

TOWN BEACH FORESHORE MANAGEMENT PLAN

PREPARED FOR SHIRE OF BROOME

DRAFT FOR REVIEW

NOVEMBER 2023

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November 2023



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Table of Contents

1	BACKGROUND & CONTEXT	1
1.1	BACKGROUND	1
1.2	PURPOSE	3
1.3	STUDY AREA.....	3
2	SOCIAL CONTEXT	4
2.1	RESERVE MANAGEMENT RESPONSIBILITIES	4
2.2	LEASES	5
2.3	LOCAL PLANNING FRAMEWORK.....	6
2.4	LAND USE	12
2.5	HERITAGE.....	16
2.6	CONSULTATION OUTCOMES	18
3	PHYSICAL & BIOLOGICAL ATTRIBUTES	22
3.1	CLIMATE AND WEATHER.....	22
3.2	TOPOGRAPHY & LANDFORM.....	23
3.3	VEGETATION AND HABITAT	26
3.4	BUSHFIRE RISK	26
3.5	COASTAL PROCESSES	27
4	KEY ISSUES	31
5	VISION & OBJECTIVES	33
6	MANAGEMENT ACTIONS	34
6.1	ACCESS & PUBLIC USE	34
6.2	COASTAL PROCESSES	40
6.3	FACILITIES AND AMENITIES.....	46
6.4	CONSERVATION AND ENVIRONMENTAL MANAGEMENT	52
6.5	PLANNING, TENURE & HERITAGE	54
7	IMPLEMENTATION & MONITORING	56

7.1	INTRODUCTION.....	56
7.2	PRIORITIES	56
7.3	RESPONSIBILITIES	56
7.4	MONITORING & REVIEW	56
7.5	FUNDING SOURCES	57
7.6	ACTIONS.....	58
8	REFERENCES / BIBLIOGRAPHY	59
8.1	COMMONWEALTH.....	60
8.2	STATE	62

Tables

TABLE 2.1 – RESERVE 31340 DETAILS	4
TABLE 2.2 – RESERVE 51304 DETAILS	5
TABLE 2.3 - ABORIGINAL HERITAGE DATABASE SEARCH RESULTS	17
TABLE 3.1 - YAWURU SEASONAL CALENDAR	23
TABLE 3.2 BROOME TIDAL PLANES.....	27
TABLE 3.3 – DESIGN WATER LEVEL FOR BROOME	28
TABLE 4.1 – KEY ISSUES OVERVIEW	31
TABLE 6.1 – MANAGEMENT ACTIONS – ACCESS AND PUBLIC USE	39
TABLE 6.2 – MANAGEMENT ACTIONS – COASTAL PROCESSES.....	44
TABLE 6.3 – MANAGEMENT ACTIONS – FACILITIES AND AMENITIES.....	51
TABLE 6.4 – MANAGEMENT ACTIONS -CONSERVATION AND ENVIRONMENTAL MANAGEMENT.....	52
TABLE 6.5 – MANAGEMENT ACTIONS – PLANNING, TENURE AND HERITAGE	54
TABLE 7.1 – IMPLEMENTATION ACTIONS.....	58

Figures

FIGURE 1.1 - STUDY AREA EXTENT	3
FIGURE 2.1 - RESERVE 31340 EXTENT	4
FIGURE 2.2 – CARAVAN PARK LEASE AREA (PHOTO DATE: OCTOBER 2022)	6
FIGURE 2.3 – EXTRACT FROM LOCAL PLANNING STRATEGY SHOWING TOWN BEACH RESERVE – TOURIST DEVELOPMENT AND PARKS, RECREATION AND DRAINAGE.....	9
FIGURE 2.4 – OLD BROOME DEVELOPMENT STRATEGY	11
FIGURE 2.5 – PHOTO 2009	12
FIGURE 2.6 – PHOTO 2000	13
FIGURE 2.7 – PHOTO 1970	13
FIGURE 2.8 – PHOTO EARLY SURVEY MAP OF BROOME TOWNSITE	14
FIGURE 2.9 – BROOME JETTY	15
FIGURE 2.10 – LOCAL HERITAGE.....	18
FIGURE 3.1 – WIND ROSE – BROOME.....	22
FIGURE 3.2 – REGIONAL COASTAL SETTING (LEFT) AND BEACH MORPHOLOGY (SOURCE: SEASHORE ENGINEERING)	24
FIGURE 3.3 – FORESHORE OVERVIEW.....	25
FIGURE 3.4 – THREATENED/PRIORITY ECOLOGICAL COMMUNITY EXTENT	26
FIGURE 3.5 – BUSHFIRE PRONE AREAS.....	27
FIGURE 3.6 TIDAL REGIME – TOWN BEACH (SOURCE: SEASHORE ENGINEERING).....	28
FIGURE 3.7 – STORMWATER OUTLET SCOUR AT TOWN BEACH IN MAR2022 (UPPER) AND RUNOFF EROSION ADJACENT TO SIMPSONS BEACH CARPARK, IMMEDIATELY WEST OF CARAVAN PARK, DEC 2018 (LOWER).....	29
FIGURE 6.1 – OVERVIEW OF TOWN BEACH ACCESS.....	34
FIGURE 6.2 – PUBLIC AND PRIVATE REALMS	35
FIGURE 6.3 – CARAVAN PARK LEASE.....	36
FIGURE 6.4 – COASTAL BOARDWALK AROUND PINDAN HEADLAND – CONCEPT ALIGNMENT.....	38
FIGURE 6.6 – BOAT RAMP AND PARKING CONFIGURATION.....	47
FIGURE 6.7 – UNMANAGED INTERFACE BETWEEN GRASSED AREA AND BEACH	48
FIGURE 6.8 – ROCK INTERFACE BETWEEN GRASS AND BEACH	49
FIGURE 6.9 – SHADE TREES ON FORESHORE.....	50
FIGURE 6.10 – LOCAL PLANNING SCHEME ZONING/RESERVATION EXTENT	54

Appendices

APPENDIX A – ADAPTATION OPTIONS ASSESSMENT; KEY PLANS

APPENDIX B – POLICY REVIEW

APPENDIX C – FORESHORE MANAGEMENT PLAN ACTIONS AND OVERVIEW

1 Background & context

1.1 Background

Town Beach is an important 1000m stretch of coastal foreshore in a central-Broome location. The Shire's CHRMAP outlines its importance in the following social and economic terms:

For Town Beach, the large local residential population adjoining its shoreline, coupled with the mix of short term accommodation options in the area including the Roebuck Bay caravan park place a high value on the beach and its foreshore areas, which attracts significant tourist numbers particularly during viewing of the 'staircase to the moon' phenomenon¹.

The CHRMAP recommended the development of a Foreshore Management Plan for Town Beach (this document) to implement the findings relating to land use and management. The preferred planning approach was to *accommodate* developable land located on land prone to coastal erosion within the 2110 planning timeframe and *accommodate* Land uses exempted by Part 7 of SPP2.6 Schedule 1 e.g., Community use of foreshore.

The foreshore section east of the old jetty, (outside the study area) was identified as an area for protection works, which have since been completed. These include foreshore landscaping, rock revetments and a new jetty.

The Shire of Broome has undertaken a significant amount of coastal investigation work within the Shire, including a CHRMAP, Coastal Vulnerability Study, Coastal Reserves Master Plan and a Geotechnical Investigation and Coastal Adaptation Options Assessment focusing on Town Beach in 2019.

The coastline geomorphology comprises an intertidal rock platform, Pindan Headland, and a sandy embayed beach. A groyne structure is located in the northern boundary of the beach – this has been in place for many years, situated where the original Broome jetty was once constructed.

The geotechnical investigations identified submerged rock (but not at a level that would substantially mitigate erosion risk to the overlying dunes). It also briefly assessed the stability of the Pindan Headland.

¹ The seawall and landscaping to the north of the Study Area largely cater for 'Stairway to the Moon' viewing.

The preferred coastal adaptation approach included 21 specific recommended actions for the “Accommodation” option; these provide background to the Foreshore Management Plan.

Town Beach – Geotechnical Investigation and Coastal Adaptation Options Assessment

The *Town Beach – Geotechnical Investigation and Coastal Adaptation Options Assessment* (the Assessment) provides the context for the preparation of this Foreshore Management Plan. The Assessment was prepared by Seashore Engineering in 2020 with the primary objective being to “*identify the extent and nature of underlying rock that is visible at the shoreline, and its capacity to either provide natural coastal protection to the assets located on the modified foredunes, or suitable foundations for coastal protection or beach access structures.*” Consideration of coastal adaptation options identified a preferred option for the Shire.

The study area included three distinct areas: the “Western Beach” (known locally as Demco Beach), “The Pindan Headland” and “Town Beach”.

In terms of shoreline stability, the assessment notes that the sandy coastline (excluding the Pindan headland) has been stable over the past 50 years. The report states that **“with the exception of a potential acceleration of erosion due to sea level rise and the potential for severe storm erosion, the sandy coastline is likely to retain that stability over at least the next 20 years. Future shoreline behaviour would be subject to the usual inter-annual variation in mean sea level, high tide occurrence and cyclone frequency and characteristics”**.

The risk assessment concluded the “extreme” level of erosion risk to the Town Beach reserve and Caravan park identified in the CHRMAP because these are constructed on erodible material within or adjacent to the foreshore area identified as being vulnerable to erosion in a severe cyclone coinciding with high tide.

In response, four coastal adaptation options were presented in the Assessment as follows:

1. Minimal Intervention
2. Managed Retreat
3. Accommodation
4. Protection.

The preferred coastal adaptation option was “Accommodate” coastal hazards through design and management strategies to minimise risk, consistent with the CHRMAP recommendations.

A Concept Plan was presented in the report by Seashore Engineering for the Adaptation Option. Key plans are provided at Appendix A.

1.2 Purpose

The purpose of this project is to build on this existing body of work to develop a Foreshore Management Plan and Implementation Strategy for Town Beach, which:

- reviews and making recommendations on tenure
- reflects discussions and views of key stakeholders and the broader community where appropriate
- balances community expectation with desired environmental, economic and recreational outcomes
- provides a framework for the ongoing management of the study area by the Shire
- allows for future coastal adaptation.

1.3 Study Area

The Foreshore Management Plan covers an area colloquially known as Town Beach. It extends across Reserve 31340 and extends in front of the caravan park to the western boundary of the reserve. The Study Area does not include the portion of the reserve subject to the caravan park lease, nor the Unallocated Crown Land on the seaward side of Reserve 31340. It is noted that portions of the study area are very narrow, resulting in some difficulties for ongoing holistic management.

The broad extent of the Study area is shown in Figure 1.1 - Study Area Extent below. Consideration was also provided to a suitable link from the foreshore to Demco Beach.



Figure 1.1 - Study Area Extent

2 Social context

2.1 Reserve management responsibilities

Town Beach is situated on Crown Reserve 31340, encompassing an area of 13.8ha. This reserve extends well beyond the extent of the Study Area, including both the Roebuck Bay Caravan Park, and the land north of the jetty. The full extent of the reserve is shown in Figure 2.1 below.



Figure 2.1 - Reserve 31340 extent

Details of the reserve management responsibilities is provided in Table 2.1 below.

Table 2.1 – Reserve 31340 details

Item	Detail
Reserve number	31340
Class	C
Responsible Agency	Department of Planning, Lands and Heritage
Management Order	Shire of Broome
Current use	Drainage, recreation, historical and cultural display, caravan park and cafe

Leasing	Power to lease for any term not exceeding 21 years, subject to the consent of the Minister for Lands
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Some consideration has also been given to the adjoining Reserves 51304 and 45605, largely within the context of enabling connected access from Town Beach to Reserve 45605 (Demco Park). Details of Reserve 51304 is provided in Table 2.2 below.

Table 2.2 – Reserve 51304 details

Item	Detail
Reserve number	51304
Class	A
Responsible Agency	Department of Planning, Lands and Heritage
Management Order	Yawuru Native Title Holders Aboriginal Corporation, Shire of Broome
Current use	Conservation, Recreation, Traditional and Customary Aboriginal Use and Enjoyment
Leasing	Power to lease for any term not exceeding 21 years, subject to the consent of the Minister for Lands

2.2 Leases

Historically there have been two leases on the reserve managed by the Shire, one for the Town Beach Café and the other for the caravan park.

Café

The Town Beach café is currently not operating, and the Shire is investigating opportunities for redevelopment of the current facility. Historically, the café opened in the early morning until early afternoon only, and it appears that the existing café has been a popular facility. Many of the submissions received during the consultation phase of this project noted that its closure had a detrimental impact on the community's enjoyment of the foreshore.

Late in 2022 the Shire released an RFQ for the short-term lease and operation of the café, pending a further process to seek Expressions of Interest pertaining to a design, construct and operate model for the redevelopment of the existing café site. At the time of writing this document, there was no operator for the facility in the short term, and the Shire is progressing with a longer-term option to redevelop the site. While there are no further details about the future design of the café site, preliminary discussions with Council suggest it is likely the existing facility will be replaced by a newer, larger and possibly double-storey facility. Such a potential intensive capital outlay required for the new facility, or any expanded services on the site or longer hours of operation, warrants a timely consideration of the impacts on the foreshore and customary community use of the area.

A larger, more intensive commercial operation on this site raises management issues which should be addressed in the FMP, including consideration of coastal setbacks and finished floor levels of the new building.

Caravan Park

A new lease was signed for the Roebuck Bay Caravan Park in June 2021, for a period of 21 years. The operator of the caravan park has prepared a Master Plan and submitted relevant Development Applications to the Shire for significant upgrades to the site. These works are currently underway. It is assumed that the caravan park redevelopment is cognisant of the CHRMAP outcomes. The extent of the lease area is shown in Figure 2.2 below.



Figure 2.2 – Caravan Park lease area (photo date: October 2022)

2.3 Local Planning Framework

Local Planning Strategy

The purpose of the Shire's Local Planning Strategy (LPS) is to set out the medium to long term planning directions for the Shire for the next 10 – 15 years.

Clause 2.4.8 of the Strategy relates to tourism and states under the objectives that:

2. *Outside the centre, ensure that tourism development and activities remain low impact in character compatible with maintaining the environmental, heritage, cultural and landscape values of the Shire of Broome.*
3. *To ensure that provision is made for caravan parks and camping grounds within the Shire of Broome to cater for leisure tourists.*

Further under Clause 2.4.8 under the actions to be undertaken under the Strategy one includes to:

- *Prepare and implement a Development Strategy for the Town Beach area within Precinct 2.*

Clause 2.4.9 of the LPS relates to Open Space the LPS states that:

Public open space is a vital component of any urban environment and performs many social, environmental and economic functions. It completes the built form, contributes to the identity of place and provides recreational opportunities, which are integral roles in building quality places to live. The passive and active attributes of public open space also contribute towards increased health and well-being of the public.

Further under this clause several actions are identified the one that relates to this plan states:

- *Provide a foreshore boardwalk between Streeters Jetty and Town Beach Jetty*

The objectives of this plan align with the objectives and proposed actions in the City's LPS and do so by improved linkages along the study area extent on the foreshore.

Clause.3.1.2 of the Strategy relates to Precinct 2 (Old Broome) in which the subject site falls. The guidelines for development within this area are to:

- *Prepare Development Strategies which consider the integration of retail, mixed use development and tourism and recreational values of the precinct.*
- *Implement the Development Strategies and design guidelines where necessary.*

This Foreshore Management Plan meets both the objectives and guidelines outlined in the Shire's current LPS in that:

- It will maintain the environmental, heritage, cultural and landscape values of the Shire of Broome.
- No changes are proposed to the current layout of the caravan park, and it will maintain the provision of accommodation for leisure tourists
- The implementation of the Foreshore management plan will improve and enhance the current development found within the Town Beach precinct.

Part 2 of the Shire LPS contains the background information and analysis in relation to the LPS, it includes and analysis of the information and the rationale for the planning strategy.

Clause 6.1.5 of the LPS relates to Community Infrastructure and under the section relating to Future Provision the Strategy states that:

- *BRAC presently accommodates the public swimming pool. In future, consideration could be given to installing stinger nets at Town Beach, providing an alternative year-round swimming facility.*

The *Future Provision* of the Strategy intends for increased community activity along the foreshore and to the Beach in particular. This FMP intends to identify routes for improved beach access, and this delivers that intention.



Figure 2.3 – Extract from Local Planning Strategy showing Town Beach Reserve – Tourist Development and Parks, Recreation and Drainage

Draft Local Planning Strategy

The Shire's adopted draft Local Planning Strategy (LPS) awaits final approval from the WAPC. The adopted LPS recommends retention of the current Coastal Planning Policy as updated to reflect the Shire's Coastal Hazard Response Management Plan.

The Old Broome Development Strategy which applies to the subject site and the proposed LPS advocates for a review the existing local planning framework to include policy. Following this comprehensive review much of the framework can be replaced by a Precinct Structure Plan.

Local Planning Scheme

The Shire's current Local Planning Scheme No.6 (LPS6) zones a portion of the subject site for 'Special Use – Caravan Park' with the remainder being reserved for 'Parks, Recreation and Drainage'.

The subject site is identified in LPS6 as subject to SCA9, where clause 5.2.9 relates to the Coastal Hazard Risk Area (SCA9) and clause 5.2.9.1 relates to the objectives of the zone which are as follows:

- a) To ensure land in the coastal zone is continuously provided for coastal foreshore management, public access, recreation and conservation.
- b) To ensure public safety and reduce risk associated with coastal erosion and inundation.
- c) To avoid inappropriate land use and development of land at risk from coastal erosion and inundation.
- d) To ensure land use and development does not accelerate coastal erosion or inundation risks; or have a detrimental impact on the functions of public reserves.
- e) To ensure that development addresses the Broome Townsite Coastal Hazard Risk Management and Adaptation Plan prepared in accordance with State Planning Policy No. 2.6 State Coastal Planning Policy (as amended) and any relevant local planning policy prepared in accordance with this Scheme.

This plan meets the above objectives in that

- The plan ensures land in the coastal zone will continuously provide for coastal foreshore management, public access, recreations and conservation
- The plan provides options to ensure public safety and reduce risk associated with coastal erosion and inundation.
- The development on the subject site is appropriate
- The current and any proposed development will not accelerate coastal erosion or inundation risks nor have a detrimental impact on the functions of the public reserves
- All current and proposed development is in line with the Shire's CHRMAP and State Planning Policy No.2.6 State Coastal Planning Policy and all Local Planning Policies.

The remainder of the subject site is reserved for Parks, Recreation and Drainage, clause 2.6.1 relates to the purpose of the zone and states that:

To serve the active and passive recreation needs of the local community and allow for the development of sporting facilities and related or compatible uses including recreation buildings, car parking, and to provide for drainage areas that incorporate water sensitive urban design principles.

Clause 2.6.2 relates to the objectives of the zone and states that:

- a) *Protect and promote Aboriginal culture and heritage where appropriate.*
- b) *Set aside areas of open space within, and in close proximity to, urban development.*
- c) *Integrate open space and drainage networks to allow for effective stormwater management and recreational use.*
- d) *To allow uses in accordance with the relevant Park Management*

The Foreshore Management Plan meets the purpose and objectives of the zone by maintaining current use and improves the current active and passive recreation needs of the local community with a boardwalk along to reserve to improve connectivity and access to the Town Beach foreshore and control access to limit detrimental impacts on foreshore vegetation and sensitive areas. .

Local Planning Scheme No.7

The Shire's Local Planning Scheme No.7 (LPS7) has been recently gazetted. The scheme expands the proposed *Recreation* reserve over the café and surrounding areas, however, retains the extent of the *Special Use – Caravan Park* zone beyond the extent of the caravan park lease on the seaward side of that site. The purpose and objectives of these zones are also retained under LPS7 and therefore this plan meets the purpose and objectives of draft LPS7.

Local Planning Policies

Old Broome Development Strategy

The development strategy sets the vision and future direction for Old Broome, Town Beach and Conti Foreshore. It provides guidance on land use and built form controls as well as a range of activation and other initiatives. The Development Strategy is adopted as an LPP.

This LPP provides the basis for Council to implement the outcomes of the Old Broome Development Strategy – originally adopted by Council in 2014. The Strategy identifies Town Beach within the *Public Open Space* and *Tourist* precincts. The *Tourist* precinct, which includes much of the caravan park, and extends to the high-water mark (beyond the current caravan park lease area boundary).



Figure 2.4 – Old Broome Development Strategy

The Strategy identifies a range of *preferred*, *not-preferred* and *inappropriate* uses for each of the precincts identified. In relation to the *Tourist* precinct, the strategy lists the following as being acceptable (no uses are *not-preferred* and *inappropriate*):

- Caravan Park
- Park shop
- Recreation – private
- Caretaker's dwelling
- Park amenities.

Preferred uses within the Recreation precinct include:

- Community purposes
- Recreation indoor
- Recreation outdoor
- Club premises
- Health club
- Recreation private
- Occasional use.

This Foreshore Management Plan is consistent with this list. As noted earlier, the draft Local Planning Strategy recommends a comprehensive review and possible repeal of this Local Planning Policy – and its replacement with a revised Precinct Structure Plan. We consider the primary land uses relevant to this Foreshore Management Plan will not change significantly in any review.

Coastal Planning Policy

This LPP was prepared in response to the CHRMAP prepared for the Shire.

The policy contains a range of planning provisions relating to storm surge inundation and coastal erosion and provides a range of design and adaptation options/requirements that need to be considered for proposed development.

It provides a planning framework for the implementation of the CHRMAP, and a pathway for the Shire to consider relevant coastal issues when making planning decisions, in conjunction with the extent of Special Control Area 9 within the Shire's Local Planning Scheme.

2.4 Land use

Historical

The has been used as a camping/caravan park and low-key recreational use for over 50 years – the earliest available aerial photograph from 1970 shows a well-established caravan park in similar location the current (albeit slightly smaller and less formal). There has been significant land use change on the foreshore in that period especially in the last 20 years.



Figure 2.5 – Photo 2009



Figure 2.6 – Photo 2000



Figure 2.7 – Photo 1970



Figure 2.8 – Photo Early survey map of Broome Townsite



Figure 2.9 – Broome Jetty²

Current

The caravan park remains the dominant feature of the reserve. As stated earlier, a new lease for the operation of the park has recently been signed for a period of 21 years, and the site is currently undergoing significant redevelopment to upgrade facilities and to have regard for the CHRMAP outcomes.

The publicly accessible areas of the reserve are generally used for low-key passive recreation by Broome locals, and the facilities largely reflect this. Key infrastructure includes the boat ramp and associated parking area, grassed recreation/picnic areas, shade trees and shelters, ablution facilities and a children's water park. Use and development is largely focused on the eastern portion of the reserve, with little direct connectivity across the reserve in front of the caravan park and further to the west.

² Source: [Broome's new jetty built where a massive wooden wharf was once the town's connection to the world - ABC News](https://www.abc.net.au/news/2021-07-11/broome-new-jetty-recalls-the-towns-connection-to-the-world/100264512)
(<https://www.abc.net.au/news/2021-07-11/broome-new-jetty-recalls-the-towns-connection-to-the-world/100264512>)

2.5 Heritage

Broome has a long social anthropological history with Aboriginal and European sites and recorded events and activities forming the basis of tourism and local identity. The town beach area is affected by these interests which may require sensitive management to protect their significance.

Aboriginal

There are several broader Aboriginal Heritage sites affecting Town Beach. These are outlined in Table 2.3 below.

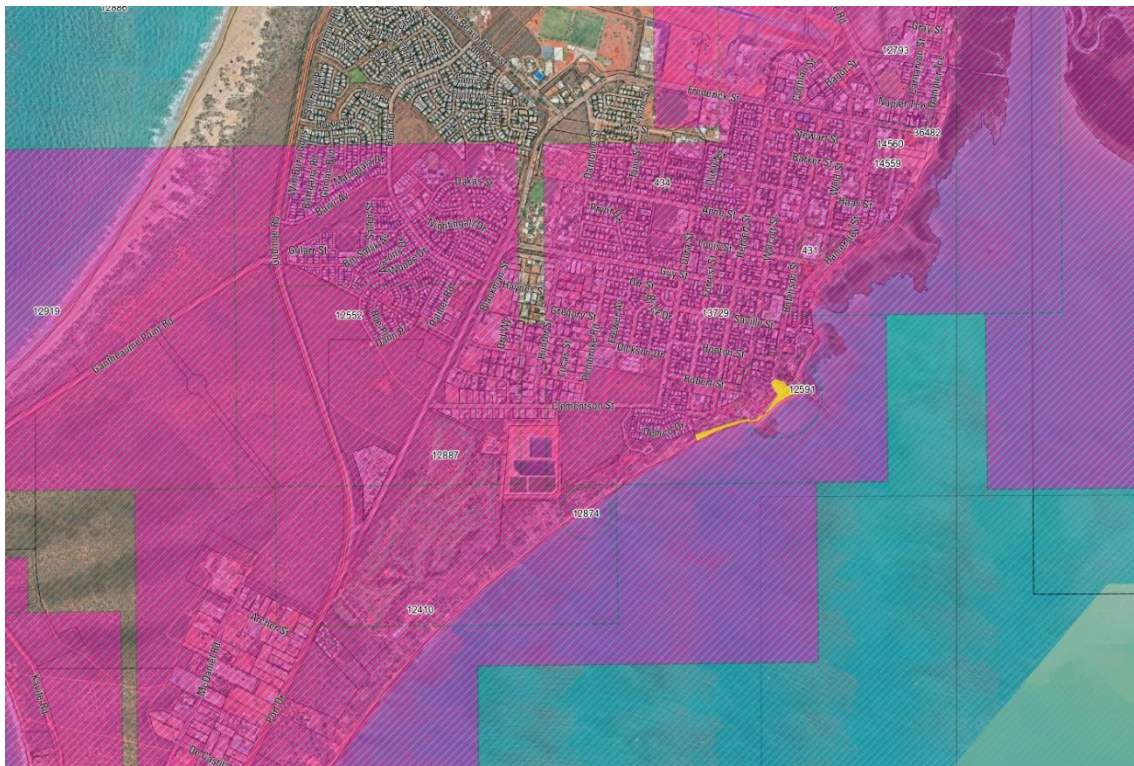


Figure 2.10 – Aboriginal Heritage Database search results

Table 2.3 – Aboriginal Heritage database search results

Name	Type
Lintapitjin/Lot 2065 Port Dr	Artefacts / Scatter, Ceremonial, Midden / Scatter, Mythological
Reserve 21801 Broome	Artefacts / Scatter, Ceremonial, Man-Made Structure, Mythological, Other: Proposed PA 087. APMC Res 23/77
Red Bank.	Fish Trap, Midden / Scatter, Mythological, Camp
Illangarami	Mythological

Source: DPLH Database Search, 2023

European

There are several European Heritage sites located in and around the foreshore. Site P4861 is the most relevant, being located on the foreshore area of Town Beach. The site has been listed on the Shire's Local Heritage List since 2996. The history of the site is described as follows:

Mangrove Point Jetty was constructed in 1897 as the Town jetty. It was 2,953 feet (900 metres) long and 15 feet (4.5 metres) wide, with a 'T'-shaped head 340 feet (103 metres) long and 30 feet (9 metres) wide. Contract for the structure was for £17,519. The jetty was connected to the town and to Streeter's Jetty in Chinatown, by a tramway. The line ran down the centre of the jetty and on one side was a cattle race, a box-like structure enclosed on both sides. Cattle were driven along the race to be loaded onto a waiting ship. The jetty was important for the transport of stock because of the considerable overland distance. Despite its length, boats were still left stranded at low tide. The jetty was the place to be seen when the steamships were in: master pearlers in white suits with two gold studs at the neck band and wearing pith helmets and the ladies with parasols. The steamship lounges would be open for the enjoyment of gin slings and whiskey and sodas. The jetty closed in the late 1960s, when a new deepwater port jetty was built further south. Mangrove Point remains a tourist lookout, viewing site and popular fishing spot.

The Statement of Significance in relation to Town Beach Reserve is as follows:

Town Beach is significant as a place of social gathering and recreation for residents and visitors of Broome. The remains of Town Jetty are an important historical site representing the shipping and pearling industries that were the foundation and sustenance of settlement and development in Broome.



Figure 2.11 – Local Heritage

2.6 Consultation outcomes

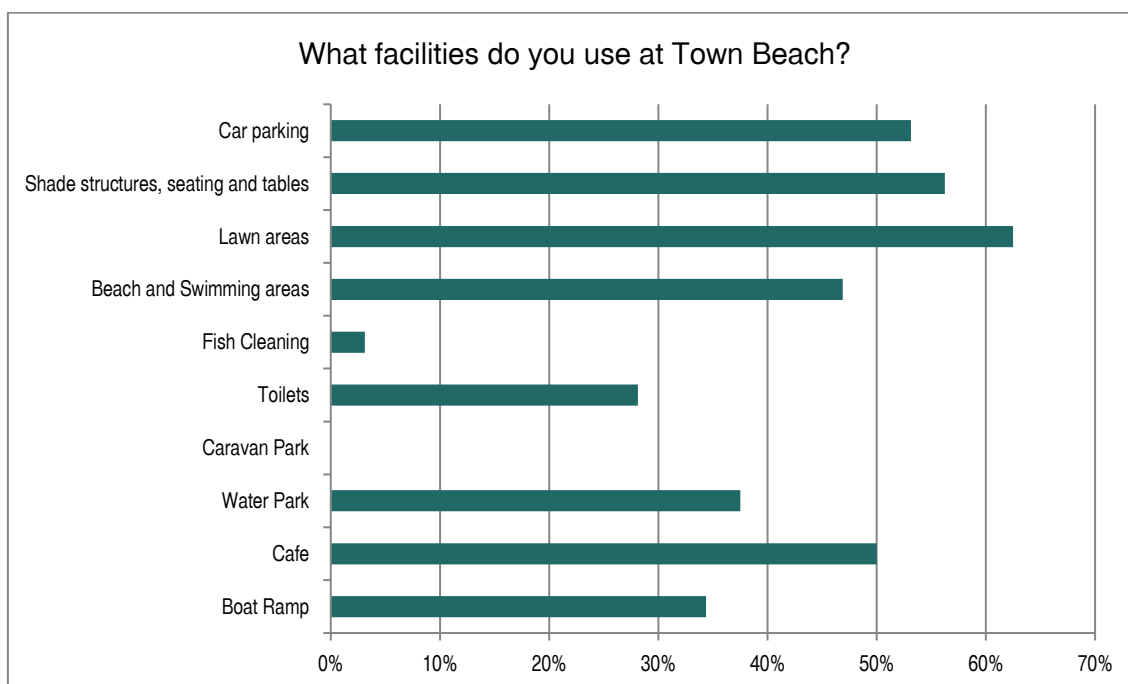
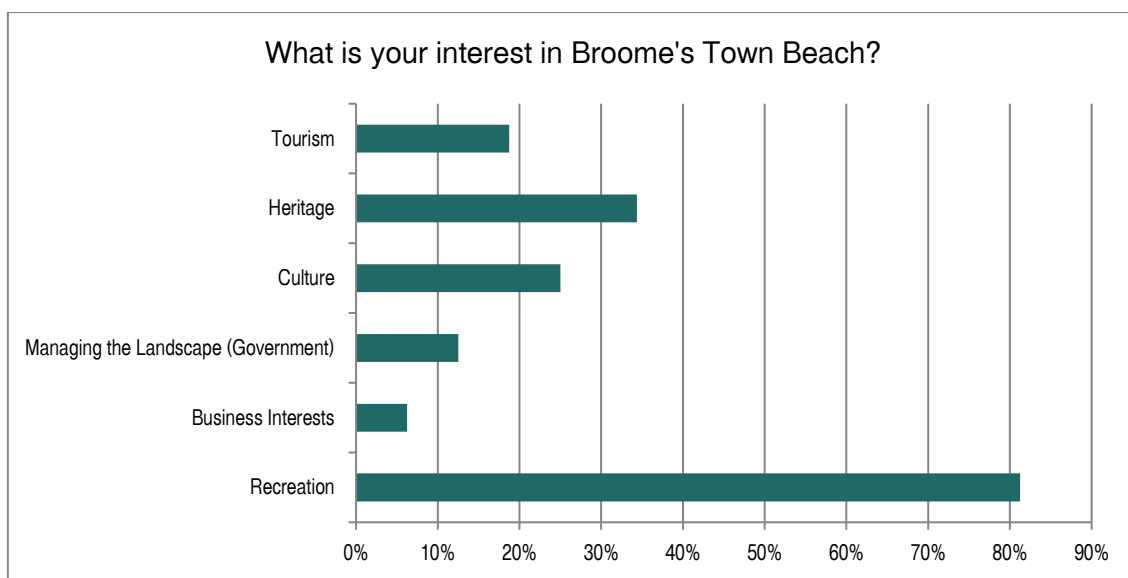
Engagement activities are designed to assist the community to contribute effectively to the preparation of the Foreshore Management Plan. A *Stakeholder and Community Engagement Plan* was prepared to guide engagement through the following objectives:

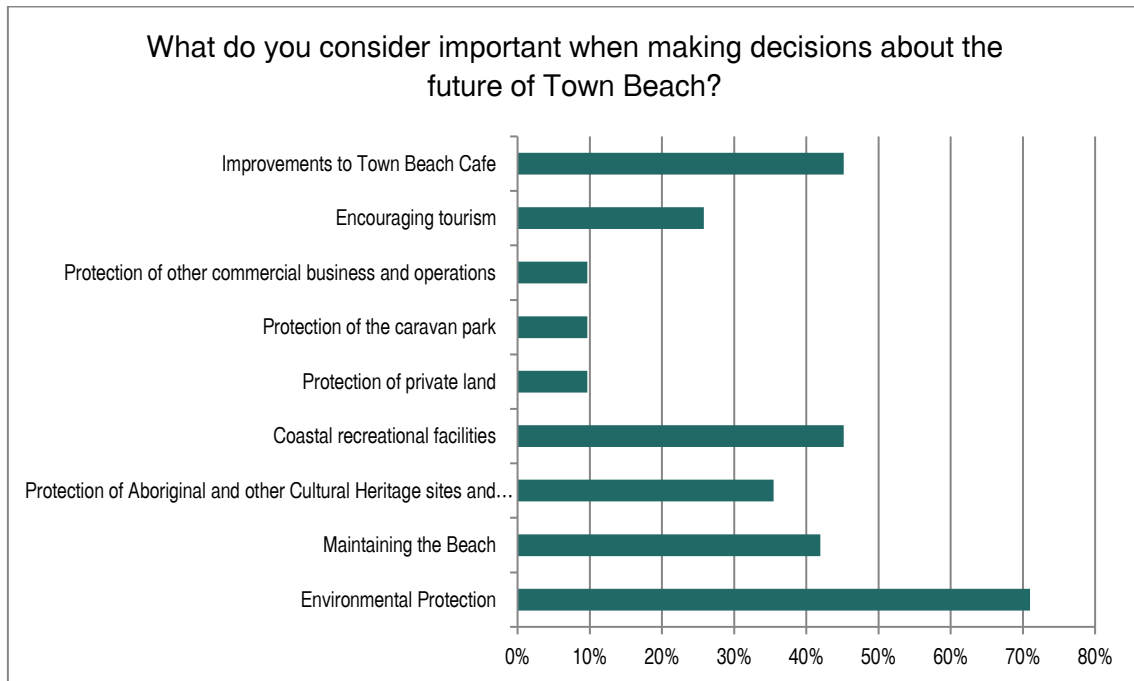
1. identify, inform and involve stakeholders in the process
2. strengthen shared values and processes between stakeholders
3. communicate the limitations and potential of the process
4. confirm community values and attitudes to foreshore use
5. inform the community on how community values and issues have been responded to
6. provide a process that will engender confidence in the Council that the resultant FMP reflects established community visions
7. avoid misinformation relative to the process and outcomes.

Survey

A community survey was conducted over a period of approximately six weeks. The survey was available online and in hard copy form – having been circulated through the town by the Shire. The survey comprised 13 questions with both multi-choice and open-ended questions being posed. 41 responses to the survey were received. The responses confirmed that the foreshore is of great importance to locals, with a significant amount of use by local residents compared to tourist respondents. The low-key character of recreational use of the reserve was also noted and valued throughout, and there was

expressed a desire to maintain this character of use into the future. Relevant outcomes are presented in the figures following. Full responses have been provided to the Shire.





Community engagement

Land Insights staff attended the foreshore in late November/early December 2022 over a 4-day period. Use and activities on the foreshore were observed, these confirmed the advice received via the community that enjoyment of the place is due to its local, low-key community and recreational use of the reserve.

In addition to the site observations, a notice was circulated in the community advising that Land Insights and the Shire would be present in the reserve for a 3-hour period on Tuesday 29th November 2022 – to welcome discussions with locals regarding the use and management of the reserve. During this period, our team was approached by several people to discuss the reserve, and in addition we approached reserve users to seek their input and to facilitate the completion of the survey with a representative sample.

Council

Council has been briefed three times during the preparation of the management plan. Relevant comments and observations from Council have been included as relevant to the management plan.

Council staff

Council staff have been briefed several times as the plan was prepared. Relevant comments and information has been included or referenced.

Yawuru

A meeting was held with the Yawuru Park Council in May 2023 to introduce and discuss elements of the plan. A subsequent meeting was held between the Yawuru and the Shire in August 2023.

Future engagement

The draft Management Plan will be advertised for public consultation.

3 Physical & biological attributes

3.1 Climate and weather

Winds

Broome generally experiences two distinct seasons of winds. Quasi monsoonal winds prevail during the wet period from October to March, with a land-sea breeze cycle (SE to SW) prevalent during the dry period from May to September.

This combination provides a clearly bimodal wind distribution, with east-southeast (dry season) and west-northwest (wet season) prevailing winds.

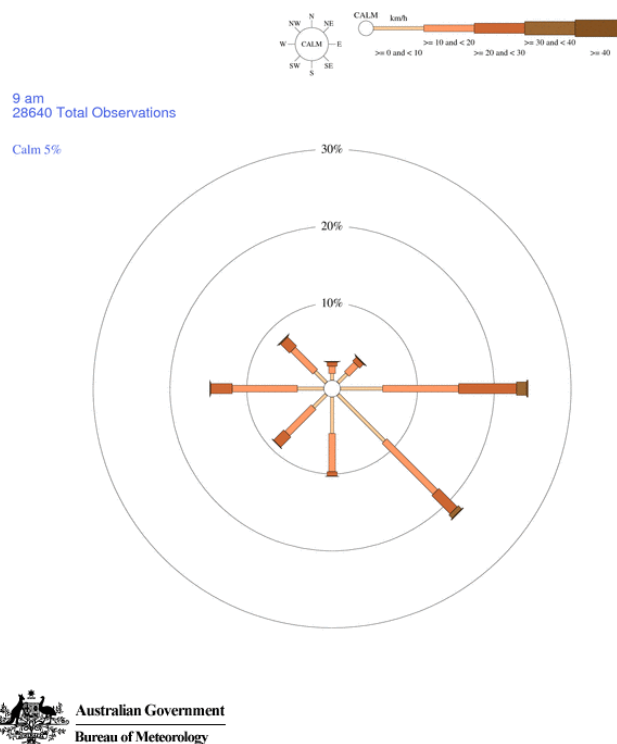


Figure 3.1 – Wind Rose – Broome

The Yawuru seasonal calendar (Table 3.1) and monthly distributions show how the relative frequency of wind directions varies over the course of a year.

Table 3.1 – Yawuru seasonal calendar

Yawuru Season	Man-gala	Marrul	Wirralburu	Barrgana	Wirilburu	Laja
Months	Dec-Mar	Apr-May	May-Jun	Jul-Aug	Sep-Oct	Oct-Nov
Description	The Wet. Strong NW winds	Changing season. Little wind or rain.	Cooling season. Strong SSE. No rain	Cold season. Strong dry SE wind.	Warming-up season. W winds begin.	Hot time. Build-up to the wet season.

Rainfall

The mean annual rainfall at Broome Airport is 624mm. Rainfall is highly variable throughout the year, and from year to year (seasonal characteristics are outlined in Table 3.3). The highest annual rainfall is 1599mm, recorded in 2018. The highest monthly rainfall of 945mm was recorded in January 2018, with a daily rainfall on 30/01/2018 of 440mm.

3.2 Topography & landform

Roebuck Bay occurs near the geomorphic transition between the Pilbara coast to the south and the Kimberley coast to the north. The 20km wide bay is bordered by Sandy and Bush points in the south and the prominent Entrance Point at Broome in the north. In between, the shoreline curves for 70 km (11).

The northern shore of Roebuck Bay commences at Crab Creek and extends west for 14 km to Dampier Creek and then southwest for 8 km to Entrance Point. The study area is sited within the Broome townsite between Dampier Creek and Entrance Point. To the north east of the site, there are extensive areas of mangroves along the western tidal ebb shoals of Dampier Creek. The shoreline includes perched beaches with local rock control, coastal dunes, pindan cliffs and coastal protection structures.

Town Beach is a 330m long sandy beach with an arcuate planform and is controlled at the northern end by the abutment for the old Broome Timber jetty, and at the southern end by a Pindan Headland, rock outcrops and mangroves. To the west there is a 4,500m long beach with an elongated arcuate planform and intertidal beach rock backed by sand dunes and pindan cliffs. This beach extends from Town Beach to the Port of Broome at Entrance Point.

These beaches are identified as Tidal Sand/Mud flats with a wide low gradient, small high tide beach (Figure 3.2). Intertidal flats may contain tidal draining channels and may lie adjacent to deeper tidal channels. Scattered mangroves commonly occur in higher intertidal zone. The beaches are usually calm, with only low wind chop during strong onshore winds.

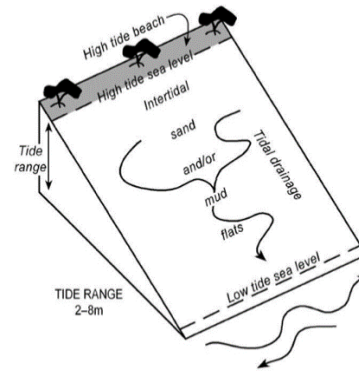


Figure 3.2 – Regional Coastal Setting (left) and Beach Morphology (source: Seashore Engineering)

Within the study area there are three distinct landforms:

- *Town Beach:* South facing relatively wide sandy beach with its planform (shape) and local controls. The foredune behind Town Beach has been re-graded as parkland and sites for the Roebuck Bay Caravan Park (RBCP).
- *Pindan Headland:* Steep unconsolidated cliff of Pindan sand, as evident throughout the Broome coastline. The headland and adjacent reef and mangroves provide control to the beaches to the east and west.
- *Western beach:* The beach to the west of the Pindan Headland is dominated by an intertidal rock platform/ramp, with a narrow perched sandy beach behind the rock and at the base of the foredune. The coastal dune has been regraded for the caravan park. (Figure 3.3).



Figure 3.3 – Foreshore overview

3.3 Vegetation and habitat

TECs

Town Beach is included within a Priority Ecological Area that extent well beyond the extent of the site itself as depicted in the figure below.



Figure 3.4 – Threatened/Priority Ecological Community Extent

A search of Threatened and Priority flora and fauna has been undertaken. Apart from the observation of threatened and endangered bird species (including migratory birds) from Town Beach, there are no other recorded species. It should be noted that the lack of database results does not indicate that species do not exist on the reserve, but rather they have not been sighted as part of a field survey.

3.4 Bushfire risk

Town Beach reserve is not within a designated bushfire prone area; however it does abut an area near Demco Reserve associated with the remnant vegetation further to the west, forming part of the wastewater treatment plant buffer and golf course.



Figure 3.5 – Bushfire Prone Areas

3.5 Coastal processes

Tidal Regime

Broome experiences a semi-diurnal tidal regime, with a lowest to highest astronomical tidal range of 10.5. There is a biannual tidal cycle, with equinoctial peaks in April and September. Tidal planes for Broome as derived from the 2016 DoT submergence curve are outlined in Table 3.1 (6).

Water levels exceeding MHS occur for about 130 hours per year, are typically limited to a 3–4-day period every 2-4 weeks during the spring tide cycle. This may occur approximately 20 times per year, but more frequently during period of elevated mean sea levels (Table 3.2).

Table 3.2 – Broome Tidal Planes

Tidal Level	LAT	MLWS	MLWN	MSL	MHWN	MHWS	HAT
Water Level (mAHD)	-5.2	-3.7	-0.8	0.1	1.1	4.0	5.3
% Time Submerged	100	97	65	52	35	1	<1
Hours per year submerged	8 770	8 540	5 660	4 290	3 070	127	0.1

Note: LAT: Lowest Astronomical Tide; MLWS: Mean Low Water Springs; MLWN: Mean Low Water Neaps; MSL: Mean Sea Level; MHWN: Mean High Water Neaps; MHWS: Mean High Water Springs; HAT: Highest Astronomical Tide. Source: Seashore Engineering.

Table 3.3 – Design water Level for Broome

ARI	10	25	50	100	200	500
Water Level (mAHD)	5.4	5.4	5.5	5.6	5.6	5.7

Note: Levels are reported according to AHD. Note that the decimal place is included to allow better resolution for comparison, rather than being an indication of accuracy. Source: Seashore Engineering.



Figure 3.6 Tidal Regime – Town Beach (source: Seashore Engineering)

Waves

Roebuck Bay is largely sheltered from the prevailing offshore swells from the west through to the southwest. Wave heights monitored inshore of Entrance Point (BR08) over 12-months in 2011/2012 by DoT recorded a maximum wave height of 1m, associated with a strong south easterly wind event. Mean wave height for the data set was 0.18m and mean wave direction was southerly (Figure 3.5).

Wave modelling undertaken by Cardno for the Broome Vulnerability Study identified a 50yr and 100yr ARI wave height (Hmo) within Roebuck Bay of 2.32m and 2.55m respectively (2).

Runoff Erosion

The scour of drainage channels along the coast in Roebuck Bay can occur during high rainfall events, in particular high intensity events that can overwhelm the stormwater system. This has the following implications for foreshore management:

1. Localised scour around the stormwater outlets can be severe, eroding the adjacent foreshore and beaches.

2. Creek outlets can migrate and scour along the shore, creating large scour channel behind dunes.
3. Material eroded from the foredune and beaches can deposit in nearshore areas, influencing local sediment dynamics as it distributed over time under the influence of waves and tidal currents.



Figure 3.7 – Stormwater Outlet Scour at town Beach in Mar2022 (upper) and Runoff erosion adjacent to Simpsons Beach Carpark, immediately west of Caravan Park, Dec 2018 (lower)

Tropical Cyclones

Broome has a complex surge record, demonstrating surge generated by barometric pressure, by wind setup or by wave setup, but generally not simultaneously due to effects of shore aspect and surge/wave fetch generation. Broome exhibits a wide spread of cyclone paths associated with high surge, which is related to a dissociation between the different water level components (barometric pressure, wind setup and wave setup).

Since 1970, there have been four Cat 3 events within 100km west of Broome, and two Cat 5 events. The most severe recent event was TC Rosita in April 2000. The majority of the observed beach impacts were associated with high rainfall and runoff scour.

4 Key Issues

A review of the key issues associated with the project is outlined in the table below:

Table 4.1 – Key issues overview

Issue	Considerations in FMP
Planning policies and management plans	<p>Review contemporary strategic documents and policies</p> <p>State Planning Policy SPP 2.6 has recently been updated and elements of this policy should be incorporated where necessary</p> <p>State and local policies will provide guidance on the proper coastal planning considerations.</p> <p>A summary of the coastal planning policies and framework and how they relate to the study area will be presented in a table.</p>
Tenure and zoning	<p>The site is backed by Shire-managed Reserve (R31340) and Yawuru Native Title Holders Aboriginal Corporation Rntbc, Shire of Broome Reserve.</p> <p>The beach area is Unallocated Crown Land, and the implications of this need to be considered.</p>
Land Use	<p>Tenure will be mapped to show the different ownership along the coast, including reserves, UCL and freehold.</p> <p>The Local Planning Scheme zones and reserves within and surrounding the study area will be mapped to help identify which land uses are appropriate and which restrictions apply.</p> <p>Popular and high use sites will be identified as this will indicate where a majority of land use pressures are.</p> <p>The variety of land uses will be identified.</p> <p>Potential land use conflicts will be identified.</p>
Environmental characteristics	<p>Baseline environmental data will be mapped for the entire study area.</p> <p>Environmental features and values will be considered including coastal geology, landscape, remnant vegetation, low lying areas, wet areas, habitat and protected flora.</p>
Social characteristics	<p>Social values along the coast are closely related to its recreational and tourist values.</p> <p>These values can be determined primarily through consultation with local government and community and through review of literature.</p> <p>Areas with the highest social value are most likely areas with high environmental value or popular spots for recreation.</p>
Economic characteristics	<p>The economic value of the coast is linked to its value for tourism and recreation.</p>

Issue	Considerations in FMP
	Maintaining the aesthetics and function of the coast is important for maintaining its economic value.
Access	<p>A review of coastal access will take place to determine areas where access should be improved.</p> <p>If access is poor this can sometimes lead to greater environmental damage, especially if, for instance, 4WDs are driven through dune vegetation to create multiple tracks and uncontrolled pedestrian access. Improving access to keep vehicles and pedestrians to allocated tracks can help lessen environmental impacts.</p> <p>Pedestrian access should be safe</p>
Infrastructure	<p>Infrastructure includes amenities, picnic facilities, walk trails and pathways, groynes, boat ramps, jetties and a number of other facilities which aid in people's enjoyment and use of the coast.</p> <p>The study will review facilities along the study area and identify areas where improvements should be made.</p>
Heritage	<p>Yawuru Traditional Owners will provide valuable input in regard to registered Aboriginal heritage sites within the Study Area</p> <p>A review of non-Aboriginal Heritage will be undertaken. It is noted that Town Beach, the old Broome Jetty site, and tramway alignment are of heritage interest.</p>
Coastal Adaptation	<p>Coastal path alignment.</p> <p>Management of coastal dune west of Pindan Head.</p> <p>Pindan Headland stability (safety)</p> <p>Upgrade of beach access structures.</p> <p>Caravan Park redevelopment.</p>
Drainage	<p>Drainage structures.</p> <p>Foredune scour.</p>

5 *Vision & objectives*

The strategic vision for the study area is as follows:

To manage the unique social and environmental resources of Town Beach, taking into account risk from coastal hazards, environmental management, and equitable access.

The objectives of the Town Beach Management Plan are below. These have been developed through consideration of issues, opportunities, values and trends derived from consultation.

Objective 1 – To manage the environmental and recreational values of the foreshore to retain the broad range of passive recreational opportunities and environmental values and sense of isolation unique to the area.

Objective 2 – To ensure that the Broome community has continual access to the foreshore and beach area at Town Beach.

Objective 3 – To ensure management and protection of the foreshore is undertaken in an environmentally and economically sustainable manner.

Objective 4 – To ensure adequate consideration of coastal hazards is undertaken and ensure management is undertaken in accordance with SPP 2.6 and associated guidelines.

Objective 5 – To retain, protect and enhance areas of historic value, and places of cultural heritage significance within the study area.

Objective 6 – To increase community awareness and participation in coastal management and maintain successful relationships between stakeholders and coastal users.

Objective 7 – Provide an implementation plan that identifies management actions and sets priorities.

6 Management actions

6.1 Access & public use

Access to the foreshore should be managed to ensure a balance between environmental management and recreation. Pedestrian access, in particular, needs to be provided in a controlled manner in certain locations to avoid indiscriminate access and degradation of foreshore environmental and aesthetic values.

Vehicular access to the foreshore is adequate, with good connectivity to the local road network and established foreshore parking areas. A boat ramp is located on the eastern end of the reserve, and a number of trailer parking bays are provided in the adjacent car park.

Pedestrian access from the main eastern car park is appropriate in current format. The edging of the pathways and grassed areas are well maintained. The newer carpark to the west is more isolated and it is noted that the rear of both adjacent buildings faces the car park. This limits surveillance and results in a loss of visual connection between the car park access path and the foreshore. There is a good opportunity to reconfigure the buildings/access in this area as part of the café redevelopment.

It is also noted that the fencing along the western boundary of the caravan park is solid and results in the car park area on this side feeling ‘enclosed’. It also prevents surveillance of the car park from the caravan park.

There is no universal access from the car park or grassed area to the beach. Universal access can be difficult in areas with steep slopes, undulating topography and large tidal variation (which is common in coastal areas). This makes Town Beach a good location to facilitate universal access compared to many other sites in Broome.



Figure 6.1 – Overview of town beach access

Apart from a small sign, there is no clear delineation between public land and the caravan park lease area. On the ground, it is unclear where the boundary between the public foreshore and the leasehold land is. It is recommended revised signage be installed to clearly indicate the demarcation between public land and leasehold land.



Figure 6.2 – Public and private realms

*Areas are not clearly delineated in this area.
Runoff/drainage erosion of the foreshore in this location is also problematic as it is destabilising the remaining public areas (see image below for reference)*



In a broader sense, it is not currently clear that there is public access permitted in front of the caravan park. This in part may be due to lack of easy access to the foreshore area in this location.



Figure 6.3 – Caravan Park lease

This (yellow line) delineates the public and private land in this area. On the ground, it is not clear that public access to the beach is possible in this location.

There has been a long-term desire to formalise a public connection between Town Beach to Demco Park. The recent finalisation of the Caravan Park Lease has provided a portion of the reserve that may facilitate this (noting that the access needs to be provided within the Reserve boundary – not within the adjoining UCL). Preliminary consideration was given to the alignment of the pathway in the 2020 caravan park redevelopment proposal, however further site-specific consideration will need to be required to finalise a cost effective and resilient route.

Two concepts were considered in the FMP for providing a constructed path either side of the headland. The option of a concrete path behind the headland would be preferable but is not feasible due to the requirement for the path to run within the caravan park lease area to ensure reasonable setbacks from the Pindan Headland. The alternate option preferred by the Shire is a coastal walkway around the headland.

The Coastal Adaptation report notes, in regard to the walkway, to “Ensure design and siting of proposed coastal walkway in RBCP Concept Plan suitable in terms of foundations, wave impacts, cliff stability, environmental impacts and durability.”

A conceptual alignment is provided below with the following noted:

- The length of the walkway would be in the order of 130m.
- The alignment requires section of the walkway to be located below highest astronomic tide. This will require either a raised walkway above tide levels (plus waves) or allowance for occasional submergence.
- The dunes at either end of the walkway are reasonably steep and the design would require consideration of suitable grades for access, landings and handrails in terms of relevant code and standards.
- Offsets from the Pindan Headland are required for safety.

Options for extending the coastal path west of the Caravan Park, to Demco Drive, was also considered. The FMP allows for improved beach access and pedestrian access along the beach at suitable tides. There are potential alignments for a concrete path along the back of the dunes that could be further considered by the shire, subject to consultation. The design would need to allow for high runoff flows observed through this area.





Figure 6.4 – Coastal Boardwalk Around Pindan Headland – Concept Alignment

Table 6.1 – Management actions – access and public use

Action	Description	Priority
<p>Relevant Objectives:</p> <p>Objective 1 – To manage the environmental and recreational values of the foreshore to retain the broad range of passive recreational opportunities and environmental values and sense of isolation unique to the area.</p> <p>Objective 2 – To ensure that the Broome community has continual access to the foreshore and beach area at Town Beach.</p>		
APU1	Monitor usage of car parks, particularly during peak time, to ensure adequate supply.	Ongoing
APU2	Maintain existing pedestrian pathways. Avoid placing further concrete pathways any closer to the beach.	Ongoing
APU3	Investigate opportunities for more formal universal access when facilities are provided. Ensure universal access and inclusion planning is considered when designing and implementing the actions recommended in this Strategy and that the Shire's Disability Access and Inclusion Plan (2018-2023) is referred to.	Short
APU4	Clearly delineate the boundary between public and leasehold land in front of the caravan park.	Short
APU5	Implement access control and reduce the level of disturbance to the environment caused by pedestrians in the area in front of the caravan park.	Short
APU6	Provide a pedestrian connection from Town Beach in front of the caravan park, to connect with Demco Park to the west.	Medium - Long
APU7	Replace, improve or formalise public access pathways from the dunes to the beach in key locations.	Medium

6.2 Coastal processes

A significant amount of work has been completed to understand, analyse and provide guidance on coastal processes, and subsequent land use adaptation options, for Town Beach. The most recent work reviewed in this regard is the report: *Town Beach – Geotechnical Investigation and Coastal Adaptation Options Assessment*, prepared by Seashore Engineering in June 2020. This research contains a comprehensive overview of coastal process potentially impacting Town Beach and identifies for discussion a range of adaptation options using methodology endorsed by and consistent with DPLH SPP2.6 – State Coastal Planning Policy.

The *Accommodate* option was identified as the preferred option. In a general sense, this option considered the following design elements:

- Remove building rubble and rework existing rock on the Western Beach
- Dune nourishment and stabilisation on the Western Beach
- Rework rock around toe of Pindan headland
- Rework existing walling east of Pindan Headland
- Maintain existing beach access stairs
- Develop Foreshore Management Plan for Town Beach (vegetation, nourishment following events)
- Develop Emergency Response Plan for Caravan Park
- Rebuild Café in similar location as piled structure and raised floor levels
- No camp sites or infrastructure seaward of the “Immediate Coastal Process Hazards Distances” in the Cardno CVS (2).
- Permanent Structures to be designed on piles

Further refinement of the *Accommodate* option was undertaken by Seashore Engineering in 2020. This resulted in the formulation of a range of recommendations as follows:

General

1. *Develop a Foreshore Management Plan to manage beach access and protect and enhance existing dune vegetation. This would require better definition of beach access and installation of dune fencing or similar.*
2. *Review existing and proposed development in the Roebuck Bay Caravan Park Redevelopment Concept that is seaward of the ‘Adjusted² Current Risk of Storm Erosion’ (100yrARI) hazard line and the projected permanent stable slope (1V:3H) for the Pindan Headland, in particular:*
 - 2.1. *Remove or adjust proposed caravan sites seaward of the ‘Adjusted Current Risk of Storm Erosion’ (100yrARI) hazard line, which includes an allowance for localised slope failure of the Pindan Cliff (1V:3H).*
 - 2.2. *Review recommendation for GALT 2020 (5) for mitigation of slope stability risk.*

- 2.3. *Ensure existing services in this area are documented on an asset management plan, and their capacity for relocation at the time of renewal is considered.*
- 2.4. *Review location of restricted access fencing behind Pindan Headland.*
3. *Review existing and proposed development in the Roebuck Bay Caravan Park Redevelopment Concept that is seaward of the '2040 Coastal Processes Allowance' hazard line, in particular:*
 - 3.1. *Proposed safari tents are suitably designed to accommodate localised erosion of the steep embankment.*
 - 3.2. *Ensure potential coastal erosion risk to park visitors is mitigated in an Emergency Response Plan for caravan park (as per CHRMAP). Nominally this could be integrated with an existing Cyclone Management Plans, with some consideration of coastal erosion during spring tides, and stormwater overflow events.*
 - 3.3. *Review existing road layout and access to mitigate coastal erosion risk*
4. *Review stormwater overflow drainage to ensure capacity of outlets to accommodate coastal erosion, and to mitigate impacts on foredune and beaches.*
5. *Inspect, refurbish and/or replace existing beach access stairs.*

Town Beach

Town Beach has a history of stability and remains a suitable site for the ongoing focus of public recreational activities and tourism. The following is recommended:

1. *Existing boat ramp to remain, with ongoing maintenance. Potential for sand removed from ramp to be used to nourish dune on Western Beach to be considered.*
2. *Works consider the planned completion of the current jetty abutment refurbishment in 2020 and future jetty construction.*
3. *Beach access to be better defined, particularly where there is existing coastal dune vegetation.*
4. *The relatively minor risk of storm surge inundation to existing café is communicated to the existing leaseholders, with consideration of short-term mitigation (e.g. public access control, batter boards).*
5. *The proposed redevelopment of the Café maintains the existing coastal setback from the coastal vegetation line and opportunities to modify the finished floor levels at the detailed design stage to mitigate future risk associated with sea level rise (flood- proofing).*

6. *The refurbishment of the existing ‘dumped’ rock protection is considered following the inspection and design of maintenance and/or refurbishment of adjacent stormwater drainage and beach access structures.*

Pindan Headland

The Pindan Headland has vertical cliffs of unconsolidated material with relatively complex erosion mechanisms. These landforms are unique natural features that are evident throughout Broome. The following is recommended:

1. *GALT 2020 note leaving the Pindan Headland in its current state has a risk of slope failure (slumping, collapse, erosion) particularly during or following rainfall events, wave action, tidal events and cyclone events. In order to leave the slope “as is”, GALT 2020 recommend that the following measures are undertaken:*
 - 1.1. *Leave as much vegetation as possible on the slopes to reduce the probability of localised slip failures and erosion.*
 - 1.2. *Restrict development on the high side of the slope. An exclusion zone extending from a 1V:3H line from the toe of the slope should not be developed.*
 - 1.3. *Footpaths may be constructed in this exclusion zone but should be considered temporary structures. A guard rail should be installed to prevent trafficking adjacent to the crest of the slope (within around 1 m).*
 - 1.4. *If a failure occurs after a rainfall or tidal event or similar, the failed area must be remediated such that the toe of the slope is reinstated to at least where it was prior to failure. “*
2. *Refine the program for ongoing coastal monitoring of the Pindan Headland, in particular post-event monitoring.*
3. *Review options for reuse and/or relocation of existing armour rock at the toe of the Pindan Cliffs.*
4. *Ensure design and siting of proposed coastal walkway in RBCP Concept Plan suitable in terms of foundations, wave impacts, cliff stability, environmental impacts and durability.*

Western Beach

The main issues for the Western Beach are foredune management to maintain reasonable coastal protection for existing and proposed land-uses, and the maintenance of beach access at the eastern end. The following is recommended:

1. *Refurbish existing foredune by removing 'dumped' concrete rubble, reworking existing rock to mitigate erosion of the toe of the steep dune at spring tides, importing suitable sand for dune nourishment, regrading and stabilisation with vegetation.*
2. *Develop a program for ongoing monitoring and nourishment of this foredune, to better understand the mechanisms of erosion and sustainable sand nourishment volumes and sand sources. Nominally this should be based on maintenance sand nourishment to retain the present foredune location.*
3. *Ensure trees immediately behind the foredune are regularly inspected for health and stability.*
4. *Planning and design of the proposed coastal access path should ensure it does not become a future liability for the Shire that requires high-cost coastal protection. The siting should ensure setbacks to the dune crest are maximised, path materials allow for movement and future maintenance (i.e. flexible materials), and the future removal of the path if threatened by erosion is considered.*
6. *Siting of well-designed and relocatable 'Cabins' or 'Safari Tents' between the seaward road along the Western Beach within the RBCP the seaward side of the '2040 Coastal Processes Allowance' hazard line is reasonable. The location of relocatable structures between the seaward road along the Western Beach within the RBCP and the "Adjusted Current Risk of Storm Erosion" hazard line can be considered on a case-by-case basis provided the dune buffer is maintained and reinstated following a storm.*

This FMP has been prepared largely in response to general recommendation 1 (Develop a Foreshore Management Plan to manage beach access and protect and enhance existing dune vegetation) however the plan has gone further than beach access and dune vegetation.

Table 6.2 – Management actions – coastal processes

Action	Description	Priority
<p>Relevant Objectives:</p> <p>Objective 1 – To manage the environmental and recreational values of the foreshore to retain the broad range of passive recreational opportunities and environmental values and sense of isolation unique to the area.</p> <p>Objective 2 – To ensure that the Broome community has continual access to the foreshore and beach area at Town Beach.</p> <p>Objective 3 – To ensure management and protection of the foreshore is undertaken in an environmentally and economically sustainable manner.</p> <p>Objective 4 – To ensure adequate consideration of coastal hazards is undertaken and ensure management is undertaken in accordance with SPP 2.6 and associated guidelines.</p>		
CP1	<p>Give due regard to SPP 2.6 for the planning of any coastal facilities or development following the management and adaptation hierarchy of avoid-retreat-accommodate-protect. The location of coastal facilities and development should consider:</p> <ul style="list-style-type: none"> coastal processes, appropriate coastal setbacks are implemented any fixed infrastructure is built to the appropriate standard over an appropriate planning timeframe and can accommodate the anticipated range of beach and dune variability. <p>It is recommended most assets on this coast are placed with consideration of how to accommodate future potential erosion and extreme events. This is particularly relevant for recreational assets with finite lifespans and coastally dependent and easily relocatable assets noted in Sections 7.1 and 7.2 of SPP2.6 respectively.</p>	Ongoing
CP2	Conduct regular monitoring of infrastructure and recreational facilities along the beach within Shire-managed reserves.	Ongoing
CP3	Ensure coastal users are adequately informed of natural hazards and risk such as flooding and inundation through the use of signs.	Ongoing
CP4	Give due regard to SPP 2.6 which provides for public access to foreshore areas and apply when considering future options for access.	Ongoing

Action	Description	Priority
CP5	Implement the <i>Accommodate</i> recommendations from the <i>Town Beach – Geotechnical Investigation and Coastal Adaptation Options Assessment</i> , however with a focus on protecting the integrity of the Pindan Headland.	Ongoing

6.3 Facilities and amenities

Town Beach is well provisioned with relevant and generally good quality facilities and amenities focused on low-key passive recreation use. Facilities and amenities include:

- Boat ramp
- Car parks and pathways
- Maintained grass parkland/picnic areas
- Water playground
- Café
- Ablution facilities
- Shade trees.

Boat ramp

The boat ramp is an important community facility and provides boat access to this side of Broome. It is highly valued by the community and should be retained. It is understood that the ramp does get extremely busy during peak periods.

The Shire is monitoring the use of the ramp and some consideration should be given to opportunities for upgrading or duplicating the ramp (in the same location) to cater for increased use, subject to progress of boat launching facilities at Broome Boat Harbour.

It is recommended that a survey of boat launching activities at the ramp and ensure that there are an appropriate number of car/trailer parking bays in the adjoining car park. Note that a mix of boat/trailer and single car parking needs to be retained within the context of AS3962 and Department of Transport guidelines, and suitable marine signage is provided.



Figure 6.5 – Boat ramp and parking configuration

Café

The café is currently not operating, and as stated earlier the Shire is in a process of seeking a short/medium-term operator of the existing facility while considering options for redevelopment of the facility over a longer term.

There is strong community support for the café as it was, and while the redevelopment process is acknowledged by the community, there is some concern expressed regarding possible plans for a larger 2 storey structure be developed on the site, complete with longer trading hours and alcohol sales. It is a clear community preference for a smaller low-key facility as consistent with this area as a local recreation location.

A *design and construct RFQ* process by the Shire is running as a separate project, and it is anticipated that any redevelopment of the facility may be some years away. There are opportunities to influence design as follows:

- Ensure footprint of any new café building is set back beyond the revised 2040 hazard line if possible, or conversely designed appropriately to consider coastal processes (including piling of foundations)
- Provide for greater visual connectivity from car park to café area and beyond to improve legibility and reduce impacts of random tracks and trails over the foreshore. (ie do not have blank walls and service areas immediately facing public domain, even if it is a car park)
- Promote a low-key facility that caters to Broome locals and adjoining caravan park users
- Ensure minimum floor levels to avoid longer-term possible inundation
- Ensure that the drainage in this area of the foreshore, including from the adjoining car park, is holistically addressed as part of the design process.

In the short to medium term, consideration could be given to mobile or non-permanent options for provision of this service to the local community on the foreshore. Provision of facilities in this manner can be seen as a good example of implementing ‘coastal adaptation’.

Maintained grass parkland/picnic areas

The grass picnic area at Town Beach is highly used and the focus of recreational activity across the FMP area. It is well maintained by the Shire and offers a pleasing aspect to the adjacent waters. It is suggested that this area be largely maintained in its current form recognising possible inundation and repair following storm events. The plan recommends the extension of the grassed area further west, between the café and the Pindan Headland. This will provide additional passive recreational spaces for the community and assist in clearly delineating the public land in front of the caravan park. Discussions with the Yawuru have indicated that this is an acceptable proposal.

At present, there is no discernible edge between the grassed area and the sandy beach, and the grass is being undermined in areas as a result, with a noticeable change in ground level in places.



Figure 6.6 – Unmanaged interface between grassed area and beach

It is suggested that the interface between the grassed area and the beach be considered. Options could include low level pindan rock interface be used to delineate the grassed area and the beach – in a similar manner to the area just to the west (refer below), or modular steps with no foundations, such as timber sleepers or similar structure which could be easily replaced/repared if and when levels are changed.



Figure 6.7 – Rock interface between grass and beach

Water playground

The water playground is a popular destination for the local community and should be retained. It appears to be well maintained and operational.

Ablution facilities

The existing ablution facilities are located to the east of the main Town Beach area. The facilities are well maintained however they do provide a barrier between the car park and the reserve. This is not an issue per-se, but their current location does limit surveillance between the car park and the reserve. If they are ever redeveloped it is recommended their placement be reviewed.

Shade trees

Established shade trees are located along the foreshore, providing an important amenity value. These should be retained and opportunities for further planting undertaken as required using endemic species where possible. Additional shade trees should be planted on the foreshore between the cafe and the Pindan Headland as part of the proposed landscaping of this area.

Interpretive information

There is limited interpretive information in this section of the foreshore. Consideration could be given to including a narrative educating users about the dynamic nature of coastlines and what is considered natural and how to adopt conservative coastal behaviours.



Figure 6.8 – Shade trees on foreshore

Table 6.3 – Management Actions – facilities and amenities

Action	Description	Priority
<p>Relevant Objectives:</p> <p>Objective 1 – To manage the environmental and recreational values of the foreshore to retain the broad range of passive recreational opportunities and environmental values and sense of isolation unique to the area.</p> <p>Objective 2 – To ensure that the Broome community has continual access to the foreshore and beach area at Town Beach.</p>		
FA1	Monitor the use of boat ramp, particularly at peak times, to fully understand demand and utilisation. Forward plan for upgrades to capacity (including adjoining parking bays) if required.	Ongoing
FA2	<p>Influence the design/construct process for the new café as follows:</p> <ul style="list-style-type: none"> • Ensure footprint of any new café building is set back beyond the revised 2040 hazard line if possible, or conversely designed appropriately to consider coastal processes (including piling of foundations) • Provide for greater visual connectivity from car park to café area and beyond to improve legibility and reduce impacts of random tracks and trails over the foreshore. (ie do not have blank walls and service areas immediately facing public domain, even if it is a car park) • Promote a low-key facility that caters to Broome locals and adjoining caravan park users • Ensure minimum floor levels to avoid longer-term possible inundation • Ensure that the drainage in this area of the foreshore, including from the adjoining car park, is holistically addressed as part of the design process. 	Short
FA3	Maintain the grassed area at Town Beach for passive recreation use. Extend between the café and the Pindan headland. Trees should be planted in any new grassed areas to provide shade.	Ongoing
FA4	Create a defined edge between the grassed area and the beach (in a similar manner to the area immediately to the east).	Short
FA5	Promote the use of mobile food vendors on the foreshore to provide services to the local community.	Short
FA6	Provide interpretive/educational information on the foreshore regarding coastal process and coastal change.	Short

6.4 Conservation and environmental management

As discussed earlier, drainage and runoff during significant rain events can result in scouring, resulting in damage to the foreshore from erosion, and deposition of sediment into nearshore waters. This requires consideration in the design of drainage structures for both the Caravan Park and the public areas managed by the Shire. Outflow structures need to consider both the wider drainage network capacity and the management of overland flow during larger events to mitigate severe scour previously observed at Town Beach and other coastal areas in Broome.

Coastal adaption options were outlined in the *Town Beach – Geotechnical Investigation and Coastal Adaptation Options Assessment* report.

Over the years rubble has been placed along the foreshore, mainly west of the main Town Beach area, presumably to assist with erosion mitigation during high tide or extreme weather events. Opportunities to remove this rubble from the foreshore (noting that some of it occurs outside of the reserve boundary and within the adjoining UCL) should be considered in the design of future coastal adaptation works and protection of the Pindan Headland as appropriate.

The dunes immediately west of the main Town Beach area are degraded due to uncontrolled pedestrian access and vegetation degradation. It is proposed to landscape this area to extend the grassed passive recreation area and provide additional shade trees in this location. This will allow for additional use at peak periods, such as ‘Staircase to the Moon’ events, where demand is particularly high.

West of the Pindan Headland, the foredune remains subject to erosion during high tides. Opportunities to remove this rubble from the foreshore should be considered as part of the design of coastal adaptation works for this area, with consideration of sand renourishment and dune protection.

Table 6.4 – Management actions -conservation and environmental management

Action	Description	Priority
<p>Relevant Objectives:</p> <p>Objective 1 – To manage the environmental and recreational values of the foreshore to retain the broad range of passive recreational opportunities and environmental values and sense of isolation unique to the area.</p> <p>Objective 3 – To ensure management and protection of the foreshore is undertaken in an environmentally and economically sustainable manner.</p> <p>Objective 4 – To ensure adequate consideration of coastal hazards is undertaken and ensure management is undertaken in accordance with SPP 2.6 and associated guidelines.</p>		

Objective 6 – To increase community awareness and participation in coastal management and maintain successful relationships between stakeholders and coastal users.		
CE1	The design of coastal stormwater outlets to Town beach by the Shire and the Caravan Park leaseholders should consider both in-pipe flows and the management of scour from overland flow associated with larger rainfall events.	Short-medium
CE2	Prepare a plan for ongoing monitoring and maintenance of the dune vegetation.	Short
CE3	Create a local 'Friends Of' group to assist with ongoing management of the dune area.	Short
CE4	Consider opportunities to remove the rubble on the beach as part of the design of coastal adaptation works. (in accordance with other actions in this FMP)	Short
CE5	Prepare a plan and procedures for monitoring dune movement and planning for dune renourishment after significant weather or tide events, particularly in the western foreshore area.	Short

6.5 Planning, tenure & heritage

Local Planning Scheme

The majority of the foreshore is zoned *Special Use – Caravan Park*. This zoning extends beyond the actual extent of the caravan park. It is suggested that the Local Planning Scheme be amended to incorporate the balance of the foreshore not within the caravan park lease to the *Parks, Recreation and Drainage Reserve*.



Figure 6.9 – Local Planning Scheme zoning/reservation extent

Unallocated Crown Land

The beaches are UCL, and the Shire management extent does not extend here. In reality, the Shire will likely undertake some management of these areas as required, however it is worth noting where the boundaries of the reserve end on the seaward side. It is recommended that no hard structures are located in the UCL where possible – bearing in mind that there are requirements for constructed pedestrian beach access points, and drainage infrastructure in places.

Table 6.5 – Management actions – planning, tenure and heritage

Action	Description	Priority
Relevant Objectives:		
Objective 4 – To ensure adequate consideration of coastal hazards is undertaken and ensure management is undertaken in accordance with SPP 2.6 and associated guidelines.		

Objective 5 – To retain, protect and enhance areas of historic value, places of cultural heritage significance within the study area.

Objective 6 – To increase community awareness and participation in coastal management and maintain successful relationships between stakeholders and coastal users.

PT1	Amend the Local Planning Scheme to limit the <i>Special Use – Caravan Park</i> zoning to the caravan park lease area and incorporate the balance of the reserve into the <i>Parks, Recreation and Drainage Reserve</i> .	Short
PT2	Continue to liaise with local Aboriginal representatives to ensure a culturally sensitive approach to recreational activities and the provision of visitor amenities within the study area.	Ongoing
PT3	Encourage involvement of Aboriginal persons in coastal management through engagement, consultation and employment /volunteering where possible.	Ongoing
PT4	Consult with the Yawuru to ensure appropriate recognition and protection is given to relevant heritage sites, including interpretation, in consultation with Yawuru, where appropriate.	Ongoing
PT5	Avoid locating any structures outside of the Shire-managed reserve.	Ongoing

7 Implementation & monitoring

7.1 Introduction

This chapter provides guidance on the implementation of the Foreshore Management Plan. It can be used as a framework to ensure coastal management is adequately catered for in future budgets. The implementation of recommendations from the Plan will need to be appropriately costed and programmed for implementation by the responsible land managers.

7.2 Priorities

The priorities assigned to each action are advisory only and reflect a timeframe for implementation. Priorities can be reviewed as required to consider availability of resources and granting of funding requests.

Priorities have been classified as follows:

- S: Short term – within the next 2 financial years
- M: Medium term – within the next 5 financial years
- L: Long term – within the next 5 to 10 financial years
- O: Ongoing – over life of the CMP as required.

With regards to management actions with responsibilities assigned to the Shire, it is envisaged that those listed as short priority will be works provided for either in the Shire annual budget or through grant funded projects within the next 2 years. Actions with Medium priority could be implemented by Council within the next 5 years, and actions identified as Long-term priorities could be implemented in the next 5 plus years.

Priority was determined through consideration of the comments received during the preparation of the plan, the costs associated and the complexity of each action.

7.3 Responsibilities

The responsibilities for implementation vary depending on the coastal landowner or manager. The responsibilities were determined largely through consideration of the tenure and land managers responsible for each site. While there is some UCL and the northern coastal dunes are largely located within private ownership, the remainder of the Shire's coastline is located within Shire-managed reserves. In addition, most of the coastal recreation sites are located within the Shire-managed reserves. As such, a majority of the responsibilities will be with the Shire of Broome.

7.4 Monitoring & review

Monitoring is an essential component of the Foreshore Management Plan. Its purpose is to assess the success of recommended actions and to determine whether they have achieved the desired outcome. It can also indicate whether the Plan requires modification to help reach the objectives more efficiently.

It is considered relevant to monitor the following within the study area:

- Visitor numbers to sites, especially during peak periods
- The success of rehabilitation
- The creation of new tracks and the amount of dune degradation
- The condition of facilities
- The condition of signs
- The cleanliness of coastal areas and whether clean-ups are required
- Rate of dune migration.

It is suggested that the Shire prepare a Monitoring Plan (Action EL15). This should include a process for the Shire to follow in order to review actions in this Plan and whether they have been achieved. Monitoring should ideally be undertaken at least annually, but possibly sooner in particular areas or where management issues are evident. In addition to visual observation of coastal features, monitoring could use technology to get an indication of how things are changing. For example, select locations can be chosen to undertake a photo database (take photos at a certain site on a regular basis over time to get an idea of coastal changes) or an annual drone flight (to take photos of the coast from the air). It may also be possible to utilise technology (such as mobile apps) to assist with monitoring. These apps could also be used by the community (e.g., to notify the Shire of any issues that may need to be resolved).

Relevant actions such as weed control, revegetation, closure of tracks, replacement of signs and facilities, provision of a caretaker or ranger etc. should be undertaken if monitoring results indicate no improvement or degradation. The Shire is encouraged to involve community where possible and where there is interest.

It is recommended that this Plan is reviewed after a 10-year period to determine if the actions are still relevant and to take into consideration changes to the social, economic and environmental context.

7.5 Funding sources

Responsible land managers may be able to seek funding for certain activities from other sources. Funding opportunities such as these tend to change on a regular basis and as a result a review of options should be undertaken each year. Projects and activities tend to be given higher priority if the proposed activities have been identified in a Coastal Management Plan. Applications will generally need to show how the proposed activities will have an environmental and social benefit and will need to provide details as to how the activity will be carried out, timeframes, costings and responsibilities. Funding can currently be applied for through the following:

- Coastwest Grants Program (through the Department of Planning, Lands and Heritage)
- Coastal Management Plan Assistance Program (Department of Planning, Lands and Heritage)
- Coastal Adaptation and Protection (CAP) Grants (Department of Transport)
- State Natural Resource Management (Department of Primary Industries and Regional Development)
- Recreational Boating Facilities Scheme (RBFS) grants (Department of Transport)

- Regional Grants Scheme (RGS) (Department of Primary Industries and Regional Development).

7.6 Actions

Actions associated with Implementation are provided in Table 12.1 below.

Table 7.1 – Implementation actions

ACTION #	DESCRIPTION	PRIORITY	RESPONSIBILITY
IA1	Prepare a Monitoring Plan which sets out a list of actions to review the outcomes of this Coastal Management Plan and their effectiveness. The Monitoring Plan should list timeframes/frequency of monitoring and responsibilities.	S	Shire of Broome
IA2	Continue the Beach Monitoring Plan to regularly monitor (site visits and photography) key coastal locations to identify triggers for management identified throughout the CMP.	S	Shire of Broome
IA3	Plan to undertake a review of this Foreshore Management Plan within 10 years of its final adoption date.	L	Shire of Broome

8 References / bibliography

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Brighthouse (2014) Roebuck Bay Caravan Park Redevelopment Plan. Report for Shire of Broome

Cardno (2015) Broome Coastal Vulnerability Study Final Report. Report for Shire of Broome

Coastal Reserves Master Plan

Draft Local Planning Scheme 7

Draft Local Planning Strategy

GALT Geotechnics (2020) Report on Geotechnical Study Coastal Erosion Assessment Town Beach

Local Planning Scheme 6

LPP – Coastal Planning Policy

LPP – Old Broome Development Strategy

Seashore Engineering (2020) Geotechnical Investigation and Coastal Adaptation Options Assessment. Report for Shire of Broome

Shire of Broome Local Planning Strategy

Western Australian Planning Commission. Statement of Planning Policy No. 2.6: State Coastal Planning Policy. Government of Western Australia, Perth;

Policy review

Commonwealth

Australian Coastal Public Safety Guidelines

The “Australian Coastal Public Safety Guidelines” were prepared in 2007 by Surf Lifesaving Australia. The purpose of the guidelines is to provide world-best practical advice to land managers with a responsibility for public safety on the Australian coast.

Application/Implication

These guidelines can be used by the Shire when considering coastal hazards and risks, coastal signage, beach cleaning, emergency management and coastal tourism safety.

Multiple Land Use Framework

Multiple landowners can exist over an area and can cause issues when it comes to access and land use across an area, especially where historic cadastre patterns have resulted in odd-shaped lots and patterns. The “Multiple Land Use Framework” (MLUF) was prepared by the Standing Council on Energy and Resources in 2013 in recognition of the conflict arising over land access and land use. The aim of the MLUF is to enable government, community and industry to meet land access and use challenges, expectations and opportunities effectively and efficiently. It was developed with the minerals and energy resources sectors in mind, however the underlying concepts can be applied to all sectors. The MLUF recognises that access to land is fundamentally important to the successful management of competing interests of mining, energy, agriculture, environment, community and other significant land users.

Application/Implication

This document has a focus on outlining the guiding principles and objectives of the project, rather than specific advice as to how land use conflicts and access can be resolved. Each situation should be considered on a case-to-case basis and terms negotiated between affected parties.

The Burra Charter

“The Burra Charter” (Australia ICOMOS Inc., 2013) provides guidance for the conservation and management of places of cultural significance (cultural heritage places). It sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance, including owners, managers and custodians. The Charter can be applied to all types of places of cultural significance including natural, Indigenous and historic places with cultural values. It provides guidance on conservation principles, conservation process and conservation practice.

The steps in the Burra Charter process are:

- Understand the place
- Assess cultural significance
- Identify all factors and issues
- Develop policy
- Prepare a management plan
- Implement a management plan
- Monitor the results of the management plan.

Application/Implication

The principles and guidelines from The Burra Charter should be used by the Shire and coastal managers in the management and protection of cultural heritage sites.

State

Kimberley Regional Planning and Infrastructure Framework

The Kimberley Regional Planning and Infrastructure Framework was finalised by the WAPC in 2015. It provides a regional context for land use planning in the Kimberley, an overview of major regional economic, social, cultural and environmental issues, priority actions for planning and priority infrastructure projects.

Broome is identified as a “regional city” in the Framework. Key infrastructure requirements for Broome are listed as port upgrades and airport relocation. It is also noted as being an international tourism link. The Framework also states that Broome is “expected to accommodate the most significant amount of the region’s anticipated population growth over the next 25 years” and is already the region’s most populous urban place. It also supports significant regional infrastructure and it is expected that the tourism industry will also continue to grow. The Framework also recognises that growth of the tourism industry will need to develop “in a manner which does not damage and/or devalue the region’s natural attractions” and that “visitors should be managed appropriately”.

Application/Implication

As Broome is the regional city for the Kimberley region it has the most pressure for tourism and population growth. Protection and management of important and popular sites such as Town Beach are imperative.

State Planning Policy 2 – Environmental and Natural Resources Policy

“State Planning Policy 2 – Environmental and Natural Resources Policy” (SPP) was prepared by the WAPC in 2003. The Policy objectives of SPP 2 are to integrate environmental management with broader land use planning, to protect, conserve and enhance the natural environment and to promote sustainable use of natural resources. Policy Measures in SPP 2 focus on water resources, air quality, soil and land quality, biodiversity, agricultural land, minerals, petroleum and basic raw materials, marine resources and aquaculture, landscape, greenhouse gas emissions and energy efficiency.

Application/Implication

The preparation of this FMP is a response to the objectives of SPP 2 and its main purpose is to protect, conserve and enhance environmental features within the study area, to promote sustainable use for future generations to enjoy and to provide practical and realistic actions that can be used by decision-makers.

State Planning Policy 2.4 – Planning for Basic Raw Materials

“State Planning Policy 2.4 – Planning for Basic Raw Materials” was prepared by the WAPC in 2021. The intent of the Policy is “to ensure basic raw materials (BRM) and extractive industries matters are considered during planning and development decision-making, to facilitate the responsible extraction and use of the State’s BRM resources”. The supporting documents are the “Planning for Basic Raw Materials Guidelines” which were prepared in 2021 to accompany the Policy.

Application/Implication

No basic raw materials are identified within the study area or along the Town Beach coastline.

State Planning Policy 2.6 – State Coastal Planning Policy

“SPP 2.6 – State Coastal Planning Policy” was prepared by the WAPC in 2013. This Policy provides guidance for decision-making within the coastal zone including managing development and land use change, establishment of foreshore reserves; and to protect, conserve and enhance coastal values. The Policy is to inform and guide decision-making by the WAPC and its Committees, and in integrating and coordinating the activities of state agencies that influence the use and development of land in the coastal zone. It also provides guidance for private landowners wishing to undertake development in the coastal zone.

Application/Implication

SPP 2.6 has been referred to as a guiding document during preparation of the FMP and the hazard assessments undertaken by Seashore Engineering.

State Planning Policy 2.6 State Coastal Planning Policy Guidelines

The “State Coastal Planning Policy Guidelines” were prepared by the WAPC in 2013. These guidelines were prepared to support the implementation of SPP 2.6 and to assist decision-makers to:

- Consider coastal hazards and evaluate their likelihood
- Identify realistic and effective management and adaptation responses to those risks
- Prioritise the management and adaptation responses.

The Guidelines provide detailed guidance for the application of the policy measures. It includes details on the following:

- Development and settlement
- Earthworks and soil
- Water resources and management
- Visual landscape

- Coastal hazard risk management and adaption planning process
- Vulnerability assessment
- Assessing risk adaption options
- Ongoing risk management and adaption planning
- Communication and consultation
- Coastal adaption and protection grants scheme
- Infill development
- Coastal protection works
- Public interest
- Public access
- Coastal roads and car parks
- Coastal pedestrian access and dual use paths
- Coastal foreshore reserves
- Ecological values
- Landscape, seascape and visual landscape
- Heritage
- Coastal strategies and management plans.

A large focus of the guidelines is planning and adapting to setbacks and ensuring infrastructure and facilities are appropriate.

Application/Implication

The SPP 2.6 Guidelines have been referred to during preparation of the FMP and the hazard assessments undertaken by Seashore Engineering.

State Planning Policy 2.9 – Water Resources

State Planning Policy 2.9 (SPP 2.9) is a Western Australian government policy that provides guidance on the management of water resources, including the sustainable use, management, and allocation of water. The policy aims to ensure that water resources are managed in a way that protects the environment, supports economic development, and meets the needs of communities now and into the future. The policy applies to all planning and development decisions in Western Australia, including the preparation of Foreshore Management Plans.

The Foreshore Management Plan for Town Beach in Broome would need to consider SPP 2.9 when assessing the impacts of development on water resources. The policy requires that development does not cause adverse impacts on the quantity or quality of surface water and groundwater resources, including wetlands and rivers. The plan would need to consider the potential impacts of development on the beach and coastal areas, including erosion, sedimentation, and the potential for contamination of the water.

The plan would also need to consider the potential impacts of climate change on water resources and coastal areas. SPP 2.9 requires that planning decisions consider the potential impacts of climate change, including sea level rise, changes in rainfall patterns, and increased frequency and intensity of extreme weather events. The Foreshore Management Plan would need to consider how these factors may impact water resources and the coastal environment at Town Beach in Broome and develop appropriate management

State Planning Policy 3.4 – Natural Hazards and Disasters

“SPP 3.4 – Natural Hazards and Disasters” was prepared by the WAPC in 2006. The purpose of the Policy is to encourage local governments to adopt a systematic approach to the consideration of natural hazards and disasters when making planning decision. Natural hazards and disasters include flood risk, bushfire, landslides, cyclonic activity, severe storms and storm surge.

The Policy objectives are to:

- “Include planning for natural disasters as a fundamental element in the preparation of all statutory and non-statutory planning documents, specifically town planning schemes and amendments, and local planning strategies
- Through the use of these planning instruments, to minimise the adverse impacts of natural disasters on communities, the economy and the environment.”

Application/Implication

Natural hazards and disasters applicable to the coastal zone include flood risk (in low-lying areas such as waterways), bushfire, coastal erosion, storm surge, severe storms (including cyclones) and landslides (or limestone collapse). The hazards most applicable to the study area include bush fire (this is also addressed under SPP 3.7), coastal erosion and storms (this is addressed under SPP 2.6). There are no limestone outcrops or slopes of 15% or greater that will warrant too much concern about landslides. Natural hazards and disasters can be addressed through the Shire’s fire and emergency response plan for the coast. Any applications for development or building along the coast will need to take this policy into consideration.

State Planning Policy 3.5 – Historic Heritage Conservation

“SPP 3.5 – Historic Heritage Conservation” was prepared by the WAPC in 2007. This policy sets out the principles of sound and responsible planning for the conservation and protection of Western Australia’s historic heritage. It applies principally to historic cultural heritage including heritage areas, buildings and structures, historic cemeteries and gardens, man-made landscapes and historic or archaeological sites with or without built features.

The objectives of this policy are:

- “To conserve places and areas of historic heritage significance
- To ensure that development does not adversely affect the significance of heritage places and areas

- To ensure that heritage significance at both the State and local levels is given due weight in planning decision-making
- To provide improved certainty to landowners and the community about the planning processes for heritage identification, conservation and protection.”

The policy measures include identification and assessment of places of state significance by the Heritage Council of WA, designation of heritage areas, establishment of heritage lists, consideration of heritage when undertaking planning and establishment of development control principles.

Application/Implication

There are minimal implications from SPP 3.5 as there are few heritage sites identified in the study area. However, should any development be proposed in the study area it will be necessary to follow the guidance in this policy as well as the relevant legislation.

State Planning Policy 3.7 – Planning in Bushfire Prone Areas

“SPP 3.7 – Planning for Bushfire Prone Areas” was prepared by the WAPC in 2015. It provides the foundation for land use planning to address bushfire risk management in Western Australia and to inform and guide decision-makers, referral agencies and landowners to help achieve acceptable bushfire protection outcomes. It applies to development in designated bushfire prone areas.

Application/Implication

The study area is not located within a mapped Bush Fire Prone Area. Nevertheless, it is still important for the Shire to consider fire and emergency services for tourist and recreation sites. The Shire should ensure that they have appropriate fire and emergency management plans in place and implemented as appropriate.

WA Coastal Zone Strategy

The Western Australian Coastal Zone Strategy (WACZS) is a government policy that provides guidance on the management of the state's coastal zone. The strategy aims to protect and enhance the ecological, social, and economic values of the coastal zone and ensure that it is managed in a sustainable way. The WACZS applies to all planning and development decisions in the coastal zone, including the preparation of Foreshore Management Plans.

The Foreshore Management Plan for Town Beach in Broome would need to be developed in accordance with the WACZS. The strategy requires that coastal management decisions consider the ecological values of the coastal zone, including biodiversity and the ecological processes that sustain it. The plan would need to consider the potential impacts of development on the ecological values of the beach and coastal areas and develop strategies to mitigate any adverse impacts.

The WACZS also requires that coastal management decisions consider the social and cultural values of the coastal zone. The plan would need to consider the social and cultural values of Town Beach in Broome, including its importance to the local community and any cultural heritage values. The plan would need to develop appropriate management strategies that balance the competing demands of different user groups, including recreation, tourism, and conservation.

Application/Implication

Overall, the Foreshore Management Plan for Town Beach in Broome would need to be developed in accordance with the WACZS to ensure that the beach and coastal areas are managed in a sustainable way that protects their ecological, social, and cultural values.

Tourism Planning Guidelines

The Western Australian Tourism Planning Guidelines (WATPG) provide guidance on the planning and development of tourism in Western Australia. The guidelines aim to ensure that tourism development is sustainable, respects the environment, and contributes to the economic and social well-being of local communities. The WATPG applies to all tourism planning and development decisions, including the preparation of Foreshore Management Plans.

The Foreshore Management Plan for Town Beach in Broome would need to consider the WATPG when assessing the potential impacts of tourism on the beach and coastal areas. The guidelines require that tourism development is planned in a way that respects the natural and cultural environment and is sensitive to the needs and aspirations of the local community. The plan would need to consider the potential impacts of tourism on the natural environment and develop strategies to mitigate any adverse impacts.

The WATPG also requires that tourism development is planned in a way that maximizes the economic benefits to the local community while minimizing any negative social impacts. The plan would need to consider the potential economic benefits of tourism to the local community and develop appropriate management strategies to ensure that these benefits are realized. The plan would also need to consider the potential social impacts of tourism on the local community, including issues such as overcrowding and noise, and develop strategies to minimize these impacts.

Adaptation Options Assessment; Key Plans



5.3. OPTION 3 – ACCOMMODATION

The Accommodate Option was based on the following design elements:

- Remove building rubble and rework existing rock on the Western Beach
- Dune nourishment and stabilisation on the Western Beach
- Rework rock around toe of Pindan headland
- Rework existing walling east of Pindan Headland
- Maintain existing beach access stairs
- Develop Foreshore Management Plan for Town Beach (vegetation, nourishment following events)
- Develop Emergency Response Plan for Caravan Park
- Rebuild Café in similar location as piled structure and raised floor levels
- No camp sites or infrastructure seaward of the “Immediate Coastal Process Hazards Distances” in the Cardno CVS (2).
- Permanent Structures to be designed on piles

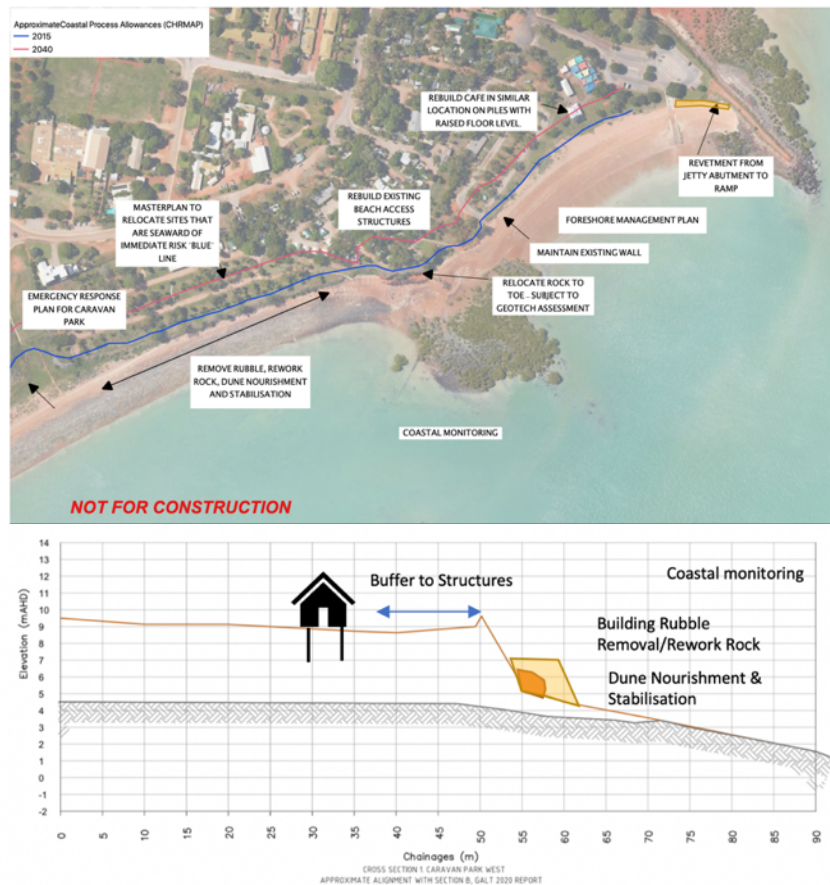


Figure 5.3 Schematic of Accommodate Option for MCA

Appendix B

Policy Review

Policy review

Commonwealth

Australian Coastal Public Safety Guidelines

The “Australian Coastal Public Safety Guidelines” were prepared in 2007 by Surf Lifesaving Australia. The purpose of the guidelines is to provide world-best practical advice to land managers with a responsibility for public safety on the Australian coast.

Application/Implication

These guidelines can be used by the Shire when considering coastal hazards and risks, coastal signage, beach cleaning, emergency management and coastal tourism safety.

Multiple Land Use Framework

Multiple landowners can exist over an area and can cause issues when it comes to access and land use across an area, especially where historic cadastre patterns have resulted in odd-shaped lots and patterns. The “Multiple Land Use Framework” (MLUF) was prepared by the Standing Council on Energy and Resources in 2013 in recognition of the conflict arising over land access and land use. The aim of the MLUF is to enable government, community and industry to meet land access and use challenges, expectations and opportunities effectively and efficiently. It was developed with the minerals and energy resources sectors in mind, however the underlying concepts can be applied to all sectors. The MLUF recognises that access to land is fundamentally important to the successful management of competing interests of mining, energy, agriculture, environment, community and other significant land users.

Application/Implication

This document has a focus on outlining the guiding principles and objectives of the project, rather than specific advice as to how land use conflicts and access can be resolved. Each situation should be considered on a case-to-case basis and terms negotiated between affected parties.

The Burra Charter

“The Burra Charter” (Australia ICOMOS Inc., 2013) provides guidance for the conservation and management of places of cultural significance (cultural heritage places). It sets a standard of practice for those who provide advice, make decisions about, or undertake works to places of cultural significance, including owners, managers and custodians. The Charter can be applied to all types of places of cultural significance including natural, Indigenous and historic places with cultural values. It provides guidance on conservation principles, conservation process and conservation practice.

The steps in the Burra Charter process are:

- Understand the place
- Assess cultural significance
- Identify all factors and issues
- Develop policy
- Prepare a management plan
- Implement a management plan
- Monitor the results of the management plan.

Application/Implication

The principles and guidelines from The Burra Charter should be used by the Shire and coastal managers in the management and protection of cultural heritage sites.

State

Kimberley Regional Planning and Infrastructure Framework

The Kimberley Regional Planning and Infrastructure Framework was finalised by the WAPC in 2015. It provides a regional context for land use planning in the Kimberley, an overview of major regional economic, social, cultural and environmental issues, priority actions for planning and priority infrastructure projects.

Broome is identified as a “regional city” in the Framework. Key infrastructure requirements for Broome are listed as port upgrades and airport relocation. It is also noted as being an international tourism link. The Framework also states that Broome is “expected to accommodate the most significant amount of the region’s anticipated population growth over the next 25 years” and is already the region’s most populous urban place. It also supports significant regional infrastructure and it is expected that the tourism industry will also continue to grow. The Framework also recognises that growth of the tourism industry will need to develop “in a manner which does not damage and/or devalue the region’s natural attractions” and that “visitors should be managed appropriately”.

Application/Implication

As Broome is the regional city for the Kimberley region it has the most pressure for tourism and population growth. Protection and management of important and popular sites such as Town Beach are imperative.

State Planning Policy 2 – Environmental and Natural Resources Policy

“State Planning Policy 2 – Environmental and Natural Resources Policy” (SPP) was prepared by the WAPC in 2003. The Policy objectives of SPP 2 are to integrate environmental management with broader land use planning, to protect, conserve and enhance the natural environment and to promote sustainable use of natural resources. Policy Measures in SPP 2 focus on water resources, air quality, soil and land quality, biodiversity, agricultural land, minerals, petroleum and basic raw materials, marine resources and aquaculture, landscape, greenhouse gas emissions and energy efficiency.

Application/Implication

The preparation of this FMP is a response to the objectives of SPP 2 and its main purpose is to protect, conserve and enhance environmental features within the study area, to promote sustainable use for future generations to enjoy and to provide practical and realistic actions that can be used by decision-makers.

State Planning Policy 2.4 – Planning for Basic Raw Materials

“State Planning Policy 2.4 – Planning for Basic Raw Materials” was prepared by the WAPC in 2021. The intent of the Policy is “to ensure basic raw materials (BRM) and extractive industries matters are

considered during planning and development decision-making, to facilitate the responsible extraction and use of the State's BRM resources". The supporting documents are the "Planning for Basic Raw Materials Guidelines" which were prepared in 2021 to accompany the Policy.

Application/Implication

No basic raw materials are identified within the study area or along the Town Beach coastline.

State Planning Policy 2.6 – State Coastal Planning Policy

"SPP 2.6 – State Coastal Planning Policy" was prepared by the WAPC in 2013. This Policy provides guidance for decision-making within the coastal zone including managing development and land use change, establishment of foreshore reserves; and to protect, conserve and enhance coastal values. The Policy is to inform and guide decision-making by the WAPC and its Committees, and in integrating and coordinating the activities of state agencies that influence the use and development of land in the coastal zone. It also provides guidance for private landowners wishing to undertake development in the coastal zone.

Application/Implication

SPP 2.6 has been referred to as a guiding document during preparation of the FMP and the hazard assessments undertaken by Seashore Engineering.

State Planning Policy 2.6 State Coastal Planning Policy Guidelines

The "State Coastal Planning Policy Guidelines" were prepared by the WAPC in 2013. These guidelines were prepared to support the implementation of SPP 2.6 and to assist decision-makers to:

- Consider coastal hazards and evaluate their likelihood
- Identify realistic and effective management and adaptation responses to those risks
- Prioritise the management and adaptation responses.

The Guidelines provide detailed guidance for the application of the policy measures. It includes details on the following:

- Development and settlement
- Earthworks and soil
- Water resources and management
- Visual landscape
- Coastal hazard risk management and adaption planning process
- Vulnerability assessment
- Assessing risk adaption options
- Ongoing risk management and adaption planning

- Communication and consultation
- Coastal adaption and protection grants scheme
- Infill development
- Coastal protection works
- Public interest
- Public access
- Coastal roads and car parks
- Coastal pedestrian access and dual use paths
- Coastal foreshore reserves
- Ecological values
- Landscape, seascape and visual landscape
- Heritage
- Coastal strategies and management plans.

A large focus of the guidelines is planning and adapting to setbacks and ensuring infrastructure and facilities are appropriate.

Application/Implication

The SPP 2.6 Guidelines have been referred to during preparation of the FMP and the hazard assessments undertaken by Seashore Engineering.

State Planning Policy 2.9 – Water Resources

State Planning Policy 2.9 (SPP 2.9) is a Western Australian government policy that provides guidance on the management of water resources, including the sustainable use, management, and allocation of water. The policy aims to ensure that water resources are managed in a way that protects the environment, supports economic development, and meets the needs of communities now and into the future. The policy applies to all planning and development decisions in Western Australia, including the preparation of Foreshore Management Plans.

The Foreshore Management Plan for Town Beach in Broome would need to consider SPP 2.9 when assessing the impacts of development on water resources. The policy requires that development does not cause adverse impacts on the quantity or quality of surface water and groundwater resources, including wetlands and rivers. The plan would need to consider the potential impacts of development on the beach and coastal areas, including erosion, sedimentation, and the potential for contamination of the water.

The plan would also need to consider the potential impacts of climate change on water resources and coastal areas. SPP 2.9 requires that planning decisions consider the potential impacts of climate change, including sea level rise, changes in rainfall patterns, and increased frequency and intensity of extreme weather events. The Foreshore Management Plan would need to consider how these factors may impact

water resources and the coastal environment at Town Beach in Broome and develop appropriate management **State Planning Policy 3.4 – Natural Hazards and Disasters**

“SPP 3.4 – Natural Hazards and Disasters” was prepared by the WAPC in 2006. The purpose of the Policy is to encourage local governments to adopt a systematic approach to the consideration of natural hazards and disasters when making planning decision. Natural hazards and disasters include flood risk, bushfire, landslides, cyclonic activity, severe storms and storm surge.

The Policy objectives are to:

- “Include planning for natural disasters as a fundamental element in the preparation of all statutory and non-statutory planning documents, specifically town planning schemes and amendments, and local planning strategies
- Through the use of these planning instruments, to minimise the adverse impacts of natural disasters on communities, the economy and the environment.”

Application/Implication

Natural hazards and disasters applicable to the coastal zone include flood risk (in low-lying areas such as waterways), bushfire, coastal erosion, storm surge, severe storms (including cyclones) and landslides (or limestone collapse). The hazards most applicable to the study area include bush fire (this is also addressed under SPP 3.7), coastal erosion and storms (this is addressed under SPP 2.6). There are no limestone outcrops or slopes of 15% or greater that will warrant too much concern about landslides. Natural hazards and disasters can be addressed through the Shire’s fire and emergency response plan for the coast. Any applications for development or building along the coast will need to take this policy into consideration.

State Planning Policy 3.5 – Historic Heritage Conservation

“SPP 3.5 – Historic Heritage Conservation” was prepared by the WAPC in 2007. This policy sets out the principles of sound and responsible planning for the conservation and protection of Western Australia’s historic heritage. It applies principally to historic cultural heritage including heritage areas, buildings and structures, historic cemeteries and gardens, man-made landscapes and historic or archaeological sites with or without built features.

The objectives of this policy are:

- “To conserve places and areas of historic heritage significance
- To ensure that development does not adversely affect the significance of heritage places and areas
- To ensure that heritage significance at both the State and local levels is given due weight in planning decision-making
- To provide improved certainty to landowners and the community about the planning processes for heritage identification, conservation and protection.”

The policy measures include identification and assessment of places of state significance by the Heritage Council of WA, designation of heritage areas, establishment of heritage lists, consideration of heritage when undertaking planning and establishment of development control principles.

Application/Implication

There are minimal implications from SPP 3.5 as there are few heritage sites identified in the study area. However, should any development be proposed in the study area it will be necessary to follow the guidance in this policy as well as the relevant legislation.

State Planning Policy 3.7 – Planning in Bushfire Prone Areas

“SPP 3.7 – Planning for Bushfire Prone Areas” was prepared by the WAPC in 2015. It provides the foundation for land use planning to address bushfire risk management in Western Australia and to inform and guide decision-makers, referral agencies and landowners to help achieve acceptable bushfire protection outcomes. It applies to development in designated bushfire prone areas.

Application/Implication

The study area is not located within a mapped Bush Fire Prone Area. Nevertheless, it is still important for the Shire to consider fire and emergency services for tourist and recreation sites. The Shire should ensure that they have appropriate fire and emergency management plans in place and implemented as appropriate.

WA Coastal Zone Strategy

The Western Australian Coastal Zone Strategy (WACZS) is a government policy that provides guidance on the management of the state's coastal zone. The strategy aims to protect and enhance the ecological, social, and economic values of the coastal zone and ensure that it is managed in a sustainable way. The WACZS applies to all planning and development decisions in the coastal zone, including the preparation of Foreshore Management Plans.

The Foreshore Management Plan for Town Beach in Broome would need to be developed in accordance with the WACZS. The strategy requires that coastal management decisions consider the ecological values of the coastal zone, including biodiversity and the ecological processes that sustain it. The plan would need to consider the potential impacts of development on the ecological values of the beach and coastal areas and develop strategies to mitigate any adverse impacts.

The WACZS also requires that coastal management decisions consider the social and cultural values of the coastal zone. The plan would need to consider the social and cultural values of Town Beach in Broome, including its importance to the local community and any cultural heritage values. The plan would need to develop appropriate management strategies that balance the competing demands of different user groups, including recreation, tourism, and conservation.

Application/Implication

Overall, the Foreshore Management Plan for Town Beach in Broome would need to be developed in accordance with the WACZS to ensure that the beach and coastal areas are managed in a sustainable way that protects their ecological, social, and cultural values.

Tourism Planning Guidelines

The Western Australian Tourism Planning Guidelines (WATPG) provide guidance on the planning and development of tourism in Western Australia. The guidelines aim to ensure that tourism development is sustainable, respects the environment, and contributes to the economic and social well-being of local communities. The WATPG applies to all tourism planning and development decisions, including the preparation of Foreshore Management Plans.











The Foreshore Management Plan for Town Beach in Broome would need to consider the WATPG when assessing the potential impacts of tourism on the beach and coastal areas. The guidelines require that tourism development is planned in a way that respects the natural and cultural environment and is sensitive to the needs and aspirations of the local community. The plan would need to consider the potential impacts of tourism on the natural environment and develop strategies to mitigate any adverse impacts.

The WATPG also requires that tourism development is planned in a way that maximizes the economic benefits to the local community while minimizing any negative social impacts. The plan would need to consider the potential economic benefits of tourism to the local community and develop appropriate management strategies to ensure that these benefits are realized. The plan would also need to consider the potential social impacts of tourism on the local community, including issues such as overcrowding and noise, and develop strategies to minimize these impacts.

Foreshore Management Plan Actions and Overview



- Study Area**

 -  Unallotiated Crown Land
 -  Cadastral Boundaries
 -  Caravan Park Lease Boundary
 -  Grassed Parkland & Shade Trees
 -  Cafe Redevelopment - Indicative Footprint
 -  Beach Access Points
 -  Delineation between grassed area and beach
 -  Proposed Public Pathway
 -  Headland public access alignment (indicative)
 -  Demco Link - Beach access (indicative)

Access and Public Use

APU1	Monitor usage of car parks, particularly during peak time, to ensure adequate supply.	Ongoing
APU2	Maintain existing pedestrian pathways. Avoid placing further concrete pathways any closer to the beach.	Ongoing
APU3	Investigate opportunities for more formal universal access when facilities are provided. Ensure universal access and inclusion planning is considered when designing and implementing the actions recommended in this Strategy and that the Shire's Disability Access and Inclusion Plan (2018-2023) is referred to.	Short
APU4	Clearly delineate the boundary between public and leasehold land in front of the caravan park.	Short
APU5	Implement access control and reduce the level of disturbance to the environment caused by pedestrians in the area in front of the caravan park.	Short
APU6	Provide a pedestrian connection from Town Beach in front of the caravan park, to connect with Demco Park to the west.	Medium - Long
APU7	Replace, improve or formalise public access pathways from the dunes to the beach in key locations.	Medium

Coastal Processes

CP1	<p>Give due regard to SPP 2.6 for the planning of any coastal facilities or development following the management and adaptation hierarchy of avoid-resist-accommodate-protect. The location of coastal facilities and development should consider:</p> <ul style="list-style-type: none"> • coastal processes, • appropriate coastal setbacks are implemented • any fixed infrastructure is built to the appropriate standard over an appropriate planning timeframe and can accommodate the anticipated range of beach and dune variability. <p>It is recommended most assets on this coast are placed with consideration of how to accommodate future potential erosion and extreme events. This is particularly relevant for recreational assets with little/Infinite and Sections 7.1 and 7.2 of SPP2.6 respectively.</p>	Ongoing
CP2	Conduct regular monitoring of infrastructure and recreational facilities along the beach within Shire-managed reserves.	Ongoing
CP3	Ensure coastal users are adequately informed of natural hazards and risk such as flooding and inundation through the use of signs.	Ongoing
CP4	Give due regard to SPP 2.6 which provides for public access to foreshore areas and apply when considering future options for access.	Ongoing
CP5	Implement the Accommodate recommendations from the Town Beach – Geotechnical Investigation and Coastal Adaptation Options Assessment; however with a focus on protecting the integrity of the Pindar Headland.	Ongoing

Facilities and Amenities

FA1	Monitor the use of boat ramp, particularly at peak times, to fully understand demand and utilization. Forward plan for upgrades to capacity (including adjoining parking bays) if required.	Ongoing
FA2	<p>Influence the design/construct process for the new café as follows:</p> <ul style="list-style-type: none"> • Ensure footprint of any new café building is set back beyond the revised 2040 hazard line if possible, or conversely designed opportunistically to consider coastal processes (including piling of foundations) • Provide for greater visual connectivity from car park to café area and beyond to improve legibility and reduce impacts of random trucks and trail off over the foreshore, in do not have blank walls and service areas immediately along public domain, when it is a car park) • Promote a low-key facility that caters to Brownsdale and adjoining caravan park users • Ensure minimum floor levels to avoid long-term possible inundation • Ensure that the drainage in this area of the foreshore, including from the adjoining car park, is holistically addressed as part of this process. 	Short
FA3	Maintain the grassed area at Town Beach for passive recreation use. Extend between the café and the Pridon headland. Trees should be planted in any new grassed areas to provide shade.	Ongoing
FA4	Create a defined edge between the grassed area and the beach in a similar manner to the area immediately to the east.	Short
FA5	Promote the use of mobile food vendors on the foreshore to provide services to the local community.	Short
FA6	Provide interpretive/educational information on the foreshore regarding coastal process and coastal change.	Short

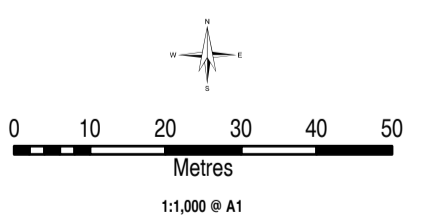
Conservation & Environmental Management

CE1	Review of coastal stormwater outfalls to Town beach by the Shire and the Carver Park leaseholders should consider both in-pipe flows and the management of scour from overland flow associated with larger rainfall events.	Short-medium
CE2	Prepare a plan for ongoing monitoring and maintenance of the dune vegetation.	Short
CE3	Create a local Friends Of group to assist with ongoing management of the dune area.	Short
CE4	Consider opportunities to remove the rubble on the beach as part of the design of coastal adaptation works, (in accordance with other actions in this FMP)	Short
CE5	Prepare a plan and procedures for monitoring dune movement and planning for dune nourishment after significant weather or tide events, particularly in the western foreshore area.	Short

Planning, Tenure and Heritage

PT1	Amend the Local Planning Scheme to limit the Special Use – Consult Panel zoning to the current park lease area and incorporate the balance of the reserve into the Parks, Recreation and Drainage Reserve.	Short
PT2	Continue to liaise with local Aboriginal representatives to ensure a culturally sensitive approach to recreational activities and the provision of visitor amenities within the study area.	Ongoing
PT3	Encourage involvement of Aboriginal persons in coastal management through engagement, consultation and employment/volunteering where possible.	Ongoing
PT4	Consult with the Yawuru to ensure appropriate recognition and protection is given to relevant heritage sites, including interpretation, in consultation with Yawuru, where appropriate.	Ongoing
PT5	Avoid locating any structures outside of the Shire-managed reserve.	Ongoing

DRAFT



NOTE: AREAS AND DISTANCES SUBJECT TO SURVEY

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Actions Overview
TOWN BEACH
FORESHORE MANAGEMENT PLAN
SHIRE OF BROOME