



Noosaville Foreshore Infrastructure Master Plan

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 **NOOSA**
Council

**NOOSA COUNCIL RESPECTFULLY
ACKNOWLEDGES THE TRADITIONAL
CUSTODIANS OF THE LANDS AND
WATERS OF THE NOOSA AREA, THE
KABI KABI PEOPLES, AND PAYS
RESPECT TO THEIR ELDERS, PAST,
PRESENT AND EMERGING.**

The Kabi Kabi First Nation covers over 11,500 km² of Country up along the Sunshine Coast from north of Brisbane to the Gregory and Isis Rivers south of Bundaberg. Kabi Kabi land takes in the eastern part of the coastal ranges including the volcanic Glasshouse Mountains and the great Mary River valley which flows from the Conondale Ranges to the sea near Maryborough.

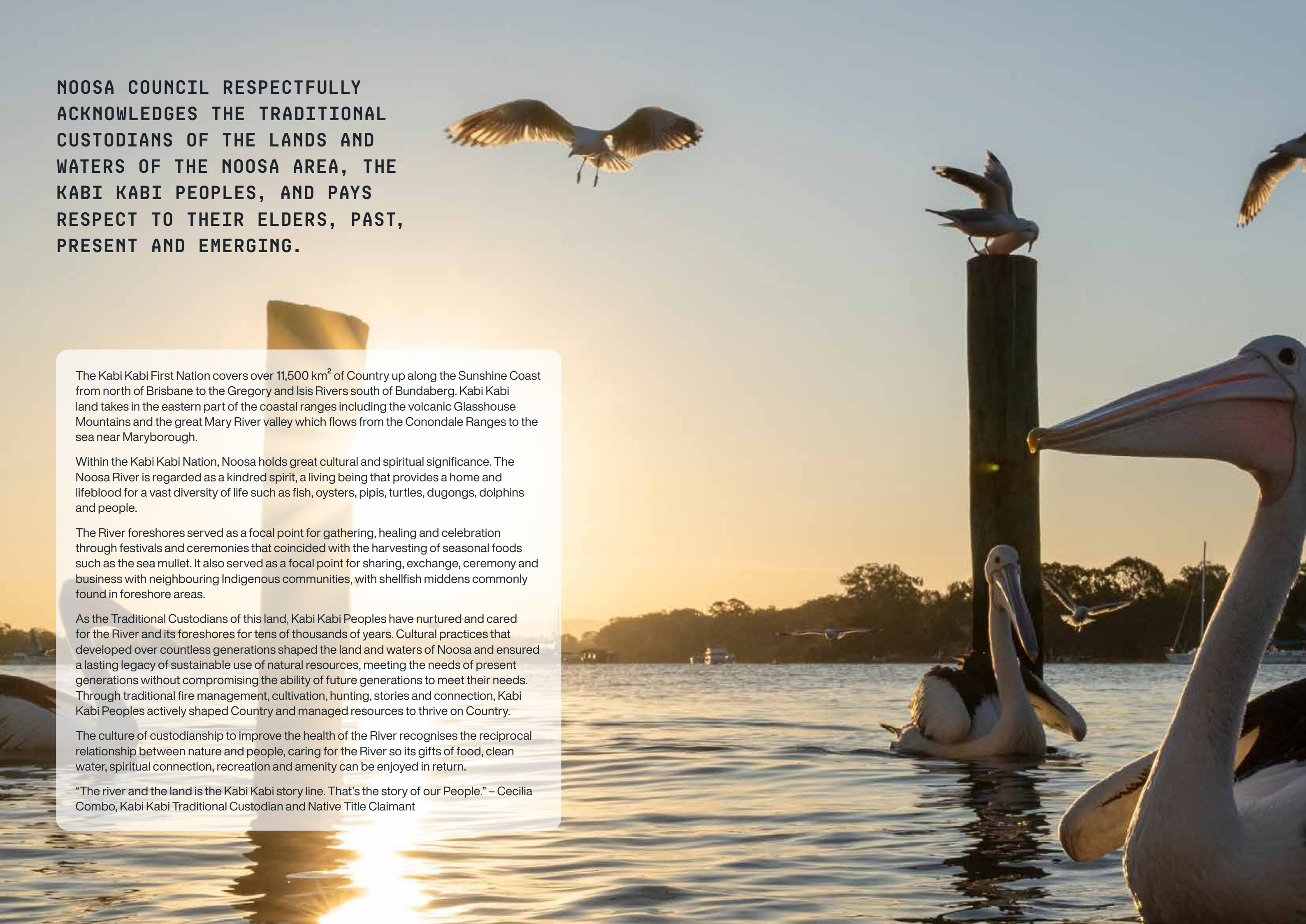
Within the Kabi Kabi Nation, Noosa holds great cultural and spiritual significance. The Noosa River is regarded as a kindred spirit, a living being that provides a home and lifeblood for a vast diversity of life such as fish, oysters, pipis, turtles, dugongs, dolphins and people.

The River foreshores served as a focal point for gathering, healing and celebration through festivals and ceremonies that coincided with the harvesting of seasonal foods such as the sea mullet. It also served as a focal point for sharing, exchange, ceremony and business with neighbouring Indigenous communities, with shellfish middens commonly found in foreshore areas.

As the Traditional Custodians of this land, Kabi Kabi Peoples have nurtured and cared for the River and its foreshores for tens of thousands of years. Cultural practices that developed over countless generations shaped the land and waters of Noosa and ensured a lasting legacy of sustainable use of natural resources, meeting the needs of present generations without compromising the ability of future generations to meet their needs. Through traditional fire management, cultivation, hunting, stories and connection, Kabi Kabi Peoples actively shaped Country and managed resources to thrive on Country.

The culture of custodianship to improve the health of the River recognises the reciprocal relationship between nature and people, caring for the River so its gifts of food, clean water, spiritual connection, recreation and amenity can be enjoyed in return.

“The river and the land is the Kabi Kabi story line. That’s the story of our People.” – Cecilia Combo, Kabi Kabi Traditional Custodian and Native Title Claimant





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Executive Summary

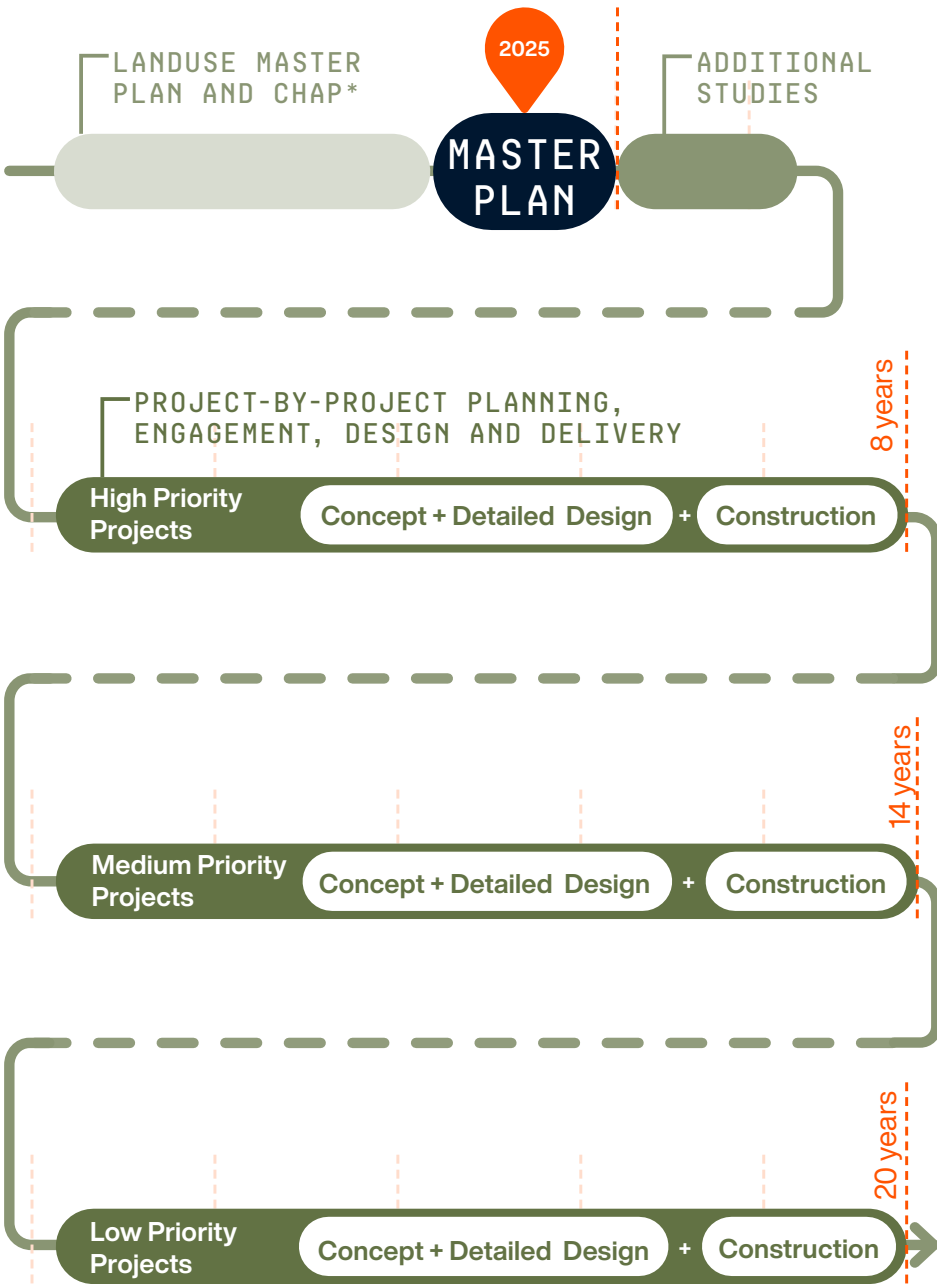
The Noosaville foreshore parkland is a beloved recreational, riverside destination for residents within the Noosa region and also for visitors seeking a laid-back holiday experience. Interaction with the Noosa River has shaped the history and development of Noosaville, and it is this special relationship that is so important to preserve and protect for the next generation.

The Noosaville Foreshore Infrastructure Master Plan has been developed to provide a future-focused strategic framework for the enhancement of the Foreshore, guided by fundamental community values.

The Noosaville Foreshore Infrastructure Master Plan, sets a vision for the next 20 years with a timeline to progressively implement various projects and small infrastructure upgrades.

This Master Plan is guided by the vision and voice of the community as captured in the *Noosaville Foreshore Land Use Master Plan (2018)* and responds to climate as captured in *Coastal Hazards Adaptation Plan (CHAP, 2021)*. Further studies are needed to ensure suitability and viability of the proposed Master Plan outcomes, including concept and detailed design stages.

The staging of projects is essential for project planning and funding, whilst also ensuring that the foreshore can continue to function as upgrades and improvements are undertaken in particular areas. This Master Plan will help in identifying high, medium and low priority projects over the next 20 years.

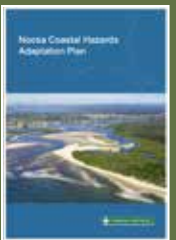


The Master Plan builds upon existing plans



Noosaville Foreshore Land Use Master Plan (2018)

The *Noosaville Foreshore Land Use Master Plan (2018)* identifies key activities, precincts, and land uses on the foreshore. It sets a clear vision for the foreshore based on extensive community engagement and land use issues and outcomes.



Noosa Coastal Hazards Adaptation Plan (2021)

The *Noosa Coastal Hazards Adaptation Plan (CHAP, 2021)* provides a plan to improve resilience to coastal risks due to climate change. Recreation areas and parks, roads, footpaths and the gravity-based stormwater network in Noosaville are at high risk of negative impacts due to erosion, tidal inundation and storm tide inundation. Without proactive resilience, this inundation is expected to restrict access and increase costs to recreational areas, footpaths and roads.



Noosa Council Corporate Plan 2023-2028

The *Noosa Council Corporate Plan 2023-2028* outlines our mission, goals and objectives for Noosa over the next 5 years. The Corporate Plan has been structured around the following 5 key themes to which this Master Plan is aligned, including; environment, liveability, prosperity, future, and excellence.

Key studies which inform this Master Plan

Noosa Cycling and Walking Strategy and Implementation Plan 2020-2040 (2021)

Noosa River Flood Study Upgrade, Volume 4, Design Event Modelling Report (2017)

Future Tidal Inundation Mapping (2018)

Noosa Shire Council Coastal Hazards, Risk, Vulnerability & Adaptation Assessment (2023)

Master Plan Purpose

The *Noosaville Foreshore Infrastructure Master Plan* aims to upgrade, protect and improve what we love about this two-kilometre foreshore.

The purpose of the *Noosaville Foreshore Infrastructure Master Plan* is to serve as a tool to guide the ongoing activation and upgrade of the foreshore. This allows us to protect what we love about the foreshore into the future, and enhance the experiences of community and visitor alike.

The Master Plan outlines holistic and adaptive solutions to the challenges we face. The Master Plan is key in achieving the following:

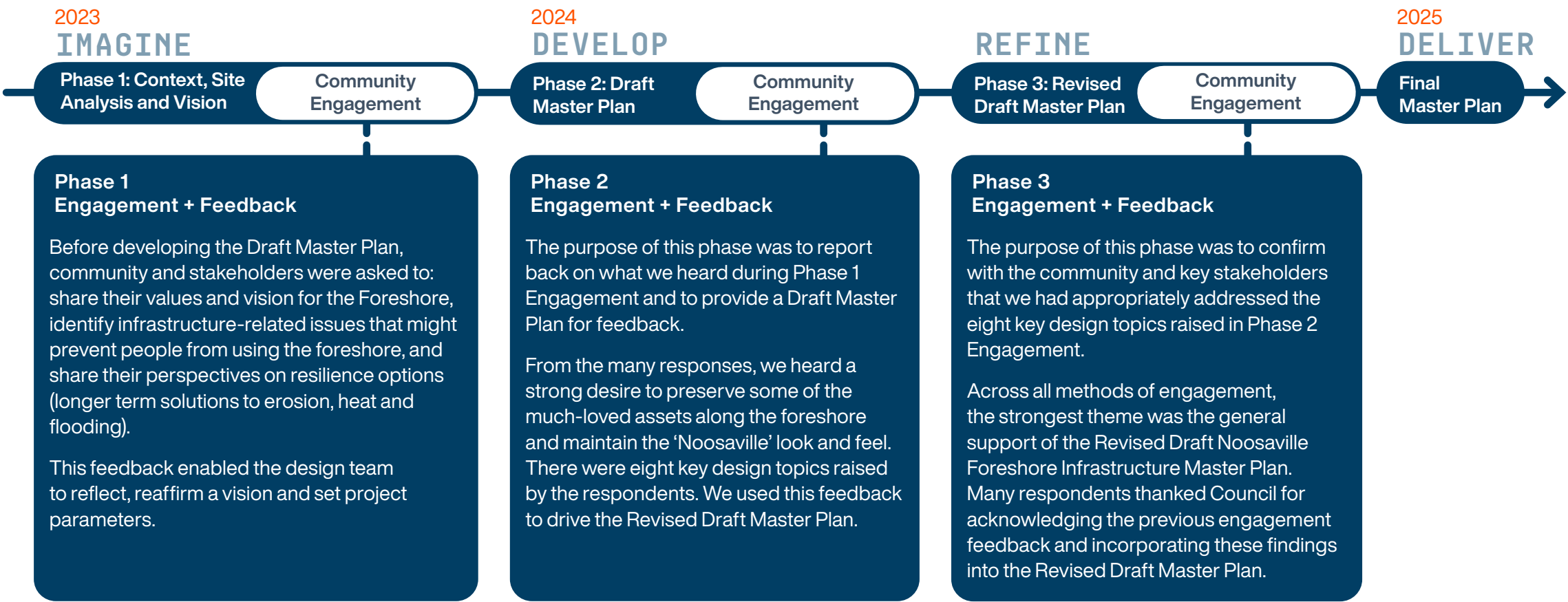
- Enhance liveability and community wellbeing
- Upgrade failing and aging infrastructure and facilities
- Provide new community facilities which respond to changing community needs
- Meet necessary standards of service for the community
- Ensure an accessible and inclusive foreshore that reflects the diverse needs of our community
- Adapt to erosion, higher temperatures, and sea level rise
- Achieve long-term cost savings on multi-million dollar asset renewal and maintenance
- Ensure efficient allocation of Council resources
- Attract external funding to reduce ratepayer costs
- Attract local investment

Master Plan Process

This Master Plan has been developed through a comprehensive process as laid out in the corresponding timeline.

This started with establishing the vision, context, and site understanding in partnership with the community and a range of experts and external stakeholders (Phase 1 Engagement + Feedback).

The next step included drafting the Master Plan and then subsequently refining it with two rounds of community engagement for further feedback and input (Phase 2 and Phase 3 Engagement + Feedback) to deliver this Final Master plan.



Site Context



Understanding Our Community

The local community loves the foreshore, and is passionate about its future. It is a vital community asset, and contributes significantly to liveability and community wellbeing.

The median age is significantly higher by 18 years than that of Queensland and Australia, and the population is made up of more female than male residents.

Compared to the state and national average, there are many more Noosaville residents living in dwellings that are apartments and townhouses. This highlights the importance of maintaining and improving access to high quality public spaces with amenity.

When asking how the community use the foreshore, an overwhelming number of responses related to exercise, while high numbers mentioned using the foreshore and Thomas Street for dining and gathering with friends and family.

When asked about their vision for the foreshore, the respondents of Phase 1 Engagement mentioned; the importance of preserving and enhancing the relaxed atmosphere and amenity (70%), the importance of ensuring the area is maintained sustainably (37%), providing for sporting and recreational opportunities (34%), and that future infrastructure is appropriate and nature based where possible (24%).

Less common responses for the foreshore but still of importance was the desire for the foreshore to be a space for social and cultural gatherings (15%), well connected to other parts of Noosa (13%), accessible for all (13%), safe (12%) and has improved infrastructure (10%).

The most important challenge when making improvements to meet the other challenges, is to not lose the existing character, feel and amenity of the foreshore.

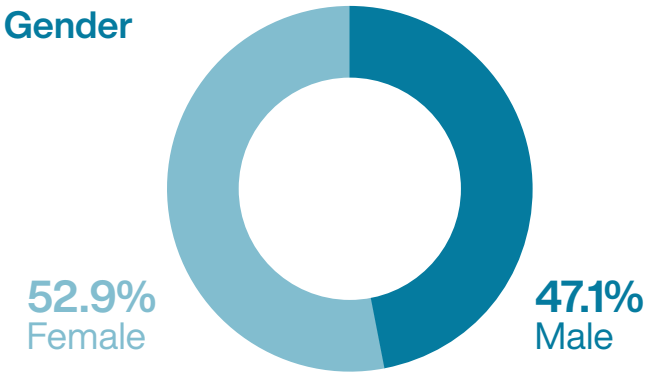
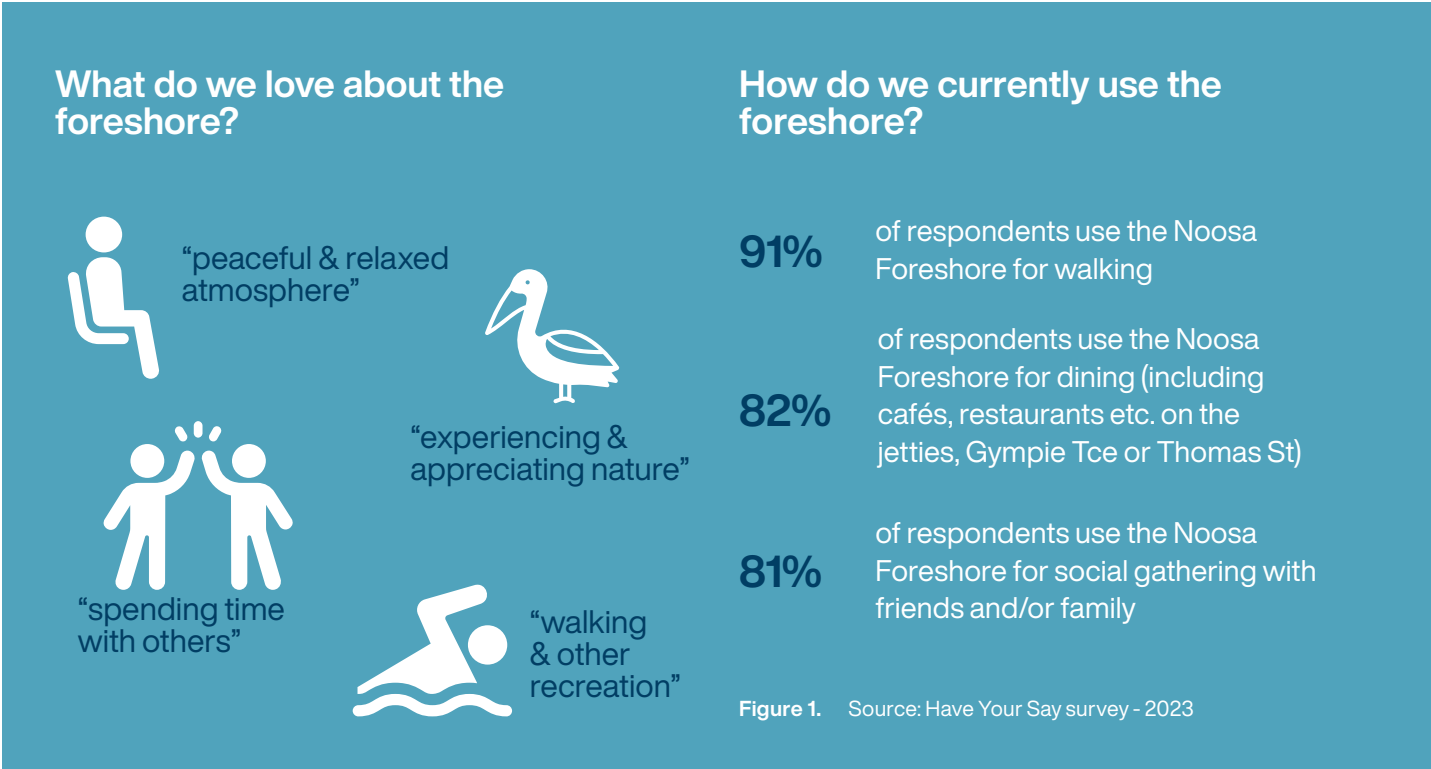


Figure 2. Noosaville Gender Statistics. Source: Australian Bureau of Statistics - 2021 Census

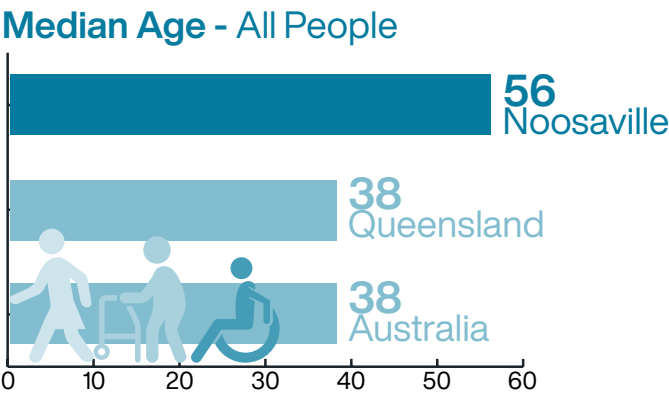


Figure 3. Noosaville Median Age Statistics. Source: Australian Bureau of Statistics - 2021 Census

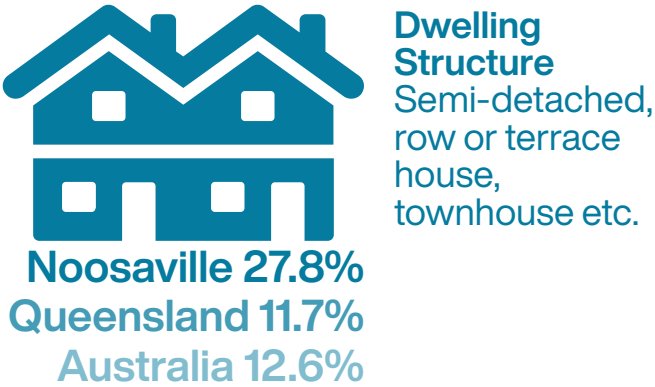


Figure 4. Noosaville Semi-detached, row or terrace house, townhouse etc. Dwelling Structure Statistics. Source: Australian Bureau of Statistics - 2021 Census

Understanding Culture + Connection

First Australians have called this land home for tens of thousands of years. The Noosa River and the surrounding country belonged to countless generations of the Kabi Kabi First Nation. The estuary was full of fish and oysters, and the land was rich with casuarina, ash, gums, mahogany, honeysuckle, bloodwood, stringy bark, tea tree, scrub tree and box tree.

Extensive engagement including a Walk on Country was undertaken with the Kabi Kabi Peoples Aboriginal Corporation to embed opportunities to recognise and respect their deep cultural and spiritual connection to the foreshore.

Across the entire foreshore, Council and Kabi Kabi plan to partner on:

- Embodying Kabi Kabi connection as a foundational theme for community experience of the foreshore.
- Incorporate Kabi Kabi stories, history and language on signage throughout the public space.
- Provide opportunities to create sculpture and public art reflecting the cultural connection, heritage and intrinsic value.
- Develop a dedicated cultural walk along the foreshore.

- Partner on nature-based restoration work proposed along the foreshore to improve resilience and natural values.
- Incorporating economic opportunities for long-term, sustainable and intergenerational benefit for Kabi Kabi, including through activities such as cultural tours.

Colonial interest in the Noosa region began with timber in the early 1860s. Tewanin was established as a port for the local timber industry and to supply the booming town of Gympie. In the 1870s and 1880s a small number of miners and families from Gympie built houses on the bank downriver from Tewanin. This area became known as ‘Gympie Terrace’.

By 1933, there were about 60 houses and shops at Gympie Terrace. During the Second World War, troops from the 2/14th Battalion were stationed locally for training in amphibious vehicles on the river and Lake Weyba. They were fed by Maisie Massoud from the wood fired ovens at her family’s café on Gympie Terrace.



After the war, professional fishing and prawning increased significantly. Boat hire businesses for amateur fisherfolk and holidaymakers were established on Gympie Terrace, along with yachting and rowing clubs.

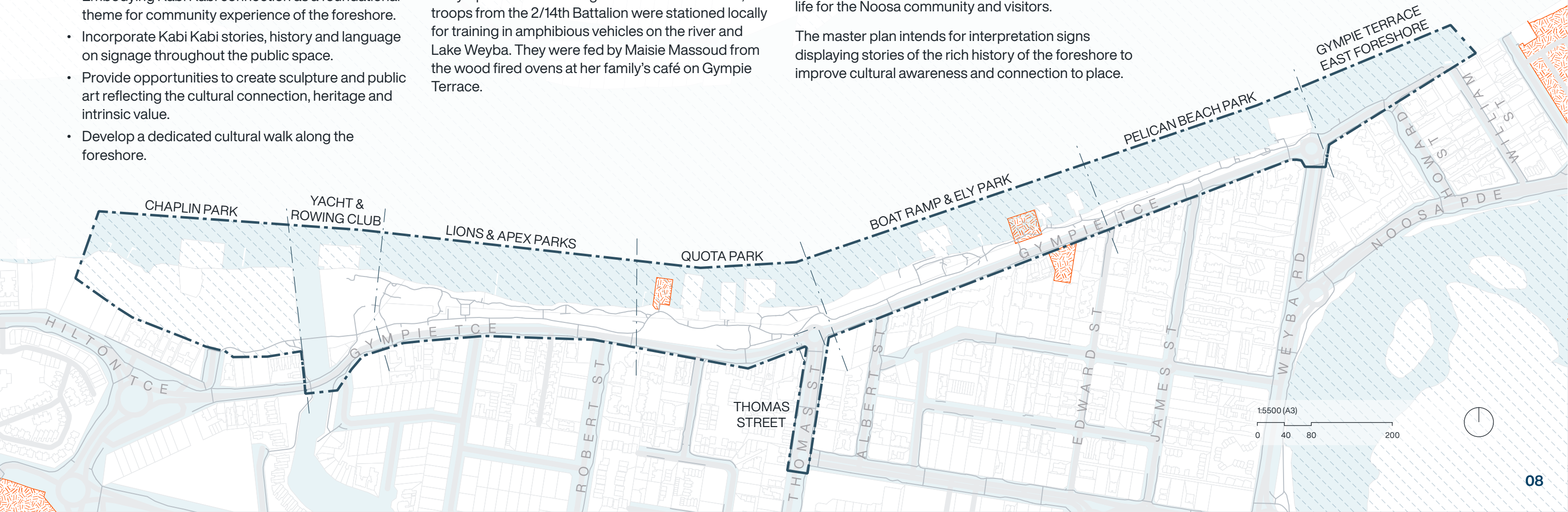
Some of these early businesses such as Terrace Boat Hire (T Boats), O Boats and Maisie’s Restaurant still operate on the foreshore. Ely Park and Massoud Park are named for early families in the area and Chaplin Park is named for former Noosa Shire Councillor Frederick Chaplin.

The Noosa Cultural Plan 2019-2023 identified the importance of adding to the network of heritage walks in the Shire. At least 20 stories have been identified that could be included in a ‘heritage walk’ or ‘story walk’, along the foreshore to bring the area’s history to life for the Noosa community and visitors.

The master plan intends for interpretation signs displaying stories of the rich history of the foreshore to improve cultural awareness and connection to place.

LEGEND

-  Local and State Heritage Places
-  Non-exclusive Kabi Kabi Native Title as per determination in June 2024



Understanding Our Use + Recreation

The foreshore is much loved by the local community and visitors alike. From early morning through to the evening, people can be seen walking and jogging along the riverside path, swimming, relaxing under the shade, picnicking, and catching up with friends and family.

Visitors travel to the foreshore by many modes of transport, including driving private vehicles, cycling, walking, bus, ferry, with stops and parking servicing the length of the foreshore. The Principal Cycle Network runs parallel to the foreshore on Gympie Terrace. Foreshore access for all abilities requires improvement.

The foreshore is popular with recreational and fitness activities and groups, from non-powered water craft/sports clubs, kayaking and paddle boarding to yoga classes, fishing and tennis. Several recreational maritime facilities exist within the area, including The Noosa and Noosa Yacht and Rowing Club (NY&RC), public boat ramps and public jetties, accommodating both non-powered and powered boats.

Several attractions draw visitors to the foreshore. Commercial jetty leases offer recreational boat hire, fishing charters, tours, supplies, dining and takeaway options, including the NY&RC and The Boathouse.

One significant playground exists at Lions Park, with separate swings and exercise equipment dotted along the foreshore parkland.

The foreshore is also supported by businesses along the south of Gympie Terrace and on Thomas Street. Safe pedestrian connections between these businesses and the foreshore need improvement.

Generally, the path network requires an upgrade for accessibility and inclusive use. The network is a mix of footpaths, boardwalks, footbridges, pedestrian crossings and stairs. The experience is varied, with some parts showcasing the area's natural beauty and river, whilst other parts pass by slipways, parking areas, boat ramps, and vehicle access points. The hierarchy of paths is at times confusing and disconnected, with potential user conflicts between vehicles, pedestrians, cyclists and e-bike/scooters.

The future shared pathway width for each precinct along the foreshore will be established as part of future detailed design taking into account monitoring data showing the number pedestrians and cyclists that are currently using the path, and guided by pathway specifications from the appropriate governing authority.

RECREATION FOCUS FOR GENERATION



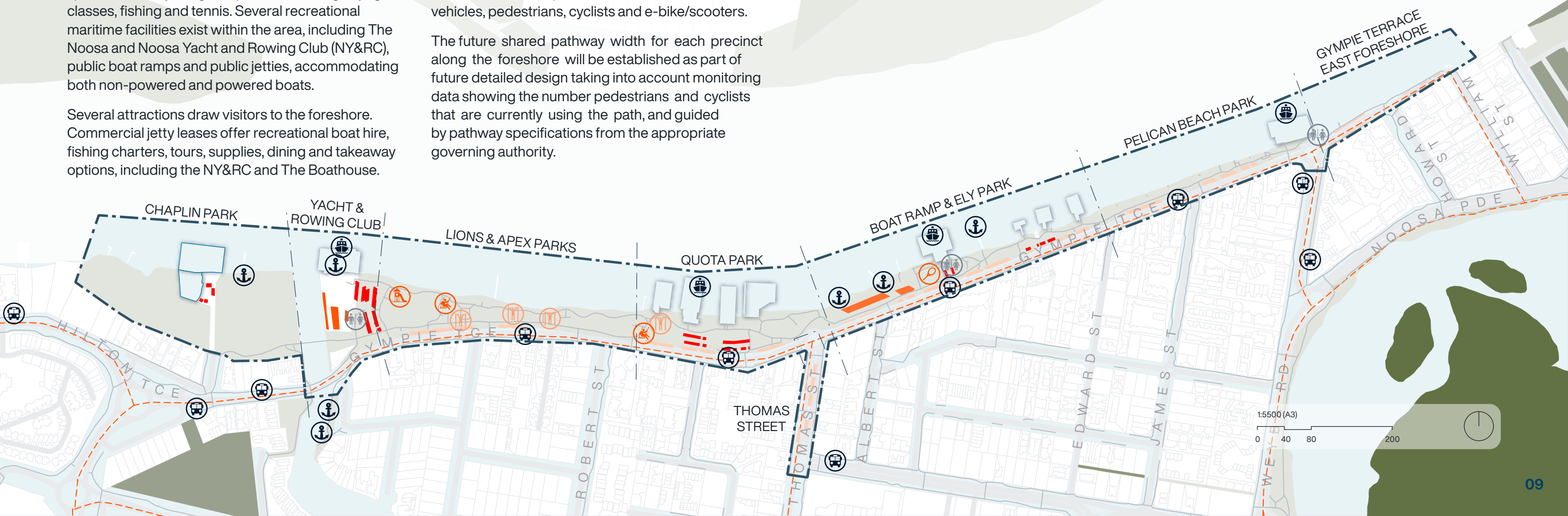
Figure 5. Opening of the Noosa River Sailing Club, 1961. Credit: Griffith Studios



Figure 6. Today, the foreshore is used for a range of activities.

LEGEND

- On-street Motor Vehicle Parking
- Off-street Motor Vehicle Parking
- Public Motor Vehicle and Boat Trailer Parking
- Boat Storage (Noosa Yacht & Rowing Club)
- Commercial Jetty Lease
- Noosa River Slipway
- Principle Cycle Network
- Pathway Network
- Bus Stop
- Noosa Ferry Stop
- Recreational Boat Facilities
- Amenities
- Tennis Club
- Playground
- Play Equipment
- Fitness Equipment



Understanding the Need for Resilience

At present, the foreshore benefits from an accessible and scenic riverside location, where changes to its condition have been happening for decades. These changes have mostly occurred in small increments and are not necessarily apparent day in and day out. Over time the foreshore has been and will continue to be impacted by extreme weather events.

Flooding is one of the biggest challenges, with tidal inundation events historically impacting the foreshore. The Queensland Government defines tidal inundation as “abnormal elevation of the sea level (a storm surge) over normal tide levels”. The foreshore is generally flat and low-lying, therefore at present inundation impacts areas of the foreshore, particularly to the west. Predictive flood modelling for 2040 and 2070 indicate sea level rise and increased inundation due to climate change. The high points in the foreshore that are less prone to flooding include the tennis court, public boat ramp and Ely Park.

Beach nourishment activities are currently being undertaken by Council, using dredged sand to top-up areas impacted by erosion. Historically, retaining walls and sea walls have been constructed to prevent sand loss that is typically caused by high tides, wind and wave action.

We know our subtropical climate can be hot and this heat impacts liveability and community wellbeing. Our partnership with UniSC to monitor and model micro-climate on the foreshore is ongoing. Urban Heat Island (UHI) is defined as ‘Urbanised areas that experience higher temperatures than the surrounding areas, largely caused by loss of vegetation, capacity to infiltrate rainwater and an increase in heat absorption by built structures’.² Indicative UHIs have been identified on the foreshore that are subject to the growing impacts of heat due to climate change.

Existing tree canopy cover varies along the foreshore with the highest identified in Pelican Beach Park (35.3%) and the lowest in Gympie Terrace East (15.9%). Lower canopy cover worsens the impacts UHIs and reduces parkland amenity of unshaded footpaths, seating and gathering spaces.

Structures and vegetation can block cooling breezes, contributing to heat. South-easterly breezes are the main winds that affect Noosaville. The foreshore’s position on the southern river bank means it is sheltered from the prevailing winds, but benefits from cooling coastal breezes.

Sea level rise and heat due to climate change is predicted to impact existing vegetation, with an increase in inundation, salinity and temperatures.

RIVERBANK CONDITION



Figure 7. Historic image showing vegetation along the riverbank. Credit: Griffiths Studio



Figure 8. Erosion on the riverbank caused by boat wash and wave action.

FLOODING



Figure 9. Pelican Boat Hire impacted by flood waters. Credit: Rob Maccoll

LEGEND

- Topographic High Point
- Urban Heat Island Area
- Rock Seawall
- Retaining Walls
- Sea-level Rise Inundation Extent at Highest Astronomical Tide (HAT)
- 2040
- 2070
- 2100

TREE CANOPY COVER

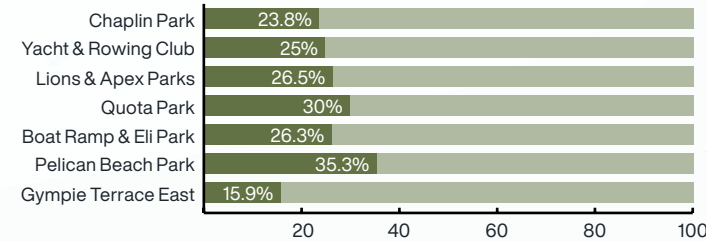
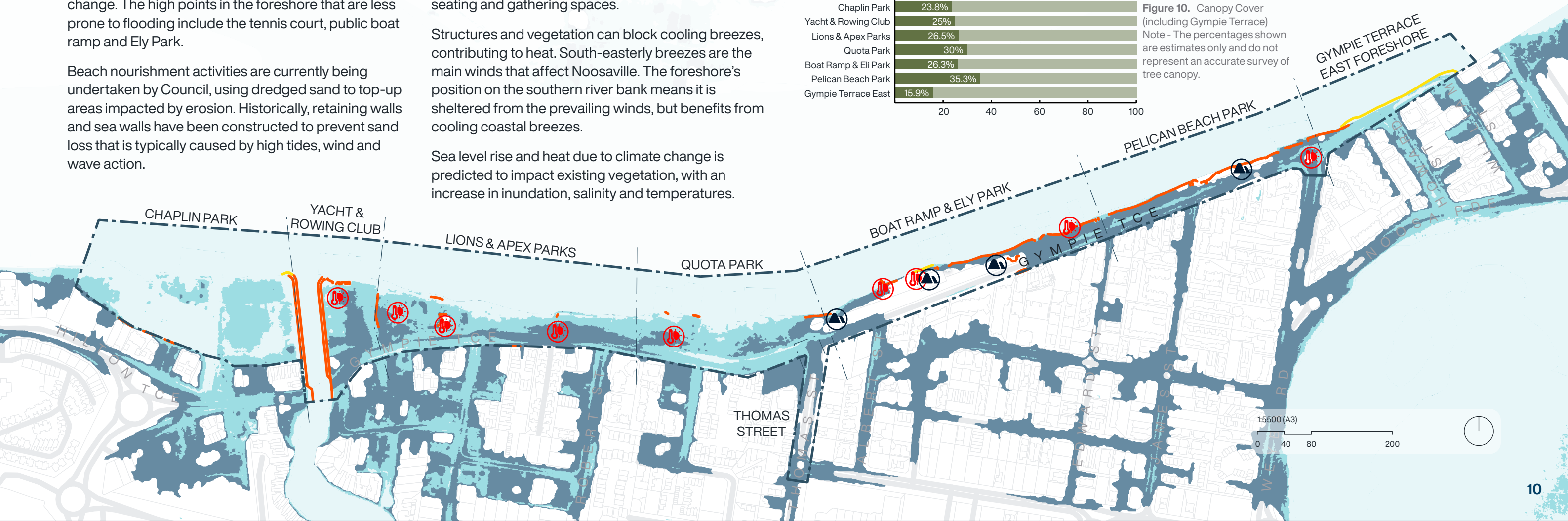


Figure 10. Canopy Cover (including Gympie Terrace) Note - The percentages shown are estimates only and do not represent an accurate survey of tree canopy.



Understanding the Environment

The Noosa River is one of Queensland's most pristine waterways. Despite the area having been historically heavily modified with the subsequent loss of habitat and biodiversity, the foreshore still plays an important role hosting a range of plant and animal species of conservation significance.

Fish Habitat Areas (highly productive coastal and estuarine networks) exist within Noosa River, and are designated as such in an effort to restrict urban development to maintain ecological significance of this environment.

Prior to European settlement and vegetation clearing, it is important to recognise the foreshore was likely to have been an open forest and woodland of Broad-leaved Paperbark (*Melaleuca quinquenervia*) and Swamp Mahogany (*Eucalyptus robusta*). There have been sedges and ferns, such as Swamp Water Fern (*Blechnum indicum*) in wetter areas and grasses and shrubs in drier areas. Other tree species that may have been present include a range of *Eucalyptus*, *Corymbia*, *Melaleuca* species, Cabbage Tree Palm (*Livistona australis*), and Swamp Oak (*Casuarina glauca*).

The foreshore has since been largely cleared of remnant vegetation and mangroves as residences, businesses and jetties were constructed along

Gympie Terrace. Today the foreshore is more similar to a traditional parkland, with maintained lawns and scattered large shade trees.

Several vulnerable and endangered fauna species have been observed within the foreshore and surrounding areas. These include the critically endangered Eastern Curlew (*Numenius madagascariensis*), the vulnerable Koala (*Phascolarctos cinereus*), the Western Alaskan Bar-tailed Godwit (*Limosa lapponica baueri*) and the Common Greenshank (*Tringa nebularia*). These species may use the foreshore for habitat, foraging and refuge. The foreshore regularly hosts an array of more common fauna, including various fish species, crustaceans, insects, and a variety of birds such as seabirds and shorebirds.

As biodiversity provides important ecosystem services such as clean water, fresh air, food, pollination and shelter to society, it is important to maintain and improve the health of the environment on the foreshore, in line with Council's nature positive goal in the Corporate Plan. The challenge is to maintain the environmental values, and increase habitat and biodiversity where possible.

SAMPLE TREE SPECIES



Melaleuca and Casuarina species



Moreton Bay Ash (*Corymbia tessellaris*)



Forest Red Gum (*Eucalyptus tereticornis*)



Coconut Palm (*Cocos nucifera*)



Tuckeroo (*Cupaniopsis anacardioides*)

LEGEND

Fish Habitat Areas

Pre-clear Regional Ecosystems

12.3.4/12.3.5/12.3.11 - *Melaleuca quinquenervia*, *Eucalyptus robusta* woodland on coastal alluvium/ *Melaleuca quinquenervia* open forest on coastal alluvium/ *Eucalyptus tereticornis* +/- *Eucalyptus siderophloia*, *Corymbia intermedia* open forest on alluvial plains usually near coast

12.3.5 - *Melaleuca quinquenervia* open forest on coastal alluvium

12.2.7 - *Melaleuca quinquenervia* or rarely *M. dealbata* open forest on sand plains

12.1.3 - Mangrove shrubland to low closed forest on marine clay plains and estuaries

12.1.2 - Saltpan vegetation including grassland, herbland and sedgeland on marine clay plains

Historical Wildlife Observations

! Critically Endangered Species

! Endangered Species

! Vulnerable Species



Understanding Our Assets

Noosa Shire Council has a range of assets and facilities located along the foreshore. Parkland facilities are popular and well-used during weekends and holiday periods, including barbecues, seats, bins, lighting and picnic facilities. There are existing challenges impacting the user experience with poor or inconsistent lighting facilities on the foreshore. Often facilities are, or are expected to be, impacted by regular inundation due to sea level rise. Future works should help to minimise the impacts and associated long-term maintenance.

Existing public amenities are located near the Noosa Yacht and Rowing Club, in Ely Park, and near the Weyba Road roundabout. These also serve as changing facilities for swimming. Public amenities range in capacity, accessibility and functionality with a notable lack of amenities between Lions and Ely Parks. Showers are also dotted along the foreshore, adjacent to areas used for swimming. Improved and accessible amenities are required.

The condition of the pathways vary from fair to poor, and will need widening or replacement in the next twenty years, to enhance accessibility and maintain use. Some footpaths are currently subject to tidal inundation, and with increased risk of flooding will need priority.

Council-owned structures and recreation facilities (shelters, play and fitness equipment) dotted along the foreshore vary in character and materiality, many of which are due for upgrade. Rock and timber seawalls used at the rivers edge to protect the foreshore, are reaching their end of life and need repair or replacement soon.

There is a large stormwater network within the foreshore with twenty-nine drainage outfalls and two open channels that send stormwater into the river. This infrastructure is more than 50 years old and in need of an upgrade over the next 20 years, due to poor condition. Several drainage outlets are blocked or buried in the sand, impacting their effectiveness. The network is gravity-fed and is at increased risk of further blockage due to continued tidal inundation. Outlets send stormwater into the Noosa River, often in areas popular with swimmers and recreational watercraft users.

Future consideration of location, materials and construction methods is required when replacing assets to ensure enhanced resilience and less ongoing maintenance costs.

The community has clearly expressed that car parking adjacent to the foreshore is currently a valued asset, supporting convenient access for all. There are presently 404 car parking spaces available along the foreshore. As each precinct is renewed over time and funding becomes available, the retention of car parking will remain an important consideration. However, it is recognised that the value and role of car parking may change over the 20-year life of the plan, influenced by shifts in community expectations, travel behaviour, technology, and land use priorities.

Accordingly, future design decisions will balance the need for accessible parking, including disabled spaces, with broader considerations such as road safety, business requirements, public and active transport integration, landscape amenity, and ongoing community values and feedback through staged consultation and detailed design processes.

LEGEND

● BBQ Locations

Playground

Amenities

Free Wifi

Council-Owned Facilities

Stormwater Pipe Network

Pedestrian Crossings and Bridges

Pathway Network Condition

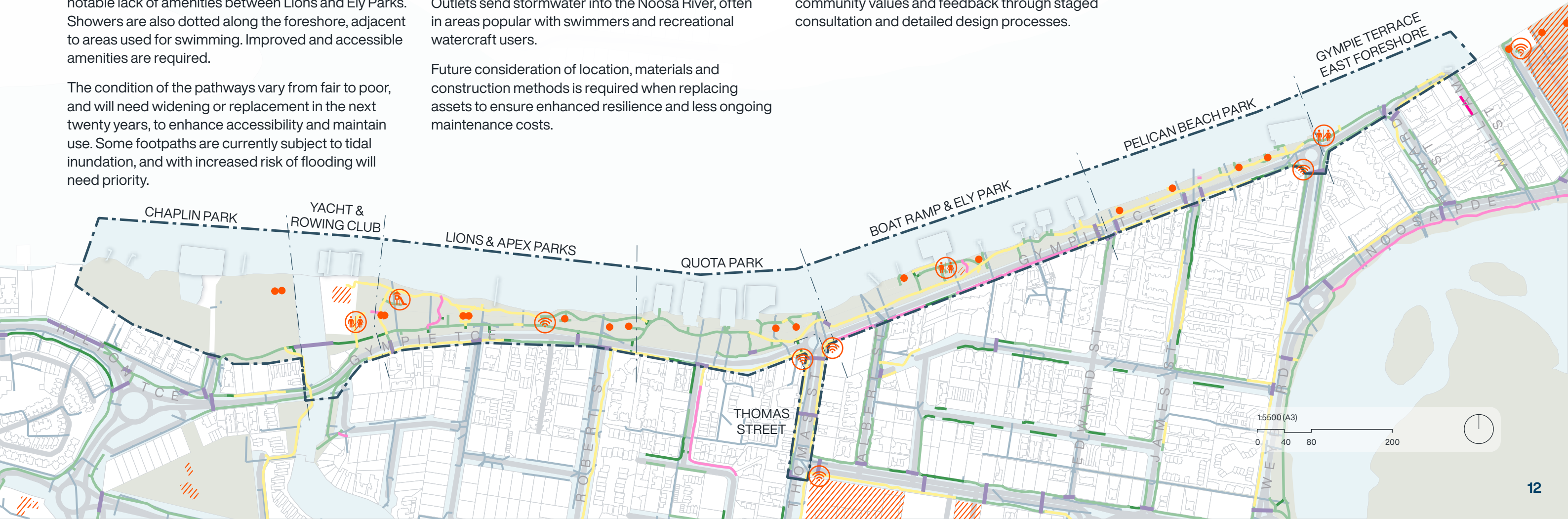
Excellent Condition

Good Condition

Fair Condition

Poor Condition

Requires Replacement



Challenges the Master Plan Must Address

FORESHORE EROSION

High tidal events, wind and wave action, boat wash and foot traffic all cause erosion on the Noosaville Foreshore. Erosion eats away at beaches and sandy areas along the foreshore.

Erosion has impacts on infrastructure, assets and vegetation. It creates level changes and presents public safety challenges.

Heavily engineered solutions such as retaining and sea walls have been constructed in the past however are at the end of their life. Beach nourishment is currently being undertaken by Council, however more sustainable and nature-based solutions are preferred to reduce the recurring cost and improve natural values.



Figure 11. Example of erosion impacting vegetation and collapsing the riverbank

FORESHORE INUNDATION

Tidal inundation is the abnormal rise of the sea level over normal tide levels. Currently, inundation impacts a number of low lying areas along the Noosaville Foreshore, most notably within Chaplin Park and Lions Park as this was once a swampy ground which was filled to create what we have today.

We know certain areas are already more regularly inundated than other areas. In areas with expensive infrastructure such as playgrounds, we need to think longer term on how we manage the impacts.

Modelling shows that tidal inundation due to sea level rise is likely to increase in some areas of the Noosaville Foreshore.



Figure 12. Low lying areas within Chaplin Park are particularly susceptible to tidal inundation.

PEDESTRIAN EXPERIENCES

Pedestrian experiences are impacted by safety, heat, quality, and user conflicts.

The pathway hierarchy requires upgrade to meet standards for accessibility and shared use. The foreshore in parts lack wayfinding/legibility and requires improvement. The pathway network is interrupted by vehicle crossovers and loading bays and passes through parking and maritime facilities creating safety risks.

Some segments of the pathways are exposed to increased heat due to their materiality and limited or no tree canopy cover.



Figure 13. Foreshore pathway users have limited space between the boat ramp and parking along Gympie Terrace

AGEING STORMWATER INFRASTRUCTURE

The foreshore has twenty-nine drainage outfalls and two open drainage channels to the river. In many cases these outlets along the foreshore are in poor condition, blocked or buried. The stormwater infrastructure is vulnerable to tidal inundation and backflows.

We have outlets in areas used by swimmers and recreational watercrafts, exposing the river and users to pollution and harmful run-off after weather events.

Inefficient and compromised outfalls can affect the stormwater network's ability to function, potentially worsening flooding and inundation. Both the river and users of the river may experience negative health effects as a result of the polluted run-off.



Figure 14. Some stormwater outlets have been impacted by blockage, reducing effectiveness.

HEAT AND COMFORT

Urban Heat Islands (UHI) within the foreshore make it uncomfortable when temperatures are high. Current UHIs have been defined on the foreshore by areas of limited shade and tree canopy cover, structures that block cooling breezes, and hard surfaces that absorb and radiate heat.

As a society we are much more cognisant of health effects such as skin cancer and heat stress. The characteristics of Urban Heat Islands (lack of shade, hot surfaces and limited cooling breezes) and the length of exposure to these characteristics may increase the risk of such health effects.



Figure 15. The boat ramp is one of the hot spots identified along the foreshore

LOSS OF HABITAT & BIODIVERSITY

The clearance of vegetation along the foreshore post European settlement has impacted both flora and fauna, with a loss of biodiversity and habitat, and reduced opportunities for fauna foraging and refuge.

Currently, the foreshore is a less welcoming home for birds, fish, reptiles, amphibians and mammals. The loss of habitat and biodiversity degrades our natural and environmental values that underpins liveability and amenity on the foreshore.

Furthermore, research has shown that access to natural areas of high biodiversity has a range of positive health impacts for our community.²



Figure 16. The eastern foreshore of Gympie Terrace is one example of an area of limited biodiversity

Master Plan

20 Year Vision

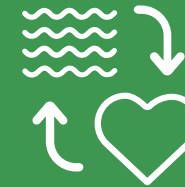
MAINTAIN & ENHANCE A PEACEFUL, RELAXING PUBLIC OPEN SPACE FOR PEOPLE TO ENJOY THE RIVER, WHILST ADAPTING & RESPONDING TO FUTURE CHALLENGES.

Principles



COUNTRY

EMBED OPPORTUNITIES FOR FIRST NATIONS TRADITIONAL CUSTODIANS TO CARE FOR COUNTRY



RIVER

CREATE MEANINGFUL CONNECTION TO THE NOOSA RIVER, WHILST PROTECTING ITS FUTURE



RECREATION

PROTECT & ENHANCE THE RECREATIONAL FUNCTION & SENSE OF PLACE



ENVIRONMENT

MAINTAIN AND REPAIR THE ENVIRONMENT, WELCOMING BACK BIODIVERSITY



COMMUNITY

FOSTER CONNECTIONS BY PROVIDING INCLUSIVE COMMUNITY SPACES WITH ACCESSIBILITY FOR ALL



COMFORT

DESIGN COOL SPACES WHERE PEOPLE CAN GATHER DURING HOT DAYS, WITH ACCESS TO SHADE, COOLING BREEZES, WATER, AMENITIES & ESSENTIAL SERVICES

Resilience Strategies for Climate Change

BEACH NOURISHMENT

Beach nourishment is the topping up of sand levels along a foreshore with sand sourced from dredging. In a river setting, it is typically pumped from the river bed to restore eroded sand edges along the waterway.

Beach nourishment along the Noosaville Foreshore is currently being undertaken by Council. Sand pumping, reshaping and regrading, helps us maintain access to the sand beaches for recreational amenity.



Figure 17. Low Planted Slope

LOW PLANTED SLOPE

Introducing planting with deep and strong root systems to beach nourishment areas will help to capture, stabilise and hold sand, and protect the river's edge from erosion. By planting beach nourishment areas, it reduces the frequency of recurring beach nourishment activities and maintenance.

Beach nourishment planting can be a staged process and adapted over time. Plant species would be predominately groundcovers and grasses and would not affect sight lines and views to the river.



Figure 18. Grassed Slope

GRASSED SLOPE

Although planted slopes (see left) are a more effective way to establish stability to the river's edge, we recognise the community values uninterrupted beach access. Therefore, some key areas of the foreshore (near playgrounds, popular swimming areas and gathering spaces) are proposed to have a grassed slopes.

Grass does not have a deep and strong enough root system to provide long-term protection from erosion. These areas will require more frequent maintenance (than low planted slopes), longer establishment and recovery periods after severe weather events and use.



Figure 19. Vegetated Swale

NATURE-BASED STORMWATER MANAGEMENT

Nature-based stormwater management aims to mimic the characteristics of natural creeks.

Upgrades to Chaplin Park's existing drainage corridors with additional revegetation will help increase resilience and biodiversity.

There are opportunities to use planted swales and rain gardens in the parkland. Unlike traditional underground pipes, these nature-based systems help slow down and clean stormwater runoff before it enters the Noosa River. They also encourage passive irrigation, accelerate shade tree growth and provide cooler spaces.

TRADITIONAL STORMWATER MANAGEMENT

Our piped infrastructure can be made more resilient through upgrades and with the addition of backflow prevention devices.



Figure 20. Living seawall tiles

LIVING SEAWALLS

Living seawall tiles and rock units mimic the features found in natural rocky shores. They can be retrofitted to our existing seawalls, making our foreshore more supportive of marine life by creating intertidal ecosystems and river habitats.

Each tile and rock unit features tiny nooks and alcoves that provide marine life a place to grow, live and hide, just as they would in a natural mangrove ecosystem.

Once established these systems improve marine biodiversity and water quality.

When complemented with signage, these interventions can provide a great educational opportunity for children and the community on the subject of marine biology.



Figure 21. Fish friendly sea wall

FISH FRIENDLY LOW SLOPING SEA WALLS

Innovative alternatives to traditional sea walls include low sloping fish friendly sea walls. The use of a gentle slope mimics a natural rock edge and has many environmental and recreational benefits. For maximum benefit, the gentler the slope of the seawall the better.

These slopes are created using rock steps and benches. The mix of horizontal and vertical faces on these steps/benches create prime habitat opportunities for intertidal plants and animals which will lead to greater diversity of species.

These slopes offer protection against erosion, increase fauna and flora biodiversity and have the flexibility to increase heights to reduce the impacts of inundation as needed.

The stepped characteristic of the walls have added benefit in allowing/encouraging the community to interact with the river.



Figure 22. Cool Street

COOL REFUGE

In the context of public open spaces, a cool refuge is an area or feature (such as a cluster of large shade trees) that provide relief and comfort to people during hot weather.

Source: University of the Sunshine Coast

COOL STREET

A 'cool street' has effective street tree planting which reduces the urban heat island effect and makes the street more walkable and pedestrian friendly during hot weather.

Source: University of the Sunshine Coast

20 Year Vision

“MAINTAIN & ENHANCE A PEACEFUL, RELAXING PUBLIC OPEN SPACE FOR PEOPLE TO ENJOY THE RIVER, WHILST ADAPTING & RESPONDING TO FUTURE CHALLENGES.”



KEY FEATURES:

- Retain existing car parking bays, loading zones, and maintenance and delivery access
- Establish two swimming areas, where boat users are restricted to promote safety
- Widen shared path, enhance riverside promenade and upgrade bridge to promote all abilities access and create an inclusive pedestrian user experience
- Enhance two 'Cool Refuge Areas' with large shade trees and cool breezes
- Upgrade and enhance parkland facilities and propose one new amenities
- Retain and enhance existing recreation, sports and play opportunities



Establish a swimming area protected from motor boats

Reorganise the street to enable equitable pedestrian access

Widen riverside promenade to an acceptable standard for all abilities access

Introduce over water structure for all abilities access and enjoyment of the rivers edge

GYMPIE TERRACE EAST FORESHORE

Upgrade existing amenities

Retain car parking

Upgrade and widen the shared path throughout the parkland

Retain and improve existing car park

BOAT RAMP AND ELY PARK

Enhance picnic facilities ensuring all abilities access

Upgrade existing amenities

Enhance picnic facilities and ensure all abilities access

Retain and enhance Boat Ramp facilities

Introduce bike and motorbike parking

Introduce all ages, all abilities play opportunities along the foreshore

Retain and upgrade tennis court facility

Redirect a safe, wide and shaded shared path to the rivers edge

Create a safe, wide and shaded shared path around the Boat Ramp facility

Prioritise pedestrians at road and driveway crossings

TIMELINE LEGEND

- High Priority Projects
- Medium Priority Projects
- Low Priority Projects

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Precinct Plans



Chaplin Park

“CHAPLIN PARK REMAINS A SIGNIFICANT AREA OF PUBLIC OPEN SPACE. PUBLIC ACCESS TO THE PARKLAND IS NOT DIMINISHED AND RECREATIONAL USE IS INCREASED BY PROVISION OF IMPROVED PUBLIC FACILITIES.”

STRATEGIES:

- Foster cultural and environmental education
- Create an inclusive space for community gathering with accessible connections
- Cultivate conditions to repair Country, welcoming back natural systems and biodiversity
- Strengthen the river foreshore sense of place



Noosa Yacht & Rowing Club

“THE YACHT AND ROWING CLUB PRECINCT CONTINUES ITS PRIMARY ASSOCIATION WITH EXISTING CLUB ACTIVITIES AND A CONSOLIDATED FACILITY IS ESTABLISHED INCORPORATING THE YACHT AND ROWING CLUB AND OUTRIGGER CLUB AS PART OF A NEW MULTI-USE FACILITY. PUBLIC ACCESS TO THE WATER’S EDGE IS ENHANCED AND LAND USE ACTIVITIES ENSURE ACCESS TO AREAS OF OPEN SPACE IS MAINTAINED.”

STRATEGIES:

- Enhance river access and recreation
- Prioritise accessibility with pedestrian parkland connections, bridge upgrade and wayfinding
- Enhance active interface and access for all non-powered water sports and optimise parking



Lions & Apex Parks

“LIONS AND APEX PARKS CONTINUE AS HIGH USE PUBLIC RECREATIONAL AREAS AND SUPPORT MODERATE LEVELS OF LOW IMPACT LAND USE ACTIVITIES.”

STRATEGIES:

- Upgrade foreshore paths to reconnect to the river and promote inclusive recreation and accessibility
- Retain Pirate Playground and celebrate inclusive play and recreation
- Create cool refuge and community gathering spaces that are shady, and welcoming





Pirate Playground



Noosa River

VIEW UP RIVER
TO PLAYGROUND

Quota Park

“QUOTA PARK CONTINUES TO SUPPORT PUBLIC RECREATIONAL USE OF IT’S GREEN OPEN SPACES AND SUPPORTS LIMITED LEVELS OF LOW-IMPACT LAND USE ACTIVITIES.”

STRATEGIES:

- Improve connection between business areas and foreshore
- Prioritise safe and accessible pedestrian and cycle connections
- Enhance shady, river landscape character with revegetation
- Create flexible gathering spaces overlooking the river
- Create cool refuge with amenities and changing places





VIEW TO THE BIG PELICAN

New Amenities and
Changing Places

Catalina Noosa

Noosa River

Pelican Boat Hire

The Big Pelican





Noosa Boathouse

Noosa River

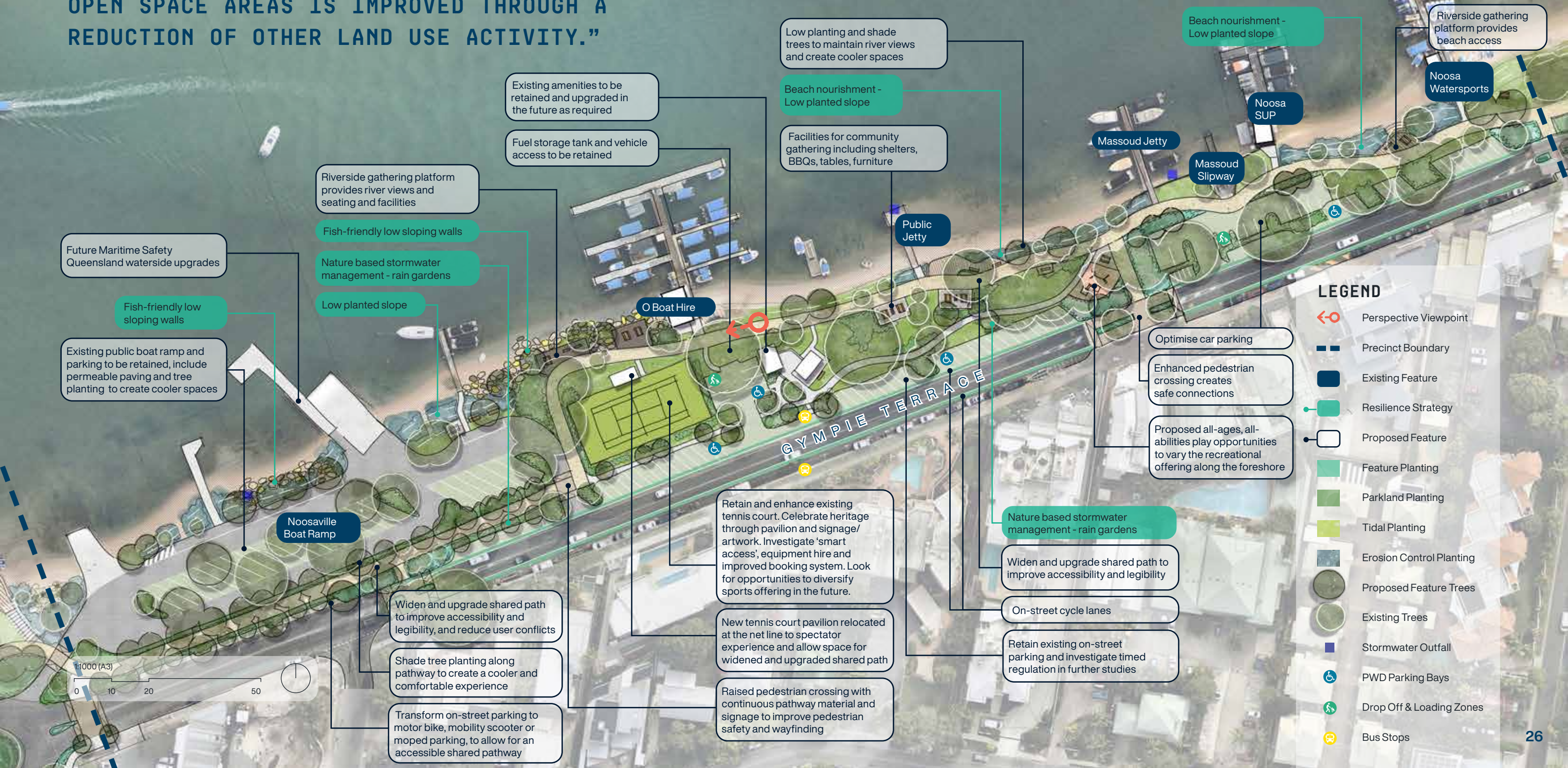
VIEW UP RIVER TO LIVE
MUSIC LAWN AND NOOSA
BOATHOUSE

Boat Ramp & Ely Park

“THE BOAT RAMP AND ELY PARK PRECINCT CONTINUES TO SERVICE PUBLIC BOATING NEEDS THROUGH THE EXISTING BOAT RAMP AND PARKING AREA. PUBLIC ACCESS TO OPEN SPACE AREAS IS IMPROVED THROUGH A REDUCTION OF OTHER LAND USE ACTIVITY.”

STRATEGIES:

- Retain and enhance multi-use/tennis court, recreation and boating facilities
- Restore rivers edge and enhance accessibility
- Create inclusive community gathering spaces that are cool and shady
- Create strong and accessible connections



VIEW UP RIVER
TO NEW TENNIS
PAVILION

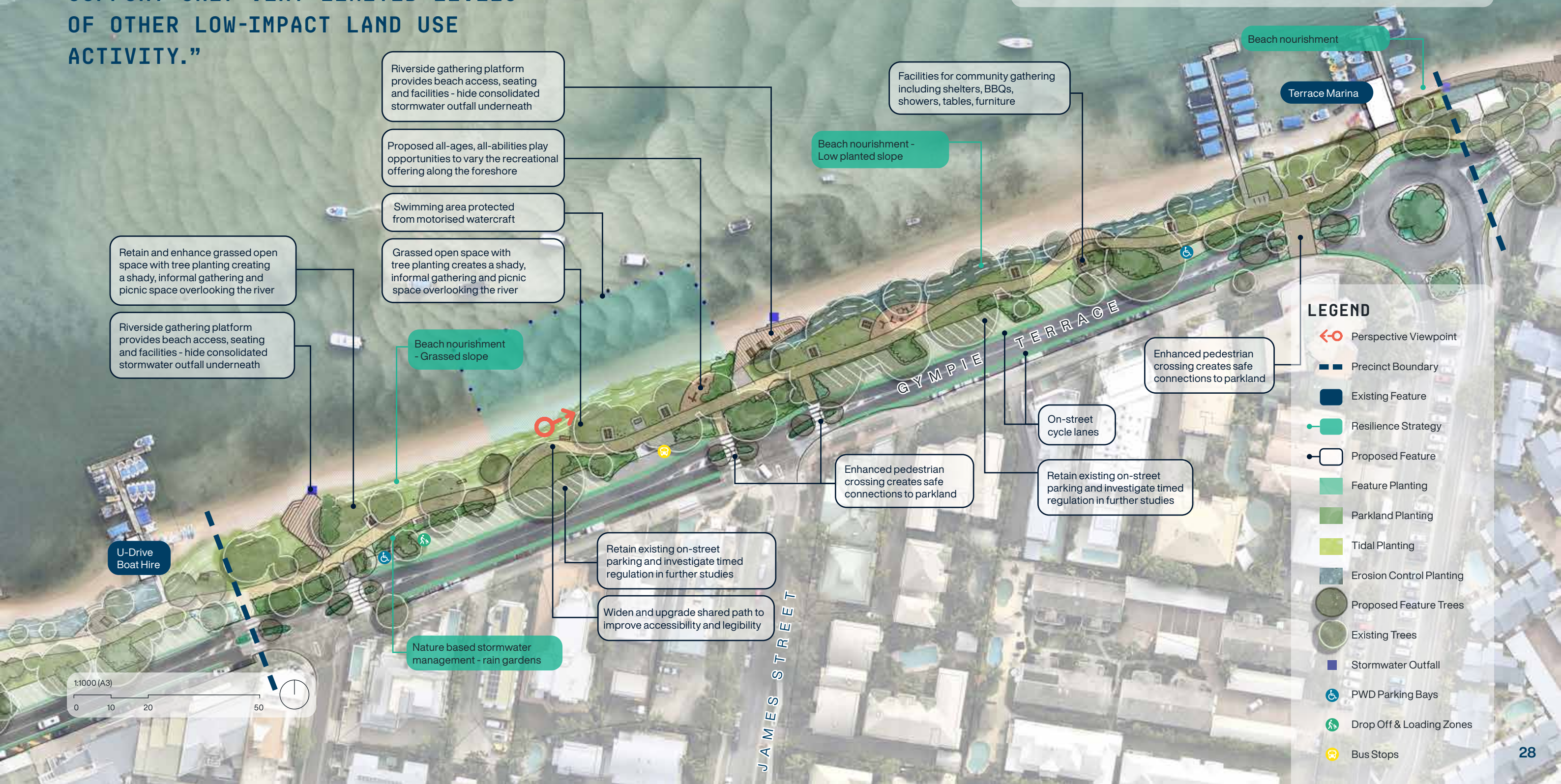


Pelican Beach Park

“PELICAN BEACH PARK CONTINUES TO SUPPORT RECREATIONAL USE OF THE GREEN OPEN SPACES AND SUPPORT ONLY VERY LIMITED LEVELS OF OTHER LOW-IMPACT LAND USE ACTIVITY.”

STRATEGIES:

- Retain strong river and beach access and accessible pedestrian connections
- Preserve the character of the foreshore and recreation opportunities
- Protect our rivers edge through vegetation and tree canopy cover



LEGEND

- Perspective Viewpoint
- Precinct Boundary
- Existing Feature
- Resilience Strategy
- Proposed Feature
- Feature Planting
- Parkland Planting
- Tidal Planting
- Erosion Control Planting
- Proposed Feature Trees
- Existing Trees
- Stormwater Outfall
- PWD Parking Bays
- Drop Off & Loading Zones
- Bus Stops



VIEW OF SHADED
RIVER VIEWING
AND BEACH ACCESS



Noosa River

Gympie Terrace

Gympie Terrace East Foreshore

“GYMPIE TERRACE EAST WILL BE RE-IMAGINED TO RECLAIM RECREATIONAL AND COMMUNAL SPACE, WHILE BALANCING THE NEEDS OF INFRASTRUCTURE, COMMUNITY AND ECOLOGY.”

STRATEGIES:

- Enhance views and access to the river
- Gain recreational foreshore space and enhanced accessible and inclusive connections for the community
- Restore aquatic and tidal habitat and tree canopy cover, increasing biodiversity



Facilities for community gathering including shelters, tables, furniture

Living seawalls - tiles

Existing amenities to be retained and upgraded in the future when required

Accessible and inclusive beach access

Terrace Marina

Riverside over-water promenade gains recreational space, conceals existing rock work and reconnects community to the river. Design is simple and in keeping with the Noosaville character

Living seawalls - units

Proposed shared path crossing to promote safe connections

Riverside promenade provides inclusive access to the parkland and the river

Living seawalls - units

Nature based stormwater management - rain gardens

Flush shared zone (one way) to prioritise safe pedestrians connections

On street parking flipped to souther side of the road to allow for an accessible riverside promenade. Investigate timed regulation in further studies

Shared path connection to Howard Street

Widen and upgrade shared path to improve accessibility and legibility

Shade tree planting to create cooler spaces and paths

Nature based stormwater management - rain gardens

LEGEND

- Perspective Viewpoint
- Precinct Boundary
- Existing Feature
- Resilience Strategy
- Proposed Feature
- Feature Planting
- Parkland Planting
- Tidal Planting
- Erosion Control Planting
- Proposed Feature Trees
- Existing Trees
- Stormwater Outfall
- PWD Parking Bays
- Drop Off & Loading Zones

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VIEW UP RIVER
TO SHARED ZONE
AND RIVER
VIEWING AREA

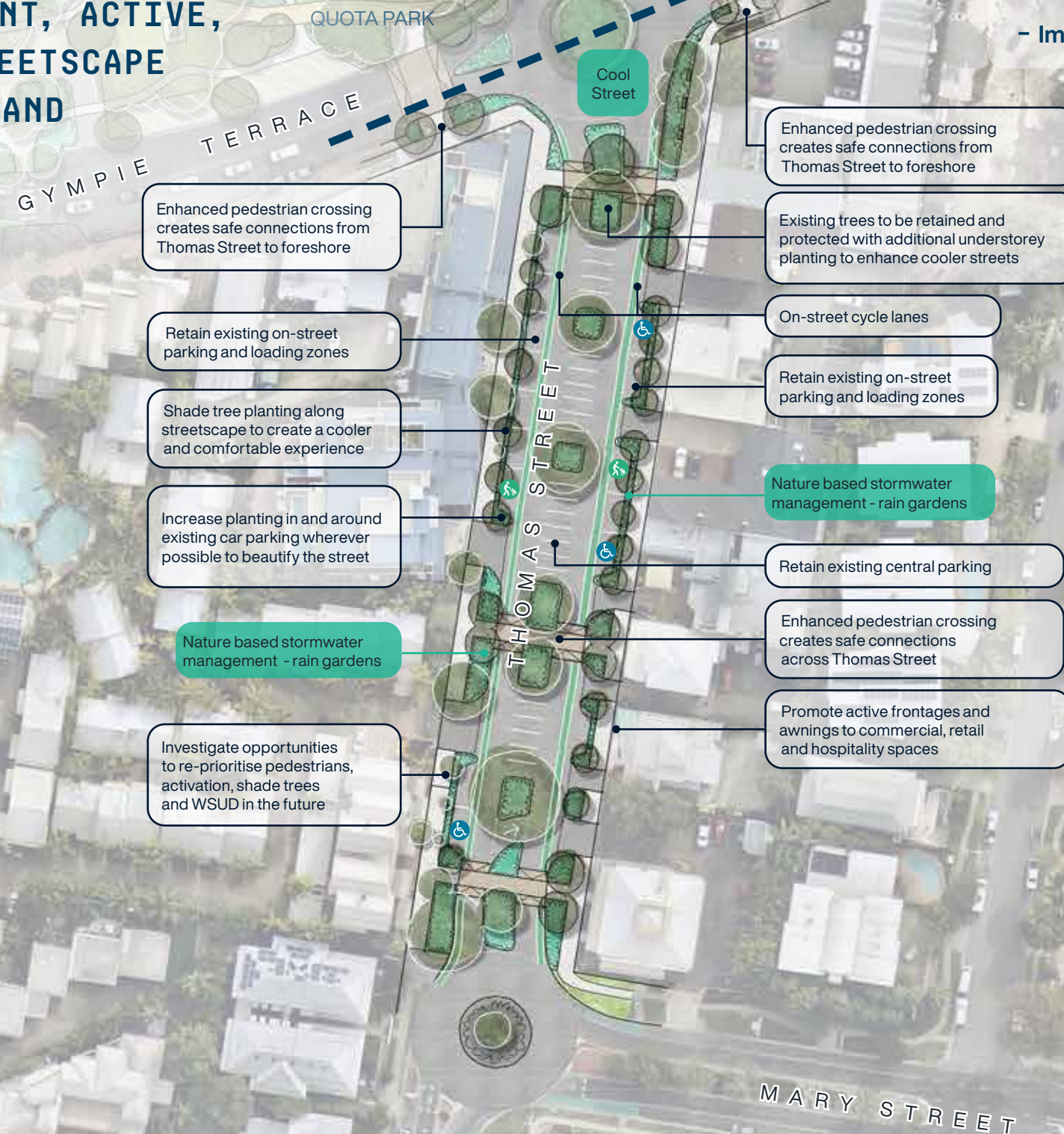


Thomas Street

“THE THOMAS STREET DINING PRECINCT WILL CONTINUE TO BE CELEBRATED AS A VIBRANT, ACTIVE, CLIMATE RESILIENT STREETScape FOR FUTURE COMMUNITY AND COMMERCIAL USE”

STRATEGIES:

- Enhance accessible foreshore connections
- Create vibrant, active frontages to commercial and retail spaces
- Integrate nature based stormwater management
- Improve tree planting to create a cool street



LEGEND

- Precinct Boundary
- Existing Feature
- Resilience Strategy
- Proposed Feature
- Feature Planting
- Parkland Planting
- Tidal Planting
- Erosion Control Planting
- Proposed Feature Trees
- Existing Trees
- PWD Parking Bays
- Drop off & Loading Zones



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Material Palettes

LIVING SEAWALLS



Fixed to existing vertical and angled seawalls, living seawall tiles are 3D printed with inbuilt shapes that are colonised by algae and other sea life. Designed by marine ecologists to mimic rocky reefs and seaweed forests, they quickly blend into existing seawalls as they're adopted by local flora and fauna.

PERMEABLE PAVING

Permeable paving is used in areas of parking and paths within the parkland.

Permeable paving allows surface water to be absorbed and filter through the ground, recharging groundwater systems, reducing polluted run-off, supporting the health of surrounding vegetation and reducing temperatures.




Figure 25. Permeable paving

FEATURE CONCRETE

Limited to areas of high traffic volumes and associated wear and tear, feature concrete provides a fit for purpose solution. Utilising low carbon concrete, feature concrete can be coloured to suit and embellished with visual imagery, providing opportunities for story-telling along the foreshore.



Figure 26. Feature concrete with stencilling

SHELTERS & FURNITURE





Figure 27. Foreshore seating

Figure 28. Parkland shelters

New shelters and furniture on the foreshore will retain key aesthetic, values and forms as the existing foreshore elements. This will ensure a consistent suite of furniture, and the simple design will let the natural beauty of the place shine.

GRASS





Figure 29. Turf

Grass is a key component of the Noosaville Foreshore. With the flexibility to function as an informal gathering space, a movement corridor for those passing through or a staging area for recreational watercraft users, durable turf will remain the dominant surface in the parkland. Where required, salt tolerant species such as Marine Couch can be used to help with salt water inundation.


RIVERSIDE PROMENADE



Pathways and platforms are used to maintain all abilities pedestrian access along the foreshore, even during inundation or weather events. Marine grade materials and composite timbers are in keeping with the natural look and feel of the foreshore.

Figure 30. Riverside Promenade

OVER-WATER STRUCTURES



The over-water structure in Gympie Terrace East is simple in design to ensure it compliments existing foreshore structures and furniture.

Figure 31. Timber Boardwalk

FISH-FRIENDLY LOW-SLOPING SEA WALLS



Figure 32. Low sloping seawall

Limited to areas where existing rock seawalls restrict interaction with the Noosa River, fish-friendly low-sloping sea walls allow users to engage with the river in ways and habitats. The rock should be sourced locally and cut in organic shapes to reflect the natural look and feel of the Noosaville foreshore. Pocket planting will increase biodiversity, water quality and visual interest.

TARGETED SENSITIVE LIGHTING



Figure 33. Targeted lighting

Considered lighting will be used in some areas to prolong community use of areas, improve user safety and deter anti-social behaviour. In ecologically sensitive areas, sensitive warm lighting should be used to protect nocturnal animal behaviour and reduce light pollution.

RECYCLED MATERIALS

Using recycled materials on the foreshore offers numerous environmental benefits. It helps conserve natural resources, reduce waste, and lower greenhouse gas emissions. By incorporating recycled materials, we promote sustainability and contribute to a more resilient and sustainable foreshore environment.



Figure 35. Mulch created from vegetation

EDUCATIONAL / INTERPRETIVE SIGNAGE





Figure 34. Interpretive Signage

Interpretive and educational signage along the foreshore can raise awareness about flora, fauna and climate change threats like rising sea levels and coastal erosion. These signs encourage sustainable practices and foster a sense of responsibility, empowering the community to protect the environment.


Note: Refer to Precinct Plans and for location of indicative material types. This is a suggestive and indicative palette of materials only. A more exhaustive and site-specific materials list to be provided in future design stages.

Plant Palettes


Feature Trees




Ficus macrophylla
Moreton Bay Fig T




Pandanus tectorius
Pandanus Screw Pine T




Araucaria cunninghamii
Hoop Pine T



Grevillea robusta
Silky Oak T



Callistemon viminalis
Weeping Bottlebrush T



Harpullia pendula
Tulipwood T


Botanic Name

T *Banksia integrifolia* subsp. *integrifolia*
T *Corymbia tessellaris*
T *Cupaniopsis anacardioides*
T *Eucalyptus tereticornis*
T *Hibiscus tiliaceus* 'Rubra'


Common Name

Coastal Banksia
Moreton Bay Ash
Tuckeroo
Blue Gum
Red Cottonwood


Feature Planting




Banksia robur
Swamp Banksia S




Chrysocephalum apiculatum
Yellow Buttons G




Xanthorrhoea johnsonii
Forest Grass Tree S



Austromyrtus dulcis
Midyim S



Dianella congesta
Beach Flax Lily G



Crinum pendunculatum
Swamp Lily G


Botanic Name

S *Acacia sophorae*
G *Carpobrotus glaucescens*


Common Name

Coastal Wattle
Pigface


Parkland Planting




Banksia integrifolia subsp. *integrifolia* - Coastal Banksia T




Hibiscus tiliaceus
Cotton Tree T




Melaleuca quinquenervia
Broad-leaved Paperbark T



Pteridium esculentum
Bracken Fern G



Casuarina equisetifolia var. *incana* Beach She-oak T



Corymbia intermedia
Pink Bloodwood T


Botanic Name

T *Blechnum indicum*
G *Gahnia sieberiana*
G *Imperata cylindrica*
T *Livistona decora*
G *Lomandra longifolia*
T *Lophostemon suaveolens*
S *Macaranga tanarius*
G *Schoenus brevifolius*


Common Name

Swamp Water Fern
Red-fruit Saw Sedge
Bladey Grass
Weeping Cabbage Palm
Spiny-head Mat Rush
Swamp Mahogany
Macaranga
Zig-zag Bog Rush


Tidal Planting*




Juncus kraussii
Sea Rush G



Limonium solanderi
Native Sea Lavender G




Sporobolus virginicus
Marine Couch G




Tecticornia indica
Samphire G

Erosion Control*



Carpobrotus glaucescens
Pigface G



Ipomoea pes-caprae subsp. *brasiliensis* - Goat's Foot G

T Trees S Shrubs G Groundcovers * Subject to tidal inundation

Note: Refer to Precinct Plans and legend for location of planting types. This is a suggestive and indicative palette of planting species only. A more exhaustive and site-specific planting list to be provided in future stages.

What's Next?

The Noosaville Foreshore Infrastructure Master Plan (NFIMP) was the next necessary step for Council to guide the foreshore, following the Noosaville Foreshore Land Use Master Plan (2018) and the Noosa Coastal Hazards Adaptation Plan (CHAP, endorsed by Council in November 2021).

This Master Plan establishes a framework for the future of the Noosaville Foreshore. In many instances, additional studies will be needed before advancing with the design development of proposed outcomes, to ensure suitability and feasibility.

This Master Plan is intended to guide development at the Noosaville Foreshore for the next 20 years. The proposed staging illustrates the continued roll out of high, medium and low priority projects through planning, engagement, design and delivery during that period. The implementation approach is flexible and able to change based on the communities evolving needs and available funding avenues.

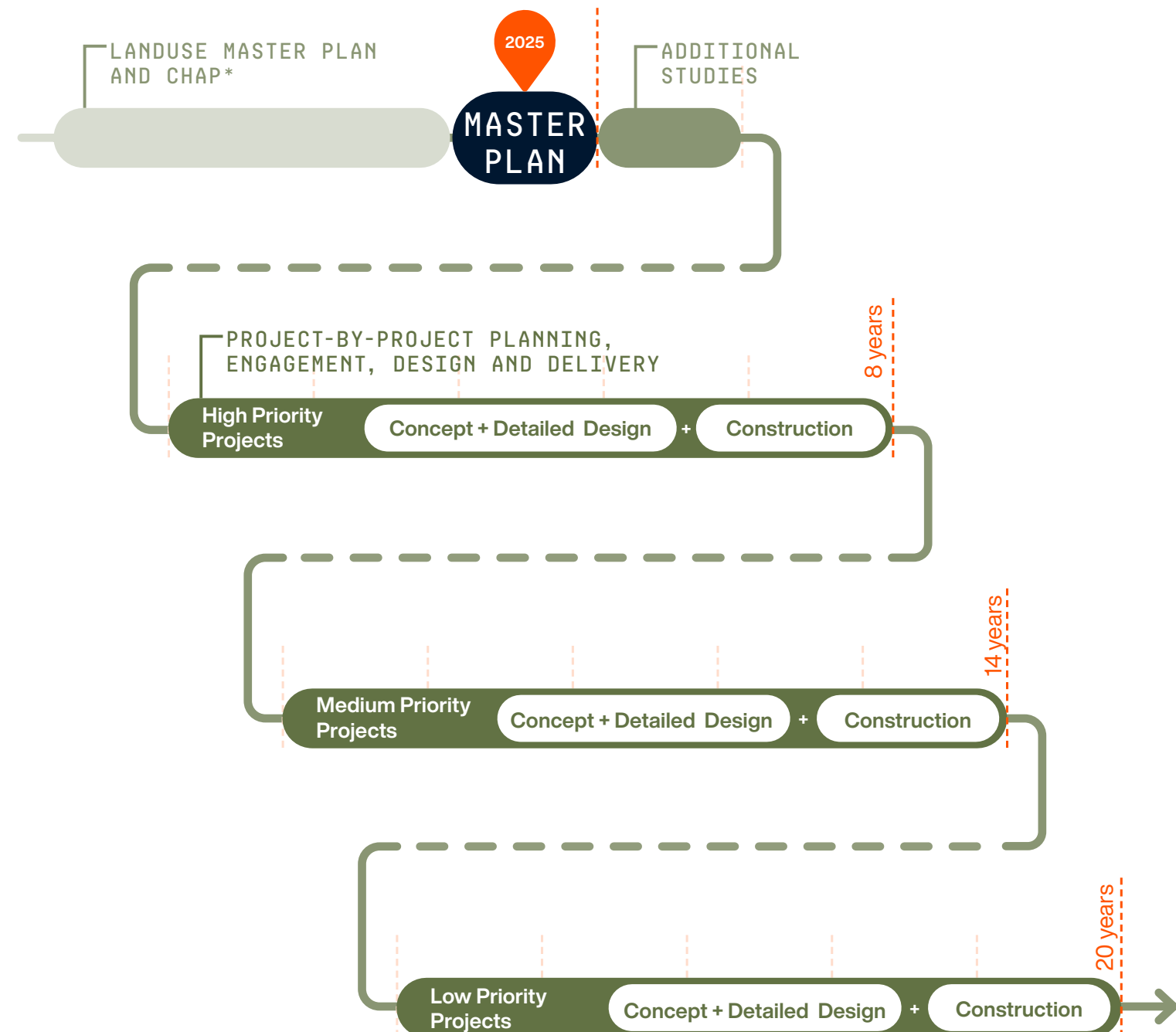
ADAPTABILITY

The resilience strategies in this Master Plan are flexible, adaptive, and staged so they can respond over time to changing weather events, erosion, inundation, natural influences, and shifts in community values. There is an exciting opportunity to trial the resilience strategies and Master Plan approaches as pilot projects, allowing us to monitor their efficiency before committing these outcomes along the foreshore.

ENGAGEMENT

As each project progresses through its planning and design phase, the community will have opportunities to actively shape the final design outcomes. Key projects highlighted for community input include upgrades to Pirate Playground, the outdoor stage and the tennis court.

Together, Council and the community will shape the future of the Noosaville Foreshore.



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SITE CONTEXT MAPPING

Legend Item	Parameters and Source	Key Observations and Limitations
Understanding the Natural Influences		
Sea-level Rise Inundation Extent at Highest Astronomical Tide (HAT) - 2040	Derived from Noosa Shire Council data "SLR_Noosa_River_HAT_2040"	Data accessed October 31, 2024
Sea-level Rise Inundation Extent at Highest Astronomical Tide (HAT) - 2070	Derived from Noosa Shire Council data "SLR_Noosa_River_HAT_2070_SHP"	Data accessed October 31, 2024
Sea-level Rise Inundation Extent at Highest Astronomical Tide (HAT) - 2100	Derived from Noosa Shire Council data "SLR_201030_HAT_2100_Tidal_Plane_Extent_Smooth"	Data accessed October 31, 2024
Topographic High Point	Derived from State of Queensland (Department of Resources) data "Contours - 1 metre - Queensland - by area of interest"	Data accessed March 14, 2024
Indicative Hot Spot Location	Derived from University of the Sunshine Coast report - "Gympie Terrace Preliminary Climate Analysis"	Publish date: July 2024
Understanding our Use + Recreation		
Principle Cycle Network	Derived from Noosa Shire Council data "Noosa_Plan_2020_SignedOff_July2020"	Data accessed September 6, 2024
Understanding Culture and Connection		
Local and State Heritage Places	Derived from Noosa Shire Council data "HeritageSites_customs_point"	Data accessed September 12, 2024
	Derived from State of Queensland (Department of Environment, Science and Innovation) data "Heritage register boundaries - Queensland"	Data accessed September 12, 2024
Non-exclusive Kabi Kabi Native Title	Derived from National Native Title Tribunal data "NTD_Register_Nat"	Data accessed September 18, 2024

Legend Item	Parameters and Source	Key Observations and Limitations
Understanding Our Assets		
Council Owned Facilities	Derived from Noosa Shire Council data "noosa-council-owned-facilities"	Data accessed September 6, 2024
Stormwater Pipe Network	Derived from Noosa Shire Council data "SWPipe_polyline"	Data accessed September 5, 2024
Pathway Network Condition	Derived from Noosa Shire Council data "Pathways_polyline"	Data accessed September 5, 2024
Understanding the Environment		
Fish Habitat Areas	Derived from State of Queensland (Department of Environment, Science and Innovation) data "Fish habitat areas - Queensland"	Data accessed September 9, 2024
Pre-clear Regional Ecosystems	Derived from State of Queensland (Department of Environment, Science and Innovation) data "Biodiversity status of pre-clearing regional ecosystems - Queensland"	Data accessed September 14, 2024
Historic Fauna Sightings	Derived from the State of Queensland (Department of Environment, Science and Innovation) data "WildNet wildlife records - published - Queensland"	Data accessed September 9, 2024



Noosaville Foreshore Infrastructure Master Plan

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