

Designing with Country

Explorer Street Eveleigh

Gadigal Country

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Djinjama

Cultural Design
and Research

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This publication aims to work respectfully with all peoples and protect the rights of Country and all entities of Country.

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Remembering Country

We acknowledge the Traditional Custodians of Country throughout Australia and abroad, and their continuing connection to culture, community, land, waters and sky. Specifically we acknowledge the Gadigal and Gadigalleon who have long cared for this Country.

We pay our respect to Elders and Knowledge Holders past and present, and express our gratitude for their continued sharing of knowledge and culture.

We pay respect to the First Nations peoples of the Eveleigh area, who have strived to retain and reclaim their cultures, languages, identities, and connections to Country despite colonial forces. We recognise the valuable contribution made by First Nations peoples in Eveleigh to community, narratives, spaces and places.

We acknowledge that sovereignty was never ceded and these lands remain a contested space for many First Nations peoples.

ICIP

We aim to work respectfully with all peoples and to protect the rights of Country and all entities of Country.

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This document does not contain any secret or sacred information as far as we are aware.

Protocols

Djinjama follows the protocols and ethics taught by Country, Elders, kin and family to ensure our work is respectful of culture and of community, and importantly is considerate of the health and wellbeing of Country:

- Be respectful to Elders, Country and others
- Observe and listen carefully, not only to words said but those not said
- Allow room for thought and reflection, give people and stories space to develop
- Be prepared to learn
- Be grateful
- Ensure reciprocally mutual benefits
- Consume responsibly
- Be open and transparent
- Lead with care and from the rear
- Maintain relationships



Warami

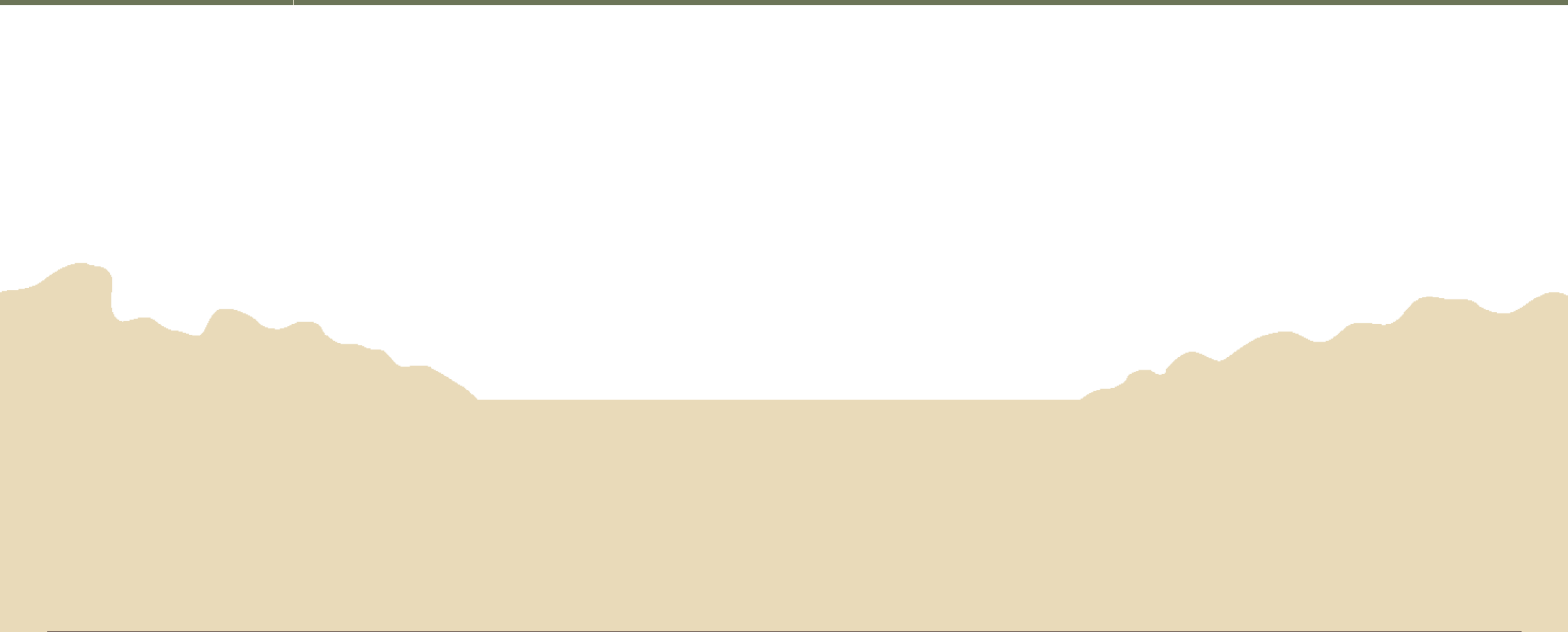
As is the protocol for using language on Country, we start with the language of the land to say **Warami**, meaning I see you come from far away. The place now known as Eveleigh is a place that has welcomed thousands of generations of Gadigal and Gadigalleon. If they were to welcome us to their Country, they may have said Warami. We acknowledge their continuing care and love of this Country, their enduring knowledge of Country, and their wisdom in guiding us to develop this work. The Gadigal and Gadigalleon were among the first to be impacted and hardest hit by colonisation yet still maintain the culture of now-Explorer Street. It is only because of their tireless efforts that our work is possible.

The purpose of this document is to guide the development of Explorer Street in Eveleigh using a Country-centred approach and Designing with Country methodology to ensure the outcomes for Country are positive. It provides guidance to those developing Explorer Street to ensure Country is at the heart of all decisions and actions of design, planning and development on Country.

Invariably it requires a commitment from government, developers, planners, architects, designers, engineers, and any others working on and with Country to act with respect for Country, culture, community and kin. Without such a commitment it will be recolonising Explorer Street not Designing with Country. Without such a commitment, the landscape will continue to be negatively impacted by development, and people, animals, plants, ecologies and biodiversity will continue to suffer. Continuing with business as usual is no longer acceptable if we are genuine about making a difference to our changing climate, to closing the gap on First Nations disadvantage, and to all our responsibilities to care for Country as those who benefit from living on Country.

1—Country

Country, for First Nations peoples, relates not only to the cultural group and land to which they belong, it is also their place of origin in cultural, spiritual, and literal terms.



About Ngura (Country)

To be clear, when talking about Country, it is not the countryside or the area outside of metropolitan spaces being referred to, it is to the lands to which First Nations peoples belong, yearn for, find healing from, and will return to.

Country is sentient and alive; Country communicates what it needs.

Country soars high into the atmosphere, buries deep into the planet core, dives far into the oceans.

Country, for First Nations peoples, relates not only to the cultural group and land to which they belong, it is also their place of origin in cultural, spiritual, and literal terms. Country also includes more-than-humans, flora, fauna, non-breathing entities, and people past, present and future. Country incorporates the tangible – such as the landscape, water, air, plants, geology, rocks, animals, minerals, medicines, and places – and intangible – such as the knowledges and cultural practices, identity, and reciprocal relationships, belonging and wellbeing, songs, stories and art.

Country is the places from which Ancestors originated and still exist within as lifeforces. Country cannot be owned or tamed, as Country is also a relationship that must be honoured and nurtured.

Many First Nations peoples' stories say they come from the land, the land is their Mother and that Country formed them and their ways of knowing, being and doing. Country holds knowledges, Laws, and lore like an eternal library. As such, for designers, planners and architects, Country can direct in design, planning and architectural processes and outcomes.

About the Sydney First Nations Community

Elders have shared that in 1788 there were at least 36 linguistic groups in the Sydney area.

The Sydney Basin is home to a number of First Nations groups. It has also long been home for and a destination and a space of movement as peoples from the north, west and south travel to the area, undertaking cultural care of Country obligations, staying with kin on the way. These groups maintain enduring connections with and responsibilities towards the Sydney area, and have differing names and languages, which originated from oral traditions with multiple dialects.

With colonisation, gentrification and urbanisation many of the original groups were dispossessed, displaced, overlooked, and presumed to have been wiped out. However, their presence is well recorded both in colonial records and in bloodlines and stories of the contemporary peoples from the Sydney Basin. As colonial processes systemically impacted First Nations peoples from across the continent, Sydney attracted an influx of First Nations peoples, creating a new Sydney First Nations community that included both those with bloodline heritage from Sydney, and those who relocated to Sydney.

Systemic colonial practices of erasure and assimilation have caused complicated contestations between some of these groups, triggering power struggles that dissociates those with long connections and belonging to place. As such, while it is acknowledged that Sydney is a contested space, it is also a shared space.

It is important to note that in First Nations knowledge systems and worldviews there are many ways of knowing, many truths, and diverse perspectives. Likewise, there are many truths about places containing diversity in the knowledges, stories, histories, names, and understandings of that place. All are acknowledged and respected in our work.



About the Place

The site is located on the continent now called Australia in the area now called Eveleigh, an inner southern suburb of Sydney with a surrounding suburbs of Redfern, Erskineville and Alexandria.

It is on Gadigal lands sited in Sydney Turpentine Ironbark Forest Country, with Eastern Suburbs Banksia Scrub close by – both now critically endangered but culturally and ecologically important.

As the bird flies it is approximately 12.08 kilometres from Kurnell on Kamay (Botany Bay) where Captain Cook landed and took shot at Gweagal warriors in 1770.

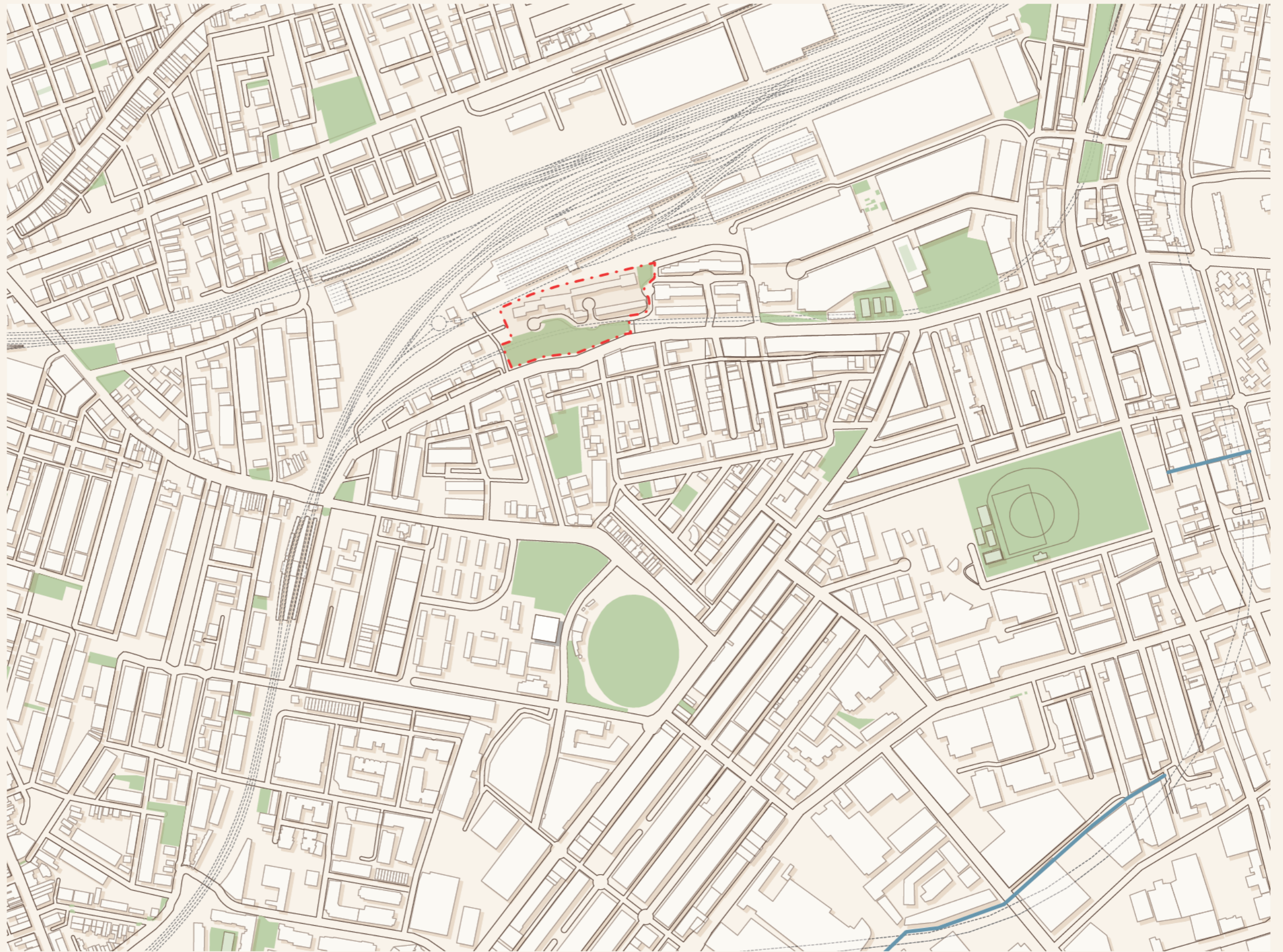
On foot it is approximately 5.9 kilometres from Warrane (Sydney Cove) where the colonisers established their first settlement in 1788.

In the last census there were 42 (about 6.9%) First Nations people recorded living in the suburb of Eveleigh.

This Country has been cared for by generations of Gadigal and Gadigalleon. *It still is.*

Site Map

Explorer Street, Eveleigh





*Connections
to Country*

Spiritual connection to Country is everything to First Nations peoples; family, plants, animals, rivers, sea, land, and sky are all considered Country and as individuals they too are part of Country. Their role is to care for Country, through storytelling, song and sharing of knowledge. They share this knowledge as part of honouring Country.



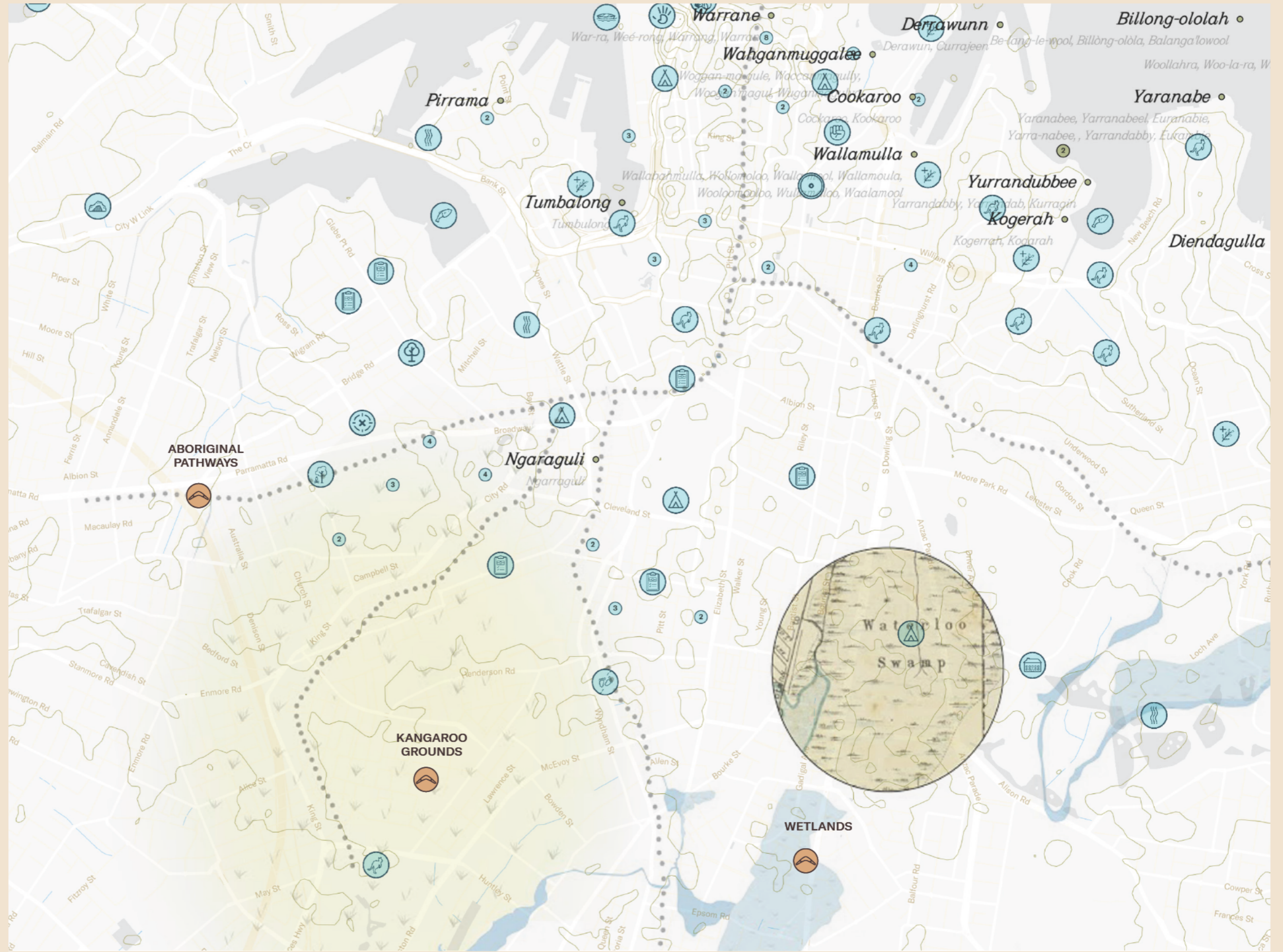
2–Background Understandings

Mapping Country

Eveleigh and Surrounds Cultural Sites

-  Midden
-  Pathway
-  Gallery/ Museum
-  Shelter
-  Indigenous Organisation
-  Cultural Tree Carving
-  Fishing
-  Waterway
-  Hunting Grounds
-  Bush Medicine
-  Ceremonial Site
-  Campsite
-  Rights
-  Water Crossing
-  Combat
-  Artwork
-  Dance Circle
-  Totemic Landscape
-  Colonial

-  Cultural Resource Area



Mapping Country

Eveleigh and Surrounds
Hydrology Over Time





Cultural and Natural Landscape

To understand the natural environment of a place and its ecological relationships is important to know some basic concepts:

Biodiversity

Biodiversity is all the different kinds of life you will find in one area—the variety of animals, plants, fungi, and even micro-organisms like bacteria that make up our natural world. Each of these species and organisms work together in ecosystems, like an intricate web, to maintain balance and support life.

Topography and Geology

Topography and geology (two very common terms that are often used interchangeably) are two small elements of the natural landscape. Topography is the characteristics of the landscape, and geology is the age of the land forms. This area has an important significance for the environment and the organisms that live in it.

Soil Landscape



Refers to areas of land with unique landform features and characteristic soil types. Because landscapes and their soils are formed by the same natural processes. Soil Landscapes are closely linked to other natural features such as vegetation, geology and hydrology.

Mapping Country


Geology and Soil Landscape



Geology

-  Shale
-  Hawkesbury Sandstone

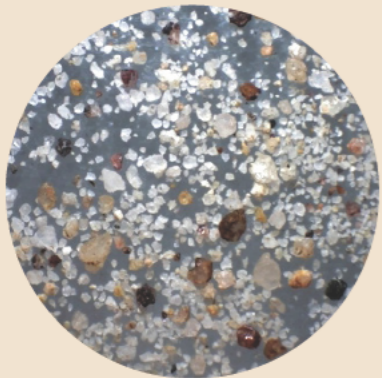
Soil Types

-  Residual
-  Aeolian

Cultural and Natural Landscape



Ashfield Shale



Sand
Under the microscope



Sydney Turpentine
Ironbark Forest

Natural Ecosystems

The Sydney Basin was formed when the Earth's crust expanded, subsided and filled with sediment between the late Carboniferous and Triassic.

Explorer Street is located in a very particular and unique landscape (geologically speaking) – in the border between Ashfield Shale (Wianamatta Group) and Sand (Beach Dunes).

The site is in association with the residual Blacktown (sites have formed from in situ weathering materials) and aeolian Tuggerah soil landscape (landscapes that are shaped by the wind).

ASHFIELD SHALE

Black to dark-grey shale and laminate (easily split into layers).

SAND

Medium to fine-grained marine sand with podzols (acid sandy soils). Formed possible by sheet flow or streamflow but now relict and modified by wind action.

VEGETATION

The pre-clearing vegetation in this area was a vast patch of Sydney Turpentine Ironbark Forest (STIF): A tall to very tall sclerophyll open forest with mid-stratum of mixed sclerophyll and mesophyll shrubs and a ground layer of grasses and forbs, found on shale or sheltered shale-sandstone soils mainly in the northern suburbs of Sydney and lower Blue Mountains.

The Formation (vegetation) where STIF is under Wet Sclerophyll Forest Wet sclerophyll forest is characterised by very tall eucalypt trees (and their close relatives) which form the upper canopy layer. The trunks of these trees tend to be straighter than those of other eucalypts, and their leafy parts are often concentrated in the top third of the tree.

The understorey of wet sclerophyll forest can contain shrubs and small trees (often with rainforest species) or may be grassy with scattered shrubs. Wet sclerophyll forest is found in all Australian states except for South Australia and the Northern Territory.

The bush of Wet Sclerophyll Forest Regrowing has important carbon potential, which will capture atmospheric carbon and store it in woody plant tissues. The peak carbon accumulation rate is likely to be between 6 and 30 tonnes of carbon dioxide equivalents per hectare per year.

The wet sclerophyll forests of New South Wales are limited to the coastal ranges and eastern side of the escarpment. Eucalypts dominate the canopy and include blue gums, mahoganies, peppermints and green-leaved ashes. Wet sclerophyll forests are highly combustible and fire seasons in the State are determined by rainfall.

Few animal species are unique to the wet sclerophyll forests, however many are more common in this environment, due to its diverse abundance of resources. The copious amount of fallen wood and

Cultural and Natural Landscape

leaf litter provide food, habitat and shelter for a complex invertebrate ground fauna, while insects, mites and spiders provide a bountiful resource for insectivorous birds.

With the demise of rainforests resources, early settlers turned to the timber of wet sclerophyll forests for hardwood construction materials. Many regions were converted to agricultural land after clearing, however many proved to be unproductive. Two million hectares of forest were reserved for more sustainable harvesting, which is still conducted today.

Water

Explorer Street is located very close to the place once called Waterloo Swamps (Waterloo Estate). Alluvial brooks and creeks ran down the slopes to form a wetland system and damp conditions. Erosion of the horizontal sandstones and shales by coastal streams created a landscape of deep cliffed gorges and remnant plateaus across which an east-west rainfall gradient and differences in soil control the vegetation of eucalypt forests, woodlands and heaths.

Waterways are used for ceremonial and cultural practices, including knowledge transfers as part of a healthy, flowing connected system. Water is central to culture and economy, providing a rich source of food and other resources. Camps would often have been located close to the shore, as well as to sources of freshwater.



Leafless Tongue Orchid
Cryptostylis hunteriana



Port Jackson Heath
Epacris purpurascens var.
purpurascens



Square-tailed Kite
Lophoictinia isura



Spotted-tail Quoll
Dasyurus maculatus

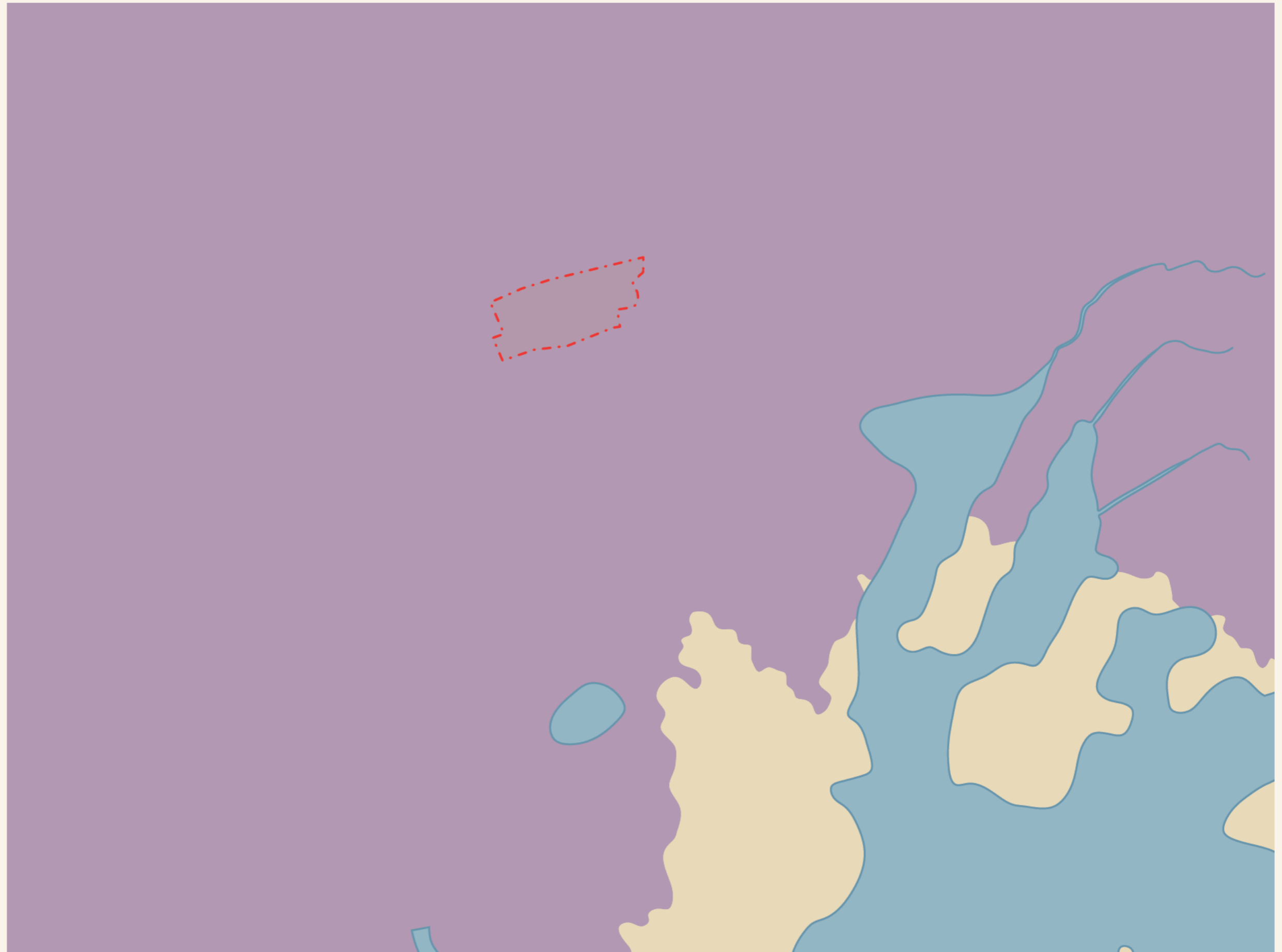


Giant Burrowing Frog
Heleioporus australiacus



Mapping Country

Pre Colonial Landscape

The Explorer Street site is located in the Sydney Turpentine Ironbark Forest Country, with Eastern Suburbs Banksia Scrub close by – both now critically endangered but culturally and ecologically important.



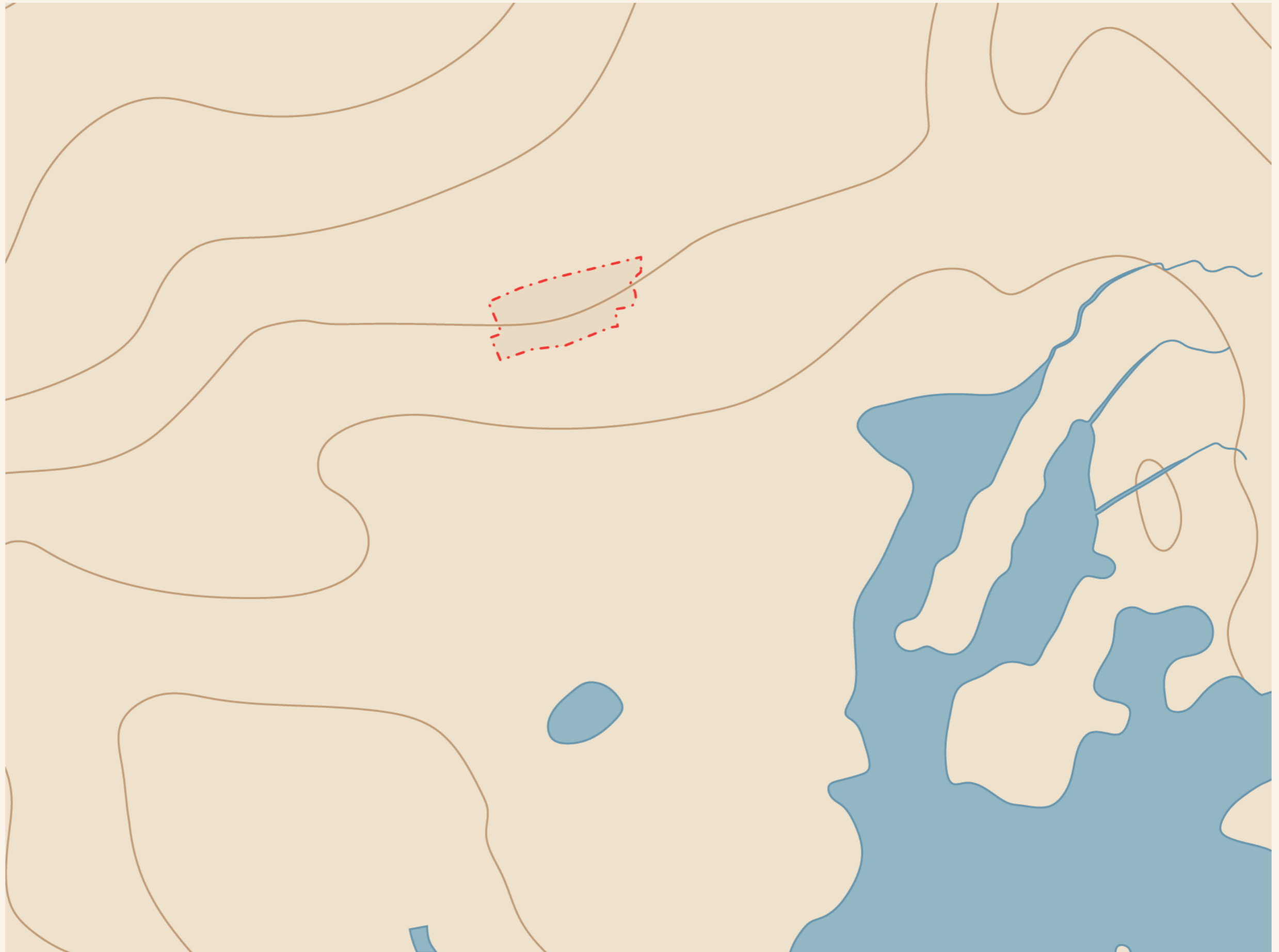
Vegetation Groups

-  Wet Sclerophyll Forest
-  Heathlands

Mapping Country

Pre Colonial Topography

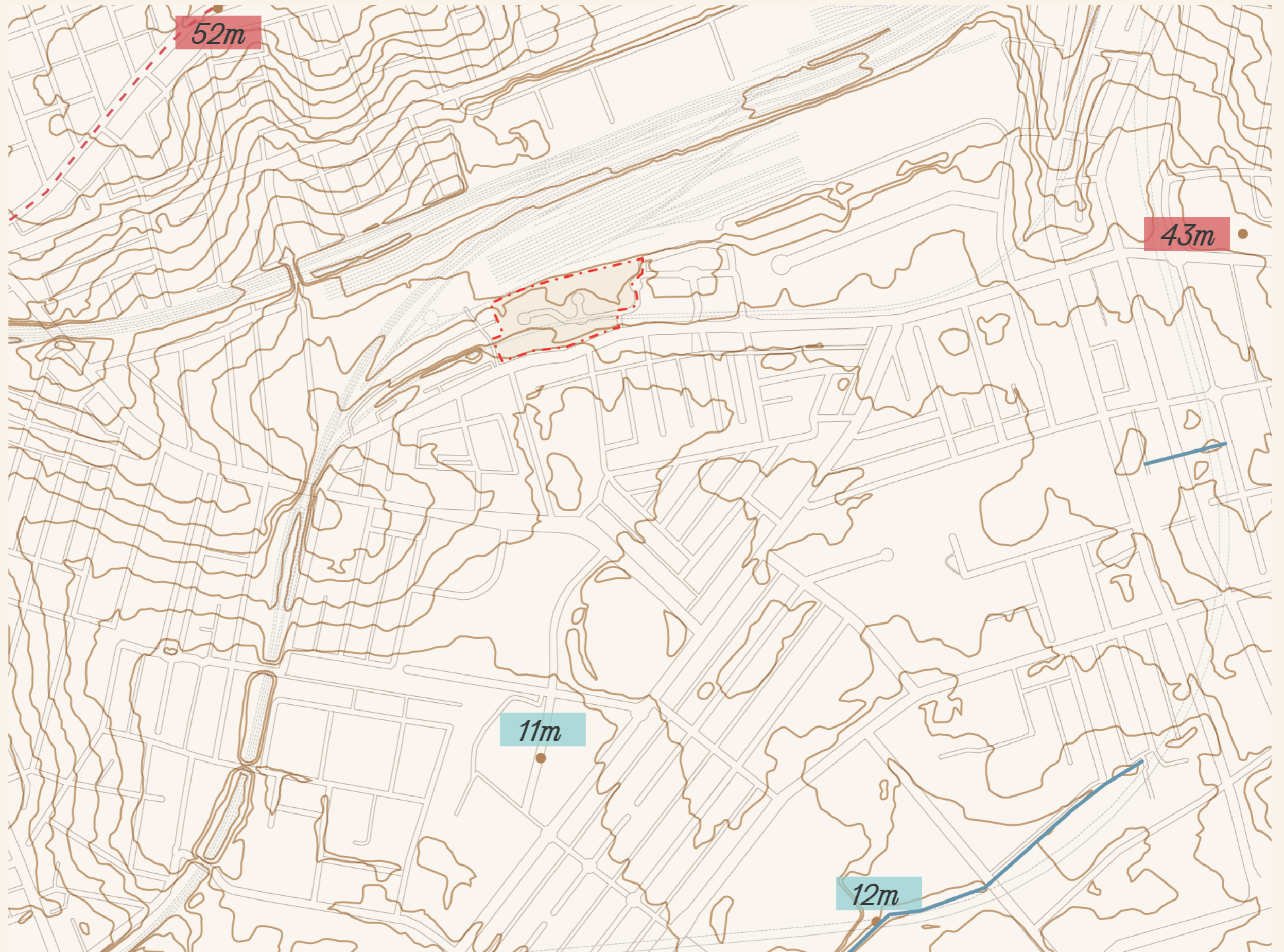
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Mapping Country

Post Colonial Topography

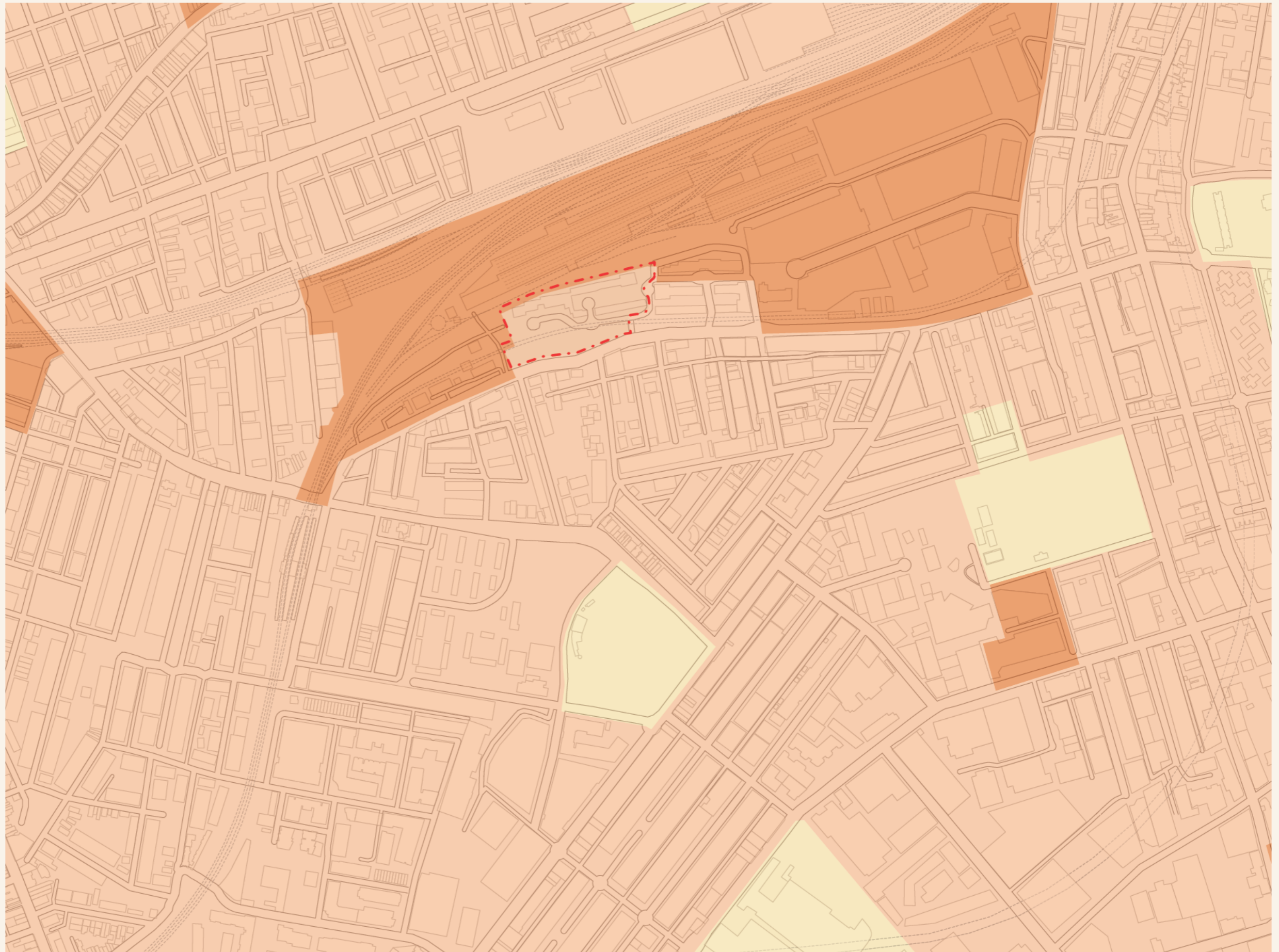
The Explorer Street site and surrounding areas has been substantially changed through colonial processes, including the topography, vegetation and waterways.








Urban Heat Map

Explorer Street, Eveleigh

The Explorer Street site and surrounding areas experience temperatures on average of 3-9°C hotter than baseline temperatures where the environment is heavily built up. Existing green spaces in the area (such as parks), however, experience lower temperatures of 0-3°C hotter than baseline temperatures.



Temperature

-  Cooler than baseline
-  0-3°C warmer than baseline
-  3-6°C warmer than baseline
-  6-9°C warmer than baseline
-  >9°C warmer than baseline



Boundaries

Boundaries between First Nations groups have always been nebulous, responding and moving to the changes in Country.



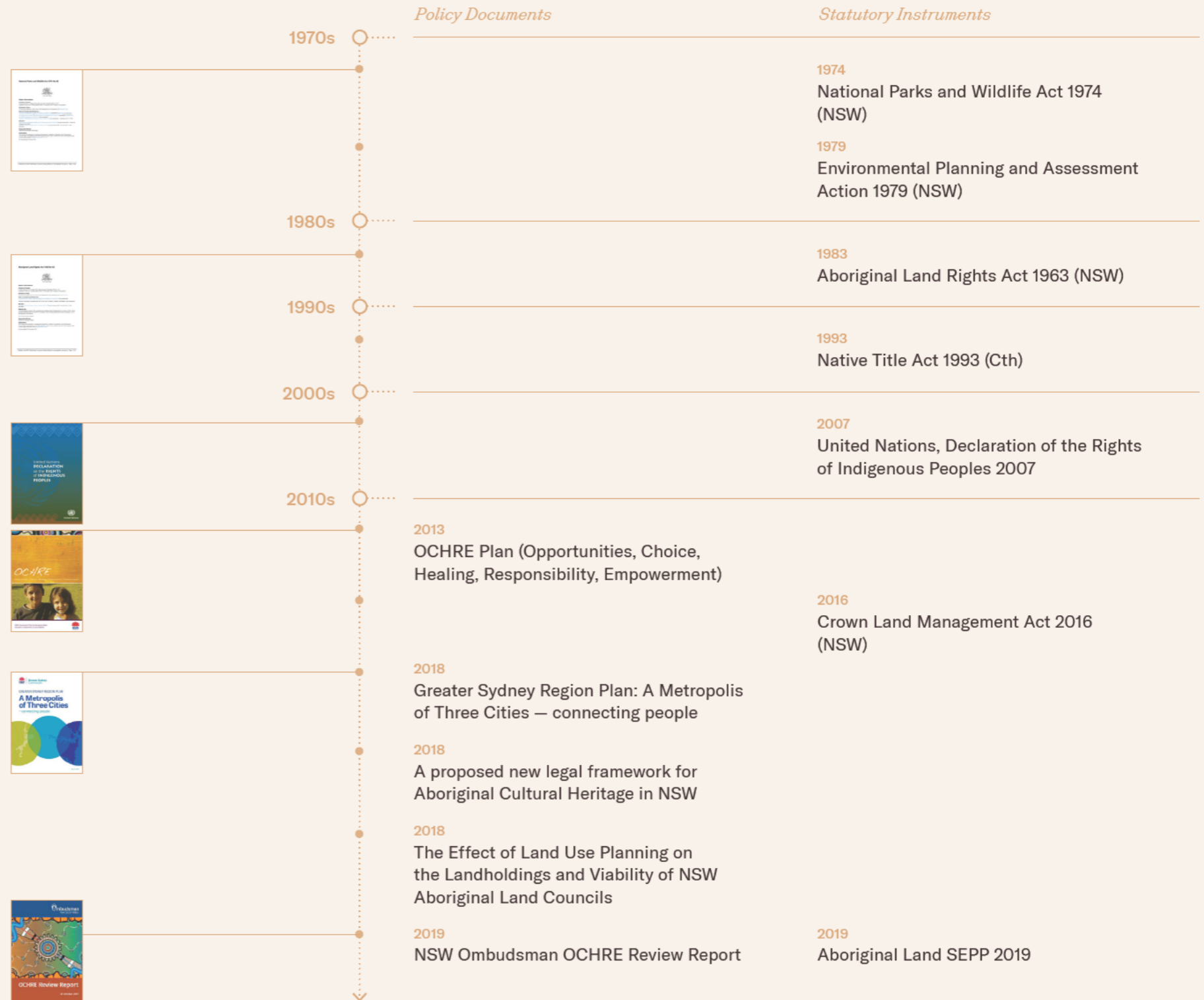
3—Strategic Planning Context

With gratitude to the hard work of First Nations Elders and Knowledge Holders, built environment practitioners, academics and researchers, advocates and resistance fighters as well as the support of non-Indigenous allies and advocates, centring Country now has a strong presence in New South Wales' design and planning policies, statutory instruments and regulations.

This section highlights some of the relevant policies and standards that guide our recommendations.

Policy Documents and Statutory Instruments

1970s-2010s



Policy Documents and Statutory Instruments

2020s



Government Architect NSW Connecting with Country Framework Outcomes for Country

The following actions are specific to Explorer Street Eveleigh in relation to meeting the guidelines set out in the Government Architect NSW's Connecting with Country Framework (2023) in relation to Outcomes for Country.



Addressing the Connecting with Country Framework at Explorer Street

1

Healthy Country

Healthy Country describes healthy, interconnected natural ecosystems, supported by regenerative practices based on Aboriginal knowledge.

Ensure that despite the urban context, biodiversity aspirations are planned in to the planning, landscaping, architectural and design outcomes

Draw inspiration from the original landscape and its geometries, colour, textures, forms and layouts, and work with topography, avoid major earthworks (or alternatively enable the original topography to be realised)

Enable permeability in relation to waters being able to access the ground and original waterways. Open up and if possible naturalise stormwater infrastructure

Work to clean water as it move through the landscape, do not pit and pipe

Reintroduce habitats for non-humans back on Country

2

Healthy Community

Built environment projects can provide opportunities for employment and capacity building within the Aboriginal community, and support Aboriginal communities' connection to their cultural identity, which supports positive health and wellbeing.

Create spaces for Aboriginal culture and heritage to be reflected back to the community in the built environment

Create the expectations that all First Nations peoples working, living and visiting the development should be able to feel culturally safe by creating a cultural safety framework

Involve the residents, as well as local Knowledge Holders and Elders in a regular and structured way, for instance, create an advisory panel with local (Gadigal with some neighbours) Elders and Knowledge Holders to guide the project on an ongoing basis

Ensure procurement targets for Aboriginal businesses and employment are exceeded

Include qualified First Nations designers and spatial practitioners on all aspects of the design and architectural projects

3

Protecting Aboriginal Cultural Heritage

It is critical that Aboriginal cultural heritage is protected in the built environment, both through the design and development of projects, and by acknowledging and respecting the rights of Aboriginal people and community over their cultural intellectual property.

Ensure Aboriginal cultural heritage related to this site is understood in collaboration with those to whom the heritage belongs (i.e. Gadigal people)

Ensure Indigenous Cultural Intellectual Property rights are recognised in all contracts that include First Nations peoples

Engage with Gadigal Knowledge Holders about language in relation to appropriate dual or re-naming of spaces

4

Cultural Competency

Built environment projects can provide opportunities for employment and capacity building within the Aboriginal community, and support Aboriginal communities' connection to their cultural identity, which supports positive health and wellbeing.

Implementing the Connecting with Country Framework through built environment projects provides educational opportunities for project teams, clients, and the public, to develop a deeper cultural awareness and respect for Aboriginal people and culture.

5

Better Places

Adopting a Country-centred approach creates better places, informs sustainable designs, integrates with the broader landscape to form place-based design responses, and promotes strong community engagement to create welcoming and accessible places.

Recognise the cultural landscape Eveleigh sits within, and reflect that in design outcomes (as specified in the principles and values)

Enable storytelling of the shared histories between Aboriginal peoples and non-Indigenous people

Where possible include local materials, specify sustainable materials, and reuse or recycle materials

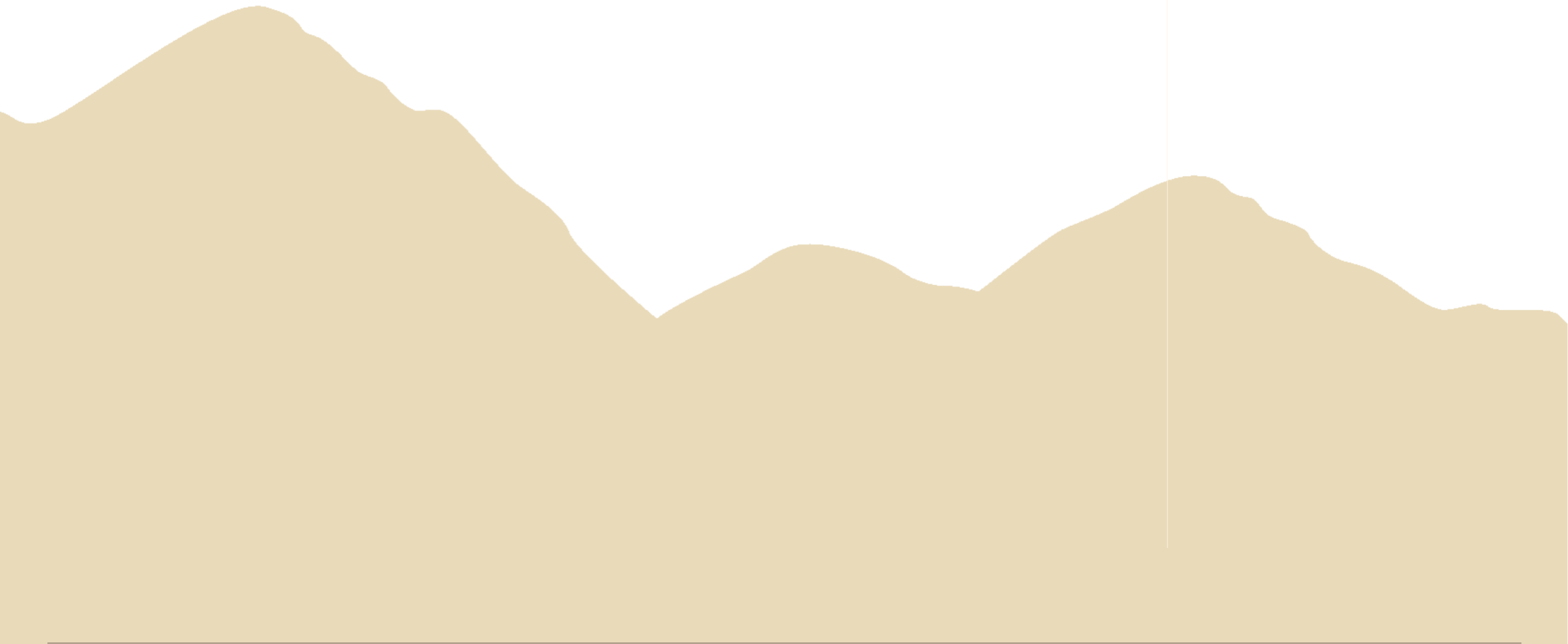
Consider how cultural practices can be reflected and reintroduced back on Country

Plant only native endemic species and create a succession plan for removing invasive species

4—Responding to Ngura (Country)

*More Than
a Place*

*Country is not just a place on a map or
a boundary line, it is a lived experience
and a heritage.*





Developing Country Respectfully

The development of this special part of Ngura (Country) represents a challenge to Traditional Custodians and First Nations peoples as it is a part of Country to which they have been dispossessed and removed for some years, and further development could render them further removed and gentrified out of this important part of Country.

The development of Country has been a spatial tool of the colonial project, in effect, First Nations peoples have been designed out of space. Our guidance in this document describes how the development of Explorer Street can occur in a way that is inclusive, honours Country, encourages actions of care and custodianship, and creates spaces that encourage First Nations peoples to return to this part of Country. Effectively, the purpose of our guidance is to support the development of Explorer Street in a Country positive manner.

Including First Nations Voices in Built Environment Projects

There are a number of ways First Nations voices can be integrated into built environment projects. We outline three here. As designers, Djinjama uses Designing with Country as our methodology.

Community Engagement

Community engagement is a strategic process of engaging with diverse groups of people from a community to ensure outcomes are reflective of their needs and are enduring, decisions are made equitably, and relationships between the people impacted by a project and those implementing it are strong and continuing. Engagement with a community can occur in many ways, from broad ranging consultation to co-design. Engagement must be appropriate both to the project and the needs of the community involved, and as such, engagement should be as carefully planned and considered as the process of design. Community engagement requires community engagement specialists who know the complexities of a community are involved early to plan and advise about the correct methodology for engagement. Dependent on the methodology and community, the client and design team may need to be involved.

This is a strategic process however there is no formal framework, it is dependent on the approach of the engagement consultant.

Connecting with Country

Connecting with Country is developing connections with Country through building relationships with First Nations peoples. This process of relationship building is undertaken during the course of a project with the expectation that First Nations knowledge will inform the design of built environment projects. The collaboration of a variety of people from the team may be required including the client and design team, and dependent on the complexities of the communities involved, may require community engagement specialists to guide the process. To achieve genuine inclusion of First Nations knowledge in the built form, all involved must have strong cultural capacity and be actively building relationships with the community and Country. It may require further interpretation by First Nations peoples to ensure the knowledge is used appropriately in the project process and outcomes.

Connecting with Country has been outlined in the Government Architect NSW Connecting with Country framework.

Designing with Country

Designing with Country is a design approach centred on Country. In the built environment, to be able to design and call oneself a designer, design qualifications are required. Country is a First Nations experience and understanding. Given the broader industry is largely still building up their cultural capacity and relationships to Country and community, currently Designing with Country requires qualified First Nations designers to lead the Designing with Country approach to the design of the built environment. It may include working with relationships held with community members however this might not be a formal engagement process. Designing with Country designers may also receive the information from a Connecting with Country or Community Engagement process to interpret the knowledge into the design outcomes and ensure it is being used appropriately and in a way that is relevant for the project.

There is no formal framework for Designing with Country, it is based on the approach of the First Nations designer.

Principles and Values from Country

These principles and values from Country have been developed via the Designing with Country process, which included yarning with key Elders related to this place.

To ensure genuine inclusion of these principles and values, as well as recommendations, design and spatial directions, further actions with the community, and innovations have been detailed.

It includes some understandings of how to manifest these principles through a design and planning process. Also outlined are colours, materials and textures from Country.

Importantly are included measurements of success, and ways of addressing some of the key strategic policies and frameworks.

Restore Country

1

This principle requires those working on Explorer Street in Eveleigh to **start with Country**, and whenever a question arises, **return to Country**. It asks for the memory embedded into this place is given space to share the layered narratives of this place. Importantly to restore Country here diversity must be integrated, both in the people involved in the design and planning and those who will live here, as well as the biodiversity in the plants and animals who are given space here. One aspect of restoring this Country is recognising this is a watery place, and as such integrating water in sensitive ways.



Boundary Conditions

2

This principle recognises **this place sits in-between**; it has always been a place people have come to, move through, gathered in. It is a place that sits between two cultural resources—the Kangaroo Grounds and Wetlands. The site also is located between two geological landscapes—Sandstone and Shale which hold two plant communities along with the related key kin species and habitats also. As such, those working at Explorer Street Eveleigh need to mind these **diverse shared spaces**, and how all can flourish here.



Custodial Care

3

This principle reminds all working at Explorer Street Eveleigh to **always touch the ground lightly**; it is a place that has been severely impacted by colonial processes so needs **extra care**. Responses to this principle will ensure there are ample **spaces on Country for culture to express and be practiced**, both in open space and indoors. Those working on this project will ensure the designs are inclusive, for all bodies and abilities to access, for humans, non-humans and more-than-humans equally.



1 Restore Country



Measurements of Success

- Healthy Country with reintroduction of green spaces full of endemic species that belong to place
- Those living in and visiting Explorer Street inherently sense the unique identity of this place and Country
- The use of water is an exemplar in this place for others aiming to develop housing estates i.e. appropriate management of waters (grey, black and runoff waters)
- Integrate National Standards of Competency for Architects into all architectural responses for the entire site

<i>Values</i>	<i>Care for Country and Biodiversity Recommendations</i>	<i>Design and Spatial Directions</i>	<i>Actions with Community</i>	<i>Materiality, Colour and Textural Recommendations</i>
Start with Country	<p>Incorporate and reintroduce local endemic species of greenery to measurably increase biodiversity</p> <p>Understand the three pillars of the sustainability triangle (social /cultural, economic, environmental) and ensure all three pillars are equally considered in relation to sustainability</p>	<p>Start all stages of work with a strong understanding of this place, and what it needs to remain the unique place it is and was</p> <p>Designs should reflect this place rather than a faraway place. Start by looking to pre-colonial Country for clues for design, for instance, what can be learned from the non-human kin who belong here?</p> <p>Utilise the greenery endemic to the area to help counteract the heat, i.e. with shaded areas</p>	<p>Collaborate with key Gadigal or ecological Knowledge Holders regarding knowledge about flora and how to integrate it appropriately</p> <p>Ethically source vegetation from Indigenous organisations</p>	<p>Examine closely the planting, structure, colours and textures of Wet Sclerophyll (Sydney Turpentine Ironbark) that is endemic to the area and use these in the design outcomes</p> <p>Reflect on and incorporate textures, colours and geometries of the geological landscape, i.e. sandstone and shale</p>
Memory of Place	<p>Do not overuse one materials from Country more than another – spread the load</p> <p>Emulate how natural areas of this site used to look by bringing back local native species only in the green spaces</p>	<p>Draw inspiration from the natural landscape and its geometries, forms and layouts and follow the guidance of Country in designed forms, geometries, structure</p> <p>Celebrate and preserve the beauty of this place with designs inspired by Country</p> <p>Do no further drastic changes to landscape other than to return it to original forms</p>	<p>Collaborate with key knowledge holders to ethically incorporate the history of Country into the space</p> <p>This Country holds the memory of those that have passed through here, including more-than-humans. Reinforce these connections by acknowledging them in art, design, soundscapes or wayfinding in collaboration with Knowledge Holders</p>	<p>Draw inspiration from this Country and its geometries, colour and textures</p> <p>Celebrate the sand dune hills that lie under this place in the materiality</p>

1 Restore Country



Relevant Example and Precedent Projects

- University Of Queensland Reconciliation Garden
- Bosco Verticale by Boeri Studio

<i>Values</i>	<i>Care for Country and Biodiversity Recommendations</i>	<i>Design and Spatial Directions</i>	<i>Actions with Community</i>	<i>Materiality, Colour and Textural Recommendations</i>
Diversity on Country	<p>Consider diversity through many filters, not just those relevant to humans</p> <p>Consider productive landscapes such as gardens and green spaces, and how they can be spaces of sharing for both humans and non-humans</p> <p>Keep non-human needs and patterns in mind when making design decisions</p> <p>Re-invite endemic fauna to site by creating spaces they feel safe and welcome with plenty of food, water and shelter</p> <p>Create a diverse, endemic planting palette that reflects changes in seasons</p>	<p>Incorporate the history of landscape into design, remembering The Waterloo Swamps and Botany Sands</p> <p>Create spaces specifically for Aboriginal peoples to come together and share culture</p> <p>Create paces that enable many different peoples to come together</p>	<p>Consult with residents regarding how productive landscapes such as gardens and greenery can benefit the community</p>	<p>Specify sustainable, diverse and complex materials and colours</p>
Watery Place	<p>Ensure the waters leave the site cleaner than when they entered</p> <p>Enable water to flow through and between structures rather than in concrete</p>	<p>Consider how the watery spaces and wetlands that belong here can be celebrated in this place once again</p> <p>Acknowledge the cultural significance of water through interpretive responses</p> <p>Use water sensitive construction techniques to ensure waters are not being overused at any stage of the project</p> <p>Respond to the nature of water in designs, allowing water to slow down, pool and disperse into the landscape, avoid overly straight lines in architecture</p>	<p>Collaborate with Gadigal or water Knowledge Holders on the cultural significance of the waters of this place and how they can be reinterpreted appropriately</p>	<p>Reflect on the wetlands in designs and integrate water sustainably in outcomes</p> <p>Use materials that actively seek to reduce water consumption</p> <p>Specify materials that mould to/for watery spaces, and reflect the movements of water or watery flows</p> <p>Allow waters to permeate the ground by designing permeable surfaces</p>

2 Boundary Conditions



Measurements of Success

- Residents and visitors are inherently aware of the original ecological communities that belong to this place
- A space where community and non-human kin can coexist
- A place where non-humans can use it as a refuge, shelter, stop (for migratory species) and/or even home

<i>Values</i>	<i>Care for Country and Biodiversity Recommendations</i>	<i>Design and Spatial Directions</i>	<i>Actions with Community</i>	<i>Materiality, Colour and Textural Recommendations</i>
Interstitial Spaces	<p>Reflect the two distinct ecological communities in the green spaces of the area</p>	<p>Create a gathering space for all in community; create a separate one for non-human kin that humans rarely access</p> <p>Develop areas for the youth to spend indoors or under cover especially during the hotter seasons</p> <p>Design clever interstitial spaces that draw residents and guests from one to another for instance, hallways, stairwells, driveways, entries and exits, balconies, courtyards, lobbies, etc</p> <p>Include cultural interpretations in the in-between spaces</p>	<p>Understand from the residents the sorts of interstitial or in-between spaces they need, and design them mindfully</p>	<p>Specify materials that reflect the distinct geologies, plant communities, waters, etc</p> <p>Design in ways to carefully integrate the old and new using material or textural differences</p>
Shared Places	<p>Develop spaces for all to flourish with acknowledgement of the diverse cultural resources (i.e. the nearby Kangaroo Grounds and wetlands)</p> <p>Avoid centring humans; recognise the belonging of non-humans in this place as equal as humans</p>	<p>Be mindful spaces are not over-designed, use practices of enoughness in design decision making</p> <p>Create spaces where visitors and residents feel welcome, safe and at home – understand the nuances of cultural safety and how this can also be designed for</p>	<p>Ensure voices of residents and community are heard and their requests actioned or if not possible honestly explained</p> <p>Create understandings of how the space can the space foster reconciliation through yarns with residents</p>	<p>Use environmentally sustainable materials and resources to not place too much burden on Country and ensure future generations can benefit from sharing Country also</p>

2 Boundary Conditions



Relevant Example and Precedent Projects

- Café Teri by Nameless Architecture
- Kanahebisui Shrine by Kazuya Saito Architects
- Enabling Village Singapore
- A new Climate garden at Grønjordsskollegiet, Denmark

<i>Values</i>	<i>Care for Country and Biodiversity Recommendations</i>	<i>Design and Spatial Directions</i>	<i>Actions with Community</i>	<i>Materiality, Colour and Textural Recommendations</i>
Flourishing Non-humans	<p>Ensuring no further harm comes to non-human kin</p> <p>Replace the trees to bring back a cool understorey and reduce the impacts of the sun on the soil</p> <p>Create a succession plan for invasive (exotic species) to be replaced with plants that belong to this Country</p>	<p>Create habitat for non-human kin including small invertebrates, birds and reptiles</p>	<p>Consult with local Gadigal Elders on which non-human kin they have associations with, including seasonal patterns, habitats etc and incorporate their understandings into design outcomes</p>	<p>Use biomimicry of local fauna and flora to choose textures for the site</p>

3 Custodial Care



Measurements of Success

- There is no further destruction to Country
- Spaces that continue a history of transitioning, meeting and gathering
- Anyone can eat from the landscape at any time of year for free
- All feel they are equally able to access all parts of the development, including spaces created for non-humans

<i>Values</i>	<i>Care for Country and Biodiversity Recommendations</i>	<i>Design and Spatial Directions</i>	<i>Actions with Community</i>	<i>Materiality, Colour and Textural Recommendations</i>
Touch the Ground Lightly	Develop spaces dedicated to re-establishing biodiversity and healing	Work with topography, do no major earthworks, instead repair any Country that has been impacted by past works where possible	Engage with cultural narratives and histories of place through an ongoing engagement process	Understand from Knowledge Holders how to ethically collect and use of resources (materials) from Country Reuse, recycle, upcycle and repurpose materials instead of specifying new
Culture on Country	Acknowledge and incorporate seasonal knowledge (flora, fauna and medicinal) into landscaping outcomes	Create spaces for cultural practices, access to First Nations access to and care for Country activities	Ensure ethical collaboration with First Nations communities, designers and cultural Knowledge Holders	Integrate understandings of seasonal living into the planting palettes and layout
Inclusive Design	Design for movement, for people to move fluidly, but also non-humans through their own movement paths Include nesting boxes, insect hotels, bee bricks across the site	Ensure all bodies regardless of their ability can access all parts of the development Ensure spaces tell the deep histories of place, not just the recent history	Creating a space where First Nations community can live and work again Consider how to establish economic benefits for the community	Specify textures, colours and designs that reflect non-human kin, for instance, small invertebrates, birds and reptiles



*Materialisations
of Country
Centred Design*

With Country and culture as guide, Explorer Street has the opportunity to be an exemplar of Country centred design.

This section provides visual inspiration on how to achieve this with indicative material, texture and colour palettes from Country.

Colours, Materials and Textures of Country

The colours, textures and materials outlined here originate from the pre-colonial Country known to be in the place now called Explorer Street. They are offered for designers and architects to gain inspiration from this place.

FLORA

Colour References



Material and Texture References



Dominant Trees



Silvertop Ash
Eucalyptus sieberi



Southern Silky Oak
Grevillea robusta



Bangalay
Eucalyptus botryoides



Axe Breaker
Trochocarpa laurina



Red Bloodwood
Corymbia gummifera



Narrow-leaved Scribbly Gum
Eucalyptus racemosa

Shrubs



Blueberry Ash
Elaeocarpus reticulatus



Hairpin Banksia
Banksia spinulosa



Veined Mock-Olive
Notelaea venosa



Creeping Wedge-pea
Gompholobium inconspicuum



Narrow-leaved Geebung
Persoonia linearis



Pink Spider Flower
Grevillea sericea

Grasses and Groundcover



Right Angle Grass
Entolasia stricta



Common Everlasting
Chrysocephalum apiculatum



Blue Bottle-Daisy
Lagenophora stipitata



Large Tick-Trefoil
Oxytes brachypoda



Long-leaved Wallaby Grass
Rytidosperma longifolium



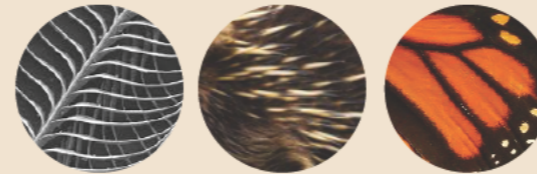
Yellow Rush Lily
Tricoryne simplex

FAUNA

Colour References



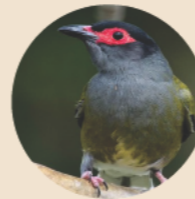
Material and Texture References



Feathers



Tree Martin
Petrochelidon nigricans



Australasian Figbird
Sphecotheres vieilloti



Pacific (Eastern) Koel
Eudynamys orientalis



Black-faced Cuckooshrike
Coracina novaehollandiae



Red Wattle Bird
Anthochaera carunculata



New Holland Honeyeater
Phylidonyris novaehollandiae

Fur



Gould's Wattled Bat
Chalinolobus gouldii



Long-nosed Bandicoot
Perameles nasuta



Platypus
Ornithorhynchus anatinus



Short-beaked Echidna
Tachyglossus aculeatus



Grey-headed Flying-fox
Pteropus poliocephalus



Common Ringtail Possum
Pseudocheirus peregrinus

Scales and Skin



Monarch Butterfly
Danaus plexippus



Pale-lipped Shade Skink
Saproscincus spectabilis



Emperor Gum Moth
Opodiphthera eucalypti



Brown-striped Frog
Limnodynastes peronii



Crusader Bug
Mictis profana



Eastern Blue-Tongue Lizard
Tiliqua scincoides

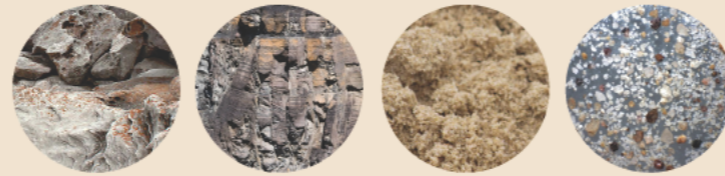
Colours, Materials and Textures of Country

GEOLOGY

Colour References



Material References



Landscape References



Wianamatta
Ashfield Shale



Sand
Beach dunes



*Country and
the Built
Environment*

It is imperative the built environment is understood as part of Country rather than separate to it in order places can be considered and cared for holistically.

5—Precedents and Case Studies

Knowledges

Country holds knowledges, Laws, narratives and lore like an eternal library.

Housing Estates or Suburbs with Introduced Biodiversity and Green Spaces

According to the United Nations Food and Agriculture Organisation¹ more than half the people on the planet live in cities. The rate of urbanisation is accelerating, especially in the global South, where 95 percent of the urban growth projected from now up to 2050 is expected to occur. Driven by a blend of natural demographic expansion and rural-urban migration—partly due to climate change and the consequent reduction in food production and livelihood opportunities—this inexorable process of urbanisation is exacting a particularly heavy toll on drylands. Already some of the world’s most vulnerable populations, i.e. people living in drylands, face particularly daunting challenges as a result of this trend. The *Green Urban Oases Programme* of the United Nations¹ aims to reduce the impact of urbanisation on biodiversity and the natural environment by turning dryland cities into ‘green urban oases’, thus strengthening their resilience to climatic, health, food and economic crises.

In New South Wales, the Department of Planning and Environment has put forth an initiative called *Cities for Nature*² to connect green spaces as an important tool for conservation across a city. The city is seen as an ecosystem that includes nature, people and the built environment. The focus lies in these 5 areas:

- 1. Protect core remnants:** Core remnants are large, healthy, intact areas of bushland, like our national parks. They usually contain more native species and habitats than smaller remnants. Larger remnants are less vulnerable to the effects of fragmentation, like increased numbers of invasive species and degradation of habitat.
- 2. Waterway health:** Healthy bushland and wetlands help ensure healthy waterways, which support aquatic biodiversity and provide recreational opportunities for Sydneysiders. Healthy rivers mean healthy estuaries, which provide sheltered, nutrient-rich breeding grounds for fish, crustaceans and other marine life.
- 3. Connect remnants:** Connecting smaller fragmented remnants, like council reserves, to large remnants of bushland will allow native animals to move safely throughout their range to find food and suitable habitat. Corridors of vegetation also allow the spread of native plant species, leading to a more genetically diverse and therefore healthy remnants.
- 4. Look after urban remnants:** Urban bushland remnants are refuges for local native animals and are important stops for migratory species that need a rest and feed when they are passing through. They include council reserves, which also provide green space for the community to enjoy nature. But their proximity to people and housing can also cause problems: the spread of weeds from dumped garden waste, and the threat to our wildlife from roaming cats and dogs.
- 5. Wildlife stepping stones:** Wildlife stepping stones are small pockets of habitat. These can include gardens rich in a variety of plants that support birds, lizards, frogs and invertebrates, or even a balcony with flowers for passing bees and butterflies.



The office of the NSW Government Architect has launched *Sydney Green Grid*³, a report that promotes a network of high-quality green space that connects town centres, public transport hubs, and major residential areas. In this report the hydrological, recreational and ecological fragments of the city are mapped and then pulled together into a proposition for a cohesive green infrastructure network for greater Sydney. The report is one step in an ongoing process towards the establishment of a new interconnected, high performance, green infrastructure network which will support healthy urban growth.

Another example is the Greater Sydney Region Plan: *A Metropolis of three Cities*⁴. To meet the needs of a growing and changing population the Plan seeks to transform Greater Sydney into a metropolis of three cities: the Western Parkland City, the Central River City and the Eastern Harbour City. The Plan is built on a vision of most residents living within 30 minutes of their jobs, education and health facilities, and services with 'great places' that bring people together. The Plan consists of 10 Directions which establish the aspirations for the region over the next 40 years and are a core component of the vision and a measure of the Plan's performance. Direction No. 8 refers to 'A city in its landscape' and expresses the value of green spaces, waterways and biodiversity.

A summary of research studies into the benefits of Green Urban Spaces

Taken from Urban forestry and urban greening in drylands¹

Environmental Benefits of Urban Forests

- In Enugu, Nigeria, street trees reduced street temperatures by 8 and 5°C respectively, during rainy and dry seasons.
- A study in Toronto found that heat-related morbidity (such as heat stroke) is reduced by 80% when tree canopy cover increases beyond 5%, and by 75% as hard surface cover decreases below 75%.
- A study in Salt Lake City in the United States of America found that neighbourhoods dominated by impervious surfaces were up to 2°C warmer and drier than urban parks in both daytime and night-time.

Air quality improvement

*NB *PM: particulate matter (PM) - microscopic matter suspended in air or water*

- Native trees and green belts in Kuwait contributed to a reduction in the annual rate of mobile sand by 94% and 95.3%, and that of dust by 64.5% and 68.4%, respectively. The ability of urban and peri-urban trees to retain sand movement and reduce soil degradation helps to slow the expansion of desertification, leading to further mitigation of climate change.
- Readings of PM10 before and after establishing a small-scale tree windbreak in Dubai showed a reduction of 19 to 22 percent of wind dust.
- In Beijing, even with 29% of trees in poor condition, 1 261.4 tonnes of pollutants from the air were removed by 2.4 million trees in 2002. The same 2.4 million trees in Beijing that removed pollutants from the air stored about 0.2 million tonnes of CO2 in biomass form.
- An analysis in Northern Negev, Israel, showed that peri-urban forests and trees produce a significant reduction in PM2.5/PM10 in urban areas during dust events.

Carbon sequestration

- In the city of Mendoza, Argentina, a study was conducted to estimate the carbon storage of the dominant species, *Morus alba*. The total *M. alba* coverage was shown to accumulate 24,208 tonnes of carbon in urban areas and 43,000 tonnes of carbon in the suburban area, from which 1,998.6 tonnes of CO₂ and 4,118.8 tonnes of CO₂ respectively are removed annually by leaves. Each year, 13,000 tonnes of CO₂ are released into the atmosphere by the city's public and private transport.
- In Addis Ababa, a study found that natural and planted forests and trees on the premises of Ethiopian Orthodox churches around the city each contained about 156 ± 92 tonnes per hectare of carbon stock.
- A study conducted in the City of Tshwane, South Africa in 2010 estimated that in the following 30 years, after planting 115,200 indigenous street trees during the period 2002–2008, around 200,492 tonnes of CO₂ equivalent would be reduced, and 54,630 tonnes of carbon sequestered.
- In Kumasi, Ghana it was found that about 1.2 million tonnes of carbon are captured in aboveground components of urban trees, with a mean of 228 tonnes of carbon per ha.

Biodiversity

- In the city of Xalapa, Mexico, a study showed a positive relationship between the richness of species and size of green spaces, with higher levels of biodiversity being measured in larger green areas.
- A study in the district of Abidjan, Ivory Coast identified that despite the poor state of urban green areas, strong biodiversity of ant species can be found, suggesting that those spaces present assets for the conservation of biodiversity.
- Research in South Africa found that, at street scale, there is a positive relationship between the richness of urban tree species and that of bird species.
- As the first biodiversity park in the United Arab Emirates, Al Fay Park contains more than 2,000 native trees and bushes—including the national ghaf trees that have been replanted from desert nurseries into the park—all specifically chosen to strengthen biodiversity for both plants and wildlife and to maximize natural cooling throughout the park.

Soil quality and water balance

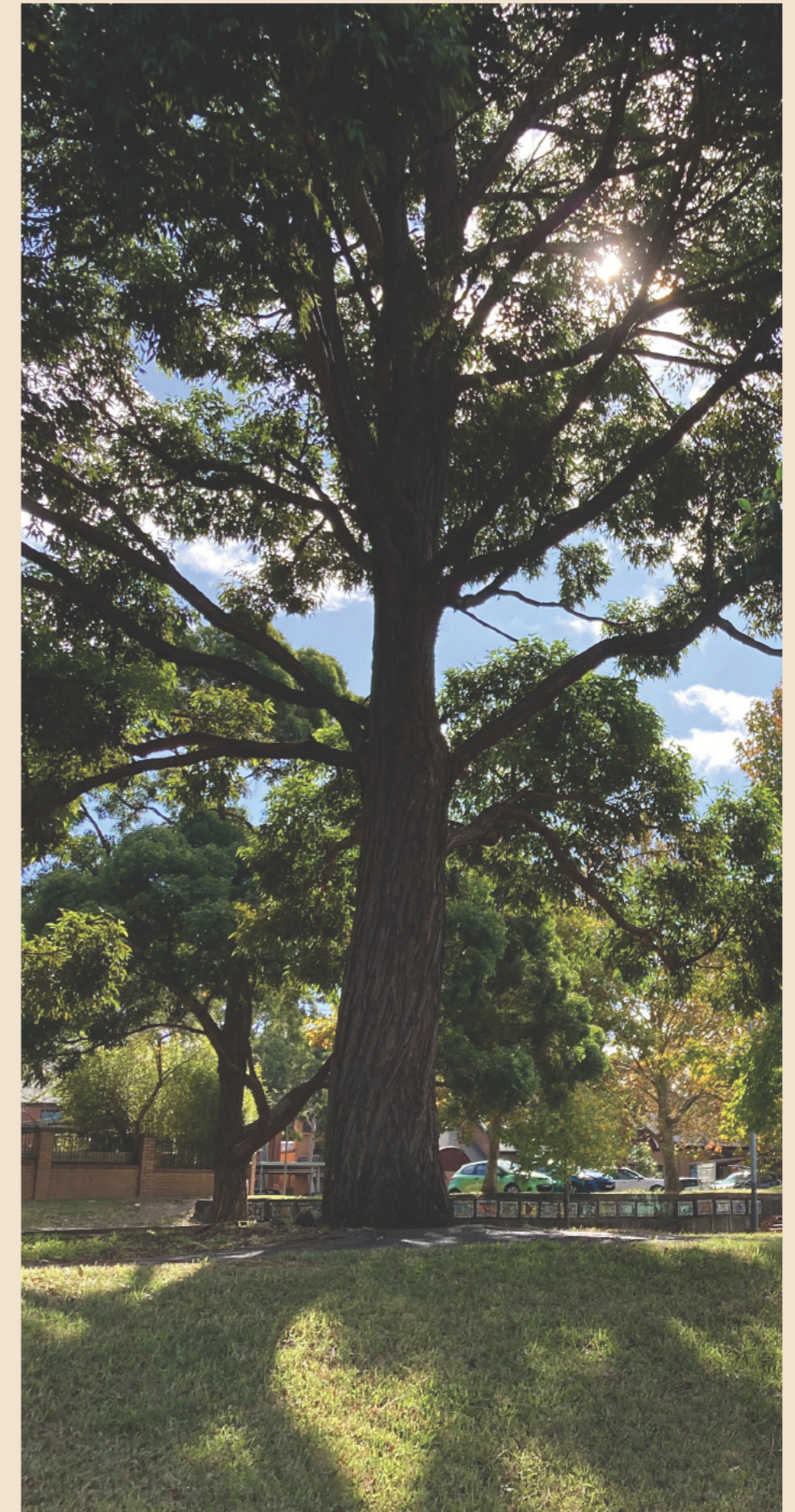
- A study in Manchester, United Kingdom of Great Britain and Northern Ireland, found that while grass almost totally eliminated surface runoff, trees and their associated tree pits reduced runoff from asphalt by as much as 62 percent.
- The New York Municipal Forest Resource Analysis found that one tree can catch around 5,420 litres of water per year.

Social Benefits

- In Victoria, attachment to the neighbourhood was found to increase significantly with tree coverage in three suburbs: where the sampled streets had higher levels of tree coverage, residents had higher levels of neighbourhood attachment compared with residents in areas where there was a lack of greenery.
- In Baltimore, United States of America, it was demonstrated that the green fabric of a neighbourhood created by tree canopy also facilitates the social health that is vital to neighbourhood functioning.
- Historic and contemporary research in Tunis revealed that trees have become associated with different social values, from place-making to family practices and have become markers of local heritage.
- Through a study in Sydney, Wollongong, and Newcastle it is demonstrated that tree canopies have a greater influence on mental health than just green spaces.

Economic Benefits

- Statistical models predicted that the 400,000 trees planted in Canberra prior to 1990 would have a combined energy reduction, pollution mitigation and carbon sequestration value of USD 20–67 million during the period 2008–2012.
- A tree plantation programme in Phoenix, United States of America, had an estimated present value of net benefits of around USD 681,000.
- Trees planted in Tshwane, South Africa, generated a CO2 reduction valued at more than USD 3 million.



Policy and governance

- Port Augusta has developed a sustainable integrated street tree policy with ‘Preferred Tree Planting Species for Port Augusta Environs’, with the implementation of regulatory rules for tree ownership and planting, including determining tree setback to avoid conflicts with the built form, and rigid tree removal regulation.
- In Sacramento, United States of America, an ordinance requiring 50 percent of parking lot areas to be shaded by trees within 10 to 15 years was passed in 1983. However, an analysis shows that this policy was not enough on its own. There was no system in place to monitor and evaluate tree health and maintenance, resulting in many trees not being planted, or being removed shortly after plantation.
- In Ras al-Khaimah, United Arab Emirates, the municipality has launched a Green Fines programme, giving companies the option to plant trees instead of paying environmental fees.

Planning, design and management

- The city of Victoria has drawn up an Urban Forest Master Plan that aims to reduce the number and severity of conflicts between urban forest and the built environment, while maximising watershed health, biodiversity and community benefits to all neighbourhoods.
- In Mendoza, Argentina, a heterogeneous composition of green areas was found to be more effective for cooling the air than a homogeneous one.
- In Aurora, United States of America, cooling benefits were greatest in buildings if taller trees were planted.

Water management in drylands

- The Adelaide Park Lands are fully supplied by the Glenelg Adelaide Pipeline Recycled Water scheme.
- In Urumqi, China, it was found that the cities’ reclaimed water is enough not only to meet the water demand of its urban landscape, but also to have remaining water stored in reservoirs, at minimum cost.

LIST OF REFERENCES

- 1 Urban forestry and urban greening in drylands: Improving resilience, health and wellbeing of urban communities. United Nations Food and Agriculture Organisation (2022)
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<https://www.environment.nsw.gov.au/get-involved/sydney-nature/cities-for-nature>
- 3 Sydney Green Grid (2017)
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- 4 Metropolis of three cities (2018)
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<https://greatercities.au/metropolis-of-three-cities>

Bosco Verticale, Milan

Case Study

Project Location:	Porta Nuova Isola area, Milan (Italy)
Owner or Operator:	COIMA
Designer:	Boeri Studio
Type of Project:	Architectural Biodiversity Project



Project Details

Bosco Verticale or ‘The Vertical Forest’ is a twin tower architectural concept that replaces traditional materials on urban surfaces with the hope of building a new relationship between humans and other living species. Finished in 2014, the towers are 80 and 112 metres high, and the balconies are covered head-to-toe with a combination of 800 trees and 5,000 shrubs. Utilising such vegetation and greenery the project provides shade, creates biological habitats, allows for mitigation, limits sprawl and with seasonal and clinical knowledge allows for proper management of all vegetation.

In the effort to reduce urban expansion, the Bosco Verticale is a device for limiting the sprawl of cities by designing with nature (greenery). Each tower is also equivalent to about 50,000 square metres of single-family houses. The vegetation or plant cover allow for the sun’s rays to be filtered preventing reflection, magnification and creating a more comfortable internal microclimate in comparison to other glass or stone materials. It’s also more beneficial environmentally as it produces oxygen, ‘regulates’ humidity, absorbs CO2 and protects against radiation and noise pollution.

The Urban Forest increases biodiversity, promoting the formation of an urban ecosystem. Various plant types in this formatted system creates a separate vertical environment which works within the existing network, creating a habitat for birds and insects. There was an initial estimate of 1,600 specimens of birds and butterflies within. In 2020, Head Architect Stefano Boeri reported that Bosco Verticale now hosts the nests of more than 20 species of birds and countless groups of plants.

In terms of seasonal knowledge, Stefano Boeri, noted the importance of climatic information when working on projects that incorporate urban greenery:

‘We always start by examining the climatic conditions and checking what framework the context gives us. These include, for example, the course of the sun, the temperature and humidity, the irrigation, the wind load and the resilience of the plants to fine dust and smog. We also analyse how these framework conditions change with increasing altitude.’

For Bosco Verticale, he noted how the lower floors differed from the upper:

‘In the case of the Bosco Verticale, for example, we used trees on the lower floors that lose their leaves in the winter because the position of the sun is very low then. This allowed us to prevent the apartments from being too shaded.’

Further study was important on plants and trees for species and space practicalities. The choices were the result of three years of studies carried out alongside a group of botanists and ethnologists. The plants used in the project were pre-cultivated in a nursery so they could become accustomed to similar conditions to those on the balconies, including those such as the sun, the temperature, humidity, the irrigation, the wind and general air pollutions. Due to the nature of plant life evolution, The Vertical Forest is everchanging much like the plants, meaning the colour of the structure changes along with the plants depending on the season which played a role in which ones were chosen.

Management was an important consideration during the project and it’s partly natural, partly man managed. ‘Flying Gardeners’, are a specialised team of arborists-climbers who, descend from the roof of the buildings using mountaineering techniques once a year to carry out pruning, removals and additions and checking progress. The management of the basins where the plants grow is the responsibility of the condominium to maintain the greenery.

The Irrigation is also centralised with the plants monitored by a digitally and remotely controlled installation while the necessary water is largely drawn sustainably from the towers. The hydration and irrigation system were designed through micro-meteorological studies. The calculation of irrigation requirements was carried out by examining climatic characteristics and was diversified depending on the exposure of each façade and the distribution of vegetation on each floor.

Enabling Villiage, Singapore

Case Study

Project Location:	Singapore
Owner or Operator:	SG Enable Ltd
Designer:	WOHA Architects
Type of Project:	Community centre, urban green space

Purpose and Significance

The Enabling Village (EV) is a community space created in a refurbished 1970s school that consists of community amenities, lifestyle retail facilities, and inclusive programming focused on disability-inclusive training and employment. The design integrates these elements to create a park/garden destination that is part of the neighbourhood’s pedestrian network and a new community heart that connects people with disabilities, residents and the public.

The design scope brings together architecture, interior design, signage, lighting, art and landscaping to deliver a holistically integrated environment. The principles of universal design have been applied to make the precinct accessible and understood by users regardless of their age, size, ability or disability. Spaces seamlessly connect by elevators, low-gradient ramps, tactile floor indicators, hearing loops and braille signs. It is a showcase of current assistive technologies and product/service designs. For example, a hearing loop system allows hearing-impaired people to listen to musical performances flawlessly through a system that wires up rooms and buildings with cables that generate signals that can be tuned into hearing aids.

Each building is made distinct by a feature wall with coloured graphics and up-cycled materials. The murals in the garden incorporate art from artists with autism. The landscaping and water areas are designed with native species to help attract biodiversity and support ecosystems. Verandahs and Cabanas extend from passageways to create outdoor meeting spaces that bring people closer to nature.

The EV is a project at the intersection of architecture, lifestyle, technology and user-experience design. In 2016 the Building and Construction Award ‘Universal Design Mark Award’ was given to the EV and again in 2022 it received the Urban Land Institute Global Awards for Excellence. These awards acknowledge its contribution to heartland rejuvenation, community building, integration of education, work, training, retail, lifestyle, and with connecting people with disabilities and the wider society.

Opportunities

The Enabling Village is a beacon of universal design. It provides an example of how various elements are brought together to create both a community and a space, representing a fresh approach to social businesses and community building that is sustainable and accessible.



Urban Farming Office Project

Case Study

Project Location:	Ho Chi Minh City, Vietnam
Owner or Operator:	Vo Trong Nghia Architects (VTN)
Designer:	Principle Architect: Vo Trong Nghia
Type of Project:	Environment Project



Project Details

Vo Trong Nghia Architects have turned their concrete framed head office in Ho Chi Minh City into a vertical farm, rich with vegetation consisting of vegetables, fruits and herbs. The office, also known as the Urban Farming Office, was designed to symbolise the sustainable, vegetative, low energy architecture for which VTN Architects are known.

The design incorporates the concrete structure and the greenery of vegetation to maximise all aspects elements of energy, climate and water management. On the southern side of the building, the wall of plants acts to filter sunlight and air, preventing overheating while also creating a shaded microclimate for the office interiors. Inside the building, workspaces are organised around a central atrium, and full height sliding glass doors provide access onto balconies for moving or harvesting planters.

The core of the office building was constructed using an exposed concrete frame, while the planters themselves are supported by a steel shelving structure. This allows for flexibility as plants grow or for them to be swapped out entirely. All the vegetation on site is irrigated with stored rainwater, while evaporation cools the air.

Careful consideration was also taken in account when considering insulation and climate when designing certain aspects of the building. The north wall has cross ventilation properties and is made of a double-layered brick wall with an air layer inside for better insulation properties which is beneficial economically with reducing the use of air conditioner.

The practice explained their inspiration for the design drew from Vietnam having diverged from tropical forests under rapid urbanisation and 'the lack of green causes various social problems such as air pollution, floods and the heat island effect.' Further, new generations in urban areas are losing their connection with nature.

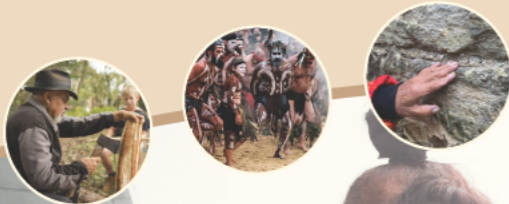
'Together with the roof garden and ground, the system provides up to 190 per cent of green ratio to the site area, which is equivalent to 1.1 tons of harvest.' This helps address the lack of greenery and food supply that has been affected by urbanisation. The plants chosen were various local edible plants, such as vegetables, herbs, and fruit trees which were selected to contribute to the biodiversity of the region, further strengthening their initiative of returning to the green Vietnam of the past lost in urbanisation.

6—Storytelling

The storytelling of Explorer Street originated from the Reading of Country and yarns with key Knowledge Holders.

Story of Place
A meeting place:

of peoples over
many generations



of geological and
topographical systems



of plant communities



of cultural practices



of cultural resource places



End Note

Irrespective of material (tangible) changes that have occurred to Country, the immaterial (intangible) aspects remain as memory and spirit.

We have an opportunity and responsibility to carry the memories of Country forward for future generations, to remember how Country has always been, to sing it, to dream it, to read it and listen to it, to repair it, to keep Country alive and healthy.

