Natural	Natural
Natural/rectalinea geometry	Rectalinea	Rectalinea	Natural	Natural	Rectalinea	Natural	Natural
Ramp/stair or sand entry	Sand	Sand	Sand	Ramp/Stair	Ramp/Stair	Sand	Sand
Excavated/built up form	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated
	17	18	19	20	21	22	23

Coldedale Ocean Pool, South Coast NSW - Photographer Nicole Larkin

Freshwater Ocean Pool	Queenscliff Ocean Pool	North Steyne Pool	Bondi Kids Pool	Wally Weekes Pool	Icebergs	Bronte Baths	Giles Baths	Ross Jones Memorial Pool
-34.2802069	-33.9052761	-30.3766725	-34.2919015	-34.2168903	-33.7744788	-33.5457607	-33.8914913	-32.9351662
150.9560215	151.2693787	153.1015232	150.9467049	151.0111061	151.2934488	151.3091666	151.2822969	151.7816833
Northern Beaches	Northern Beaches	Northern Beaches	Waverly	Waverly	Waverly	Waverly	Randwick	Randwick
1925	1937	1929	1947	1900	1931	1888	1902	1947
Main Beach	Main Beach	Rock Platform	Main Beach	Main Beach	Rock Platform	Rock Platform	Rock Platform	Sandy beach
-	-	NNE	-	-	E	NE	-	NE
208°	121°	22°	264°	183°	89°	50°	113°	40°
-	-	-	-	-	-	-	-	-
Tucked	Tucked	Prominent	Tucked	Tucked	Tucked	Tucked	Prominent	Tucked
-	River Mouth	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed
Attached	Attached	Attached	Attached	Attached	Attached	Attached	Attached	Attached
-	-	-	-	-	-	-	-	-
Activated	Secluded	Secluded	Activated	Activated	Activated	Activated	Secluded	Activated
No	No	No	Yes	Yes	Yes	No	No	No
No	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No	No	No	Yes	Yes	Yes	Yes	No	Yes
Formalised	Formalised	Natural	Natural	Natural	Formalised	Formalised	Natural	Natural
Concrete	Concrete	Natural	Natural	Natural	Concrete	Concrete	Natural	Natural
Rectalinea	Rectalinea	Natural	Natural	Natural	Rectalinea	Natural	Natural	Natural
Ramp/Stair	Ramp/Stair	Sand	Sand	Sand	Ramp/Stair	Ramp/Stair	Sand	Ramp/Stair
Excavated	Excavated	Excavated	Built Up	Excavated	Built Up	Excavated	Excavated	Excavated
24	25	26	27	28	29	30	31	32

5.6

Index of data

POOL	McIvers Baths	Wylie's Baths	Ivor Rowe Rockpool	Mahon Pool	Malabar Ocean Pool	Cronulla Rock Pools (North)	Cronulla Rock Pools (South)
LATITUDE	-33.7815729	-33.7551889	-33.6786622	-33.9201431	-33.8911718	-33.7034364	-33.8008067
LONGITUDE	151.2946558	151.2990198	151.3165694	151.2605743	151.2823371	151.3092899	151.2943996
LGA	Randwick	Randwick	Randwick	Randwick	Randwick	Sutherland	Sutherland
YEAR	1876	1907	-	1932	1909	1932	1941
LOCATION	Rock Platform	Rock Platform	Rock Platform	Rock Platform	Rock Platform	Sandy beach	Sandy beach
BEARING	-	E	E	-	-	E	-
ORIENTATION	99°	86°	83°	121°	114°	84°	109°
PREVAILING SWELL	-	-	-	-	-	-	-
SITING TO HEADLAND	Prominent	Tucked	Prominent	Prominent	Tucked	Prominent	Prominent
COASTAL FEATURES	-	-	-	-	-	-	-
FOUNDATION	-	-	-	-	-	-	-
GEOMORPHOLOGY	-	-	-	-	-	-	-
POOL TYPE	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed
INTERTIDAL LOCATION	Attached	Attached	Attached	Attached	Attached	Attached	Attached
POOL WALL	-	-	-	-	-	-	-
SECLUDED/ACTIVATED	Secluded	Secluded	Secluded	Secluded	Secluded	Activated	Activated
Visible/accessible from road	No	No	No	No	No	No	No
Visible/accessible from beach	No	No	No	No	No	Yes	Yes
Visible/accessible from pathway	No	No	Yes	Yes	Yes	Yes	Yes
Visible/accessible from SLS club	No	No	No	No	No	Yes	Yes
NATURAL/FORMALISED	Natural	Natural	Natural	Natural	Natural	Natural	Formalised
Concrete/natural bottom	Natural	Natural	Natural	Natural	Natural	Natural	Natural
Natural/rectalinea geometry	Natural	Rectalinea	Natural	Natural	Natural	Rectalinea	Rectalinea
Ramp/stair or sand entry	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Excavated/built up form	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated
	33	34	35	36	37	38	39

WoononaOcean Pool, South Coast NSW - Photographer Nicole Larkin

Shelly Beach	Oak Park	Bulgo Beach	Coalcliff Baths	Wombarra Baths	Coledale Baths	Austinmer Baths	Bulli Ocean Bath	Woonona Baths
Pool	Pool	Pool						
-33.647292	-33.8950965	-33.7335525	-33.7676004	-32.9517949	-34.0705502	-33.7862834	-34.339618	-34.3474754
151.3275772	151.2745929	151.3046443	151.3018495	151.7557597	151.1569149	151.2895113	150.9265012	150.9232396
Sutherland	Sutherland	Wollongong	Wollongong	Wollongong	Wollongong	Wollongong	Wollongong	Wollongong
1938	1909	1960	1923	1937	1921	1914	1903	1925
Rock Platform	Rock Platform	Rock Platform	Rock Platform	Sandy beach	Rock Platform	Sandy beach	-	-
ENE	-	E	E	NE	-	-	-	-
66°	114°	85°	86°	40°	180°	105°	-	-
-	-	-	-	-	-	-	-	-
Prominent	Prominent	Prominent	Prominent	Prominent	Prominent	Prominent	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed
Attached	Attached	Attached	Attached	Attached	Attached	Attached	Attached	Attached
-	-	-	-	-	-	-	-	-
Secluded	Secluded	Secluded	Activated	Activated	Activated	Activated	Activated	Activated
No	No	No	No	No	Yes	No	No	No
No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes
No	No	No	Yes	No	No	Yes	Yes	No
Natural	Natural	Natural	Formalised	Natural	Natural	Natural	Natural	Natural
Natural	Natural	Natural	Concrete	Natural	Natural	Natural	Natural	Natural
Rectalinea	Natural	Natural	Rectalinea	Natural	Rectalinea	Rectalinea	Rectalinea	Natural
Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated
40	41	42	43	45	46	47	48	49

5.6

Index of data

POOL	Bellambi Baths	Towradgi Ocean Pool	Nuns Pool	Ladies Baths	Fishermans Beach Baths	Pheasant Point Baths	Blowhole Point Baths
LATITUDE	-34.3656945	-34.386008	-34.4221842	-34.4228369	-34.483783	-34.6680327	-34.6699078
LONGITUDE	150.9241998	150.9154451	150.9102993	150.9094477	150.9150642	150.8575442	150.8622274
LGA	Wollongong	Wollongong	Wollongong	Wollongong	Wollongong	Kiama	Kiama
YEAR	1965	1964	1829	1887	1950	1877	1880
LOCATION	-	-	-	-	-	-	-
BEARING	-	-	-	-	-	-	-
ORIENTATION	-	-	-	-	-	-	-
PREVAILING SWELL	-	-	-	-	-	-	-
SITING TO HEADLAND	-	-	-	-	-	-	-
COASTAL FEATURES	-	-	-	-	-	-	-
FOUNDATION	-	-	-	-	-	-	-
GEOMORPHOLOGY	-	-	-	-	-	-	-
POOL TYPE	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed	Enclosed
INTERTIDAL LOCATION	Attached	Attached	Attached	Attached	Attached	Attached	Attached
POOL WALL	-	-	-	-	-	-	-
SECLUDED/ACTIVATED	Activated	Activated	Secluded	Secluded	Activated	Secluded	Secluded
Visible/accessible from road	Yes	No	No	No	No	No	No
Visible/accessible from beach	Yes	Yes	No	No	Yes	No	No
Visible/accessible from pathway	Yes	Yes	No	Yes	Yes	Yes	Yes
Visible/accessible from SLS club	No	Yes	No	No	No	No	No
NATURAL/FORMALISED	Natural	Formalised	Natural	Natural	Natural	Natural	Natural
Concrete/natural bottom	Natural	Concrete	Natural	Natural	Natural	Natural	Natural
Natural/rectalinea geometry	Natural	Rectalinea	Natural	Natural	Natural	Natural	Natural
Ramp/stair or sand entry	Sand	Sand	Sand	Sand	Sand	Sand	Sand
Excavated/built up form	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated	Excavated
	50	51	52	53	54	55	56

Right: Bronte Baths located on Sydney's Eastern Beaches.
Photographer: Nicole Larkin

Werri Beach	Boat Harbour	Bermagui	Eden Rock Pool
Baths	Baths	Blue Pool	
-34.7439928	-34.7496878	-36.4295095	-37.0630903
150.8361697	150.8333319	150.0841749	149.9101129
Kiama	Kiama	Bega Valley Shire	Bega Valley Shire
1942	1905	1938	1960
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Enclosed	Enclosed	Enclosed	Enclosed
Attached	Attached	Attached	Attached
-	-	-	-
Activated	Secluded	Secluded	Secluded
No	No	No	No
Yes	No	No	No
Yes	No	No	No
No	No	No	No
Natural	Natural	Natural	Natural
Natural	Natural	Natural	Natural
Rectalinea	Natural	Natural	Natural
Sand	Sand	Sand	Sand
Excavated	Excavated	Excavated	Excavated
57	58	59	60

6.0

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6.1

About the author

Nicole Larkin is a practising architect and designer. Her body of work on ocean pools has been fundamental in fostering value and understanding for design and architecture in NSW. Nicole graduated from a Masters of Architecture from the University of Sydney Faculty of Architecture in 2013. Since 2011 she has held a role with award winning Sydney based architecture firm Tzannes.

In her own right, Nicole has undertaken and led award winning projects across the field of arts, architecture and design. She has been the recipient of a Young Australian Designer of the Year Award, Timber Design Award and Clitheroe Mentorship. Most recently for her work on ocean pools Nicole was Awarded a USYD Alumni Excellence award for her significant contribution to the built envrionment and community.

Nicole continues to undertake research on ocean pools in NSW and aspires to publish a best practice design guideline for ocean pools as a resource for professionals and the community.

For more information on Nicole or her work please see her website www.nicolelarkin.com

6.2

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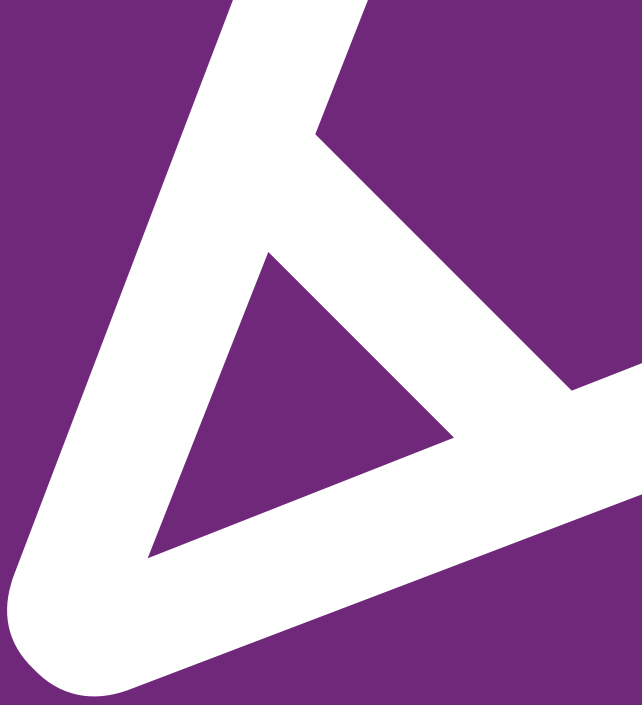

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