

06 February 2023

Report to City of Karratha

Point Samson Foreshore Redevelopment

Business Case



About ACIL Allen

ACIL Allen is a leading independent economics, policy and strategy advisory firm, dedicated to helping clients solve complex issues.

Our purpose is to help clients make informed decisions about complex economic and public policy issues.

Our vision is to be Australia's most trusted economics, policy and strategy advisory firm. We are committed and passionate about providing rigorous independent advice that contributes to a better world.

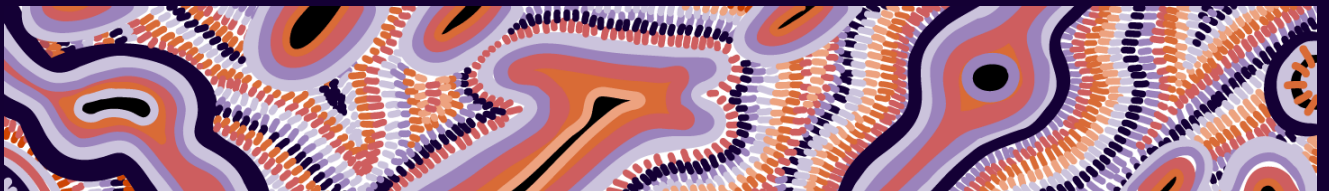
Reliance and disclaimer The professional analysis and advice in this report has been prepared by ACIL Allen for the exclusive use of the party or parties to whom it is addressed (the addressee) and for the purposes specified in it. This report is supplied in good faith and reflects the knowledge, expertise and experience of the consultants involved. The report must not be published, quoted or disseminated to any other party without ACIL Allen's prior written consent. ACIL Allen accepts no responsibility whatsoever for any loss occasioned by any person acting or refraining from action as a result of reliance on the report, other than the addressee.

In conducting the analysis in this report ACIL Allen has endeavoured to use what it considers is the best information available at the date of publication, including information supplied by the addressee. ACIL Allen has relied upon the information provided by the addressee and has not sought to verify the accuracy of the information supplied. If the information is subsequently determined to be false, inaccurate or incomplete then it is possible that our observations and conclusions as expressed in this report may change. The passage of time, manifestation of latent conditions or impacts of future events may require further examination of the project and subsequent data analysis, and re-evaluation of the data, findings, observations and conclusions expressed in this report. Unless stated otherwise, ACIL Allen does not warrant the accuracy of any forecast or projection in the report. Although ACIL Allen exercises reasonable care when making forecasts or projections, factors in the process, such as future market behaviour, are inherently uncertain and cannot be forecast or projected reliably.

This report does not constitute a personal recommendation of ACIL Allen or take into account the particular investment objectives, financial situations, or needs of the addressee in relation to any transaction that the addressee is contemplating. Investors should consider whether the content of this report is suitable for their particular circumstances and, if appropriate, seek their own professional advice and carry out any further necessary investigations before deciding whether or not to proceed with a transaction. ACIL Allen shall not be liable in respect of any claim arising out of the failure of a client investment to perform to the advantage of the client or to the advantage of the client to the degree suggested or assumed in any advice or forecast given by ACIL Allen.

© ACIL Allen 2022

ACIL Allen acknowledges Aboriginal and Torres Strait Islander peoples as the Traditional Custodians of the land and its waters. We pay our respects to Elders, past and present, and to the youth, for the future. We extend this to all Aboriginal and Torres Strait Islander peoples reading this report.



Excerpt of a painting titled Goomup, by Whadjuk Yued Ballardong artist Jarni McGuire

Contents

1	Introduction	1
1.1	Background	1
1.2	Approach	1
1.3	Acronyms and definitions	2
1.4	Report structure	2
2	Situational Analysis	3
2.1	Economic and regional context	3
2.2	Point Samson foreshore redevelopment concept	5
2.3	Options for foreshore development	7
2.4	Alignment with Government policy	10
3	Visitor Analysis	12
3.1	Potential tourism activation potential	12
3.2	Existing visitor profile	13
3.3	Current visitor spending	15
3.4	Visitor forecasts	16
3.5	Visitor spending forecasts	16
4	Benefit Cost Assessment	19
4.1	Benefit Cost Assessment framework	19
4.2	Identification of benefits and costs	20
4.3	Benefit cost model assumptions	26
4.4	Benefit Cost Assessment results	26
5	Recommendations	32
5.1	Key findings	32
5.2	Recommendation as to preferred development option	33

Introduction

1

Point Samson is an historic town located on the Point Samson Peninsula in the Pilbara region of Western Australia. It currently supports a small population of 250 people and is a popular visitor destination due to its beach and fishing values.

The City of Karratha's vision for Point Samson is for a small settlement capable of accommodating up to 1,000 people whilst retaining a coastal village character. It will have a residential, tourism and recreation focus that serves the people of the Pilbara region and is also able to attract visitors from elsewhere in Australia and overseas.¹ This report sets out a business case for the redevelopment of the Point Samson foreshore area around the area known as The Point. The aim of the redevelopment is to improve the recreational and visitor facilities in the town to assist in attracting new population and visitors to create additional economic activity in the town and the surrounding Point Samson Peninsula.

1.1 Background

The *Point Samson Foreshore Management Plan*² was developed to provide guidance on the management of the Point Samson foreshore. It highlights an expected growth in the population and the number of visitors to the town as a result of a series of complementary new developments that are expected to place increasing pressure on the existing facilities in the town and its natural, recreational, and cultural assets.

Following the development of the Management Plan, a series of stakeholder engagement sessions were conducted to gather community and stakeholder feedback on design options for the foreshore. Based on this feedback, a concept proposal for the Point Samson foreshore was developed which included options at The Point for a fishing jetty, parkland and picnic areas, carpark upgrades, a public amenities block, a plaza, a boat shed, a skate park and pump track, interpretative signage, beach access and boardwalks. The *Point Samson Jetty & Redevelopment Works Feasibility Estimate*³ details the estimated cost of the capital components of each part of the design concept.

1.2 Approach

This report sets out a business case for the redevelopment of The Point area of the Point Samson foreshore. It analyses three development options for the redevelopment and identifies the social,

¹ City of Karratha (2015), Point Samson Structure Plan

² UDLA (2022), Point Samson Foreshore Management Plan Review, City of Karratha

³ HW & Associates for the City of Karratha (2021), Point Samson Jetty and Redevelopment Works Feasibility Estimate, City of Karratha

environmental, and economic benefits of each development option along with its costs. The quantitative benefits and costs area analysed using a Benefit Cost Assessment approach.

A **Benefit Cost Assessment** compares the costs of each of the development options to the benefits that are generated by them. It therefore identifies which of the options provide a net benefit indicating that the benefits of development outweigh the costs. In conducting the benefit cost assessment, a desktop review of reports and studies was used to identify the potential benefits and costs of the development options and this was supplemented with consultation with key stakeholders.

1.3 Acronyms and definitions

Table 1.1 presents the acronyms used in this report.

Table 1.1 List of acronyms

Acronym	Meaning
\$m	Million Dollars
\$	Australian dollars (default, unless otherwise specified)
ABS	Australian Bureau of Statistics
BCR	Benefit Cost Ratio
FTE	Full Time Equivalent
WA	Western Australia
<i>Source: ACIL Allen</i>	

1.4 Report structure

This report includes the following chapters:

- **Chapter 2: Situation Analysis.** This chapter provides an overview of the Point Samson foreshore and its role in the social and economic development of the region including as a tourist attraction and recreation site. It also provides background of timber jetties in Western Australia and the role they play in local communities.
- **Chapter 3: Visitor Analysis.** This chapter analyses the potential impact of a change in the number of visitors to the town and the value of visitor spending as a result of the redevelopment of the foreshore.
- **Chapter 4: Benefit Cost Assessment.** This chapter identifies and quantifies the benefits and costs of three redevelopment options for the Point Samson foreshore in its construction and ongoing operation phases.
- **Chapter 5: Recommendations.** This chapter provides a summary of the analysis and findings of the business case.

Situational Analysis

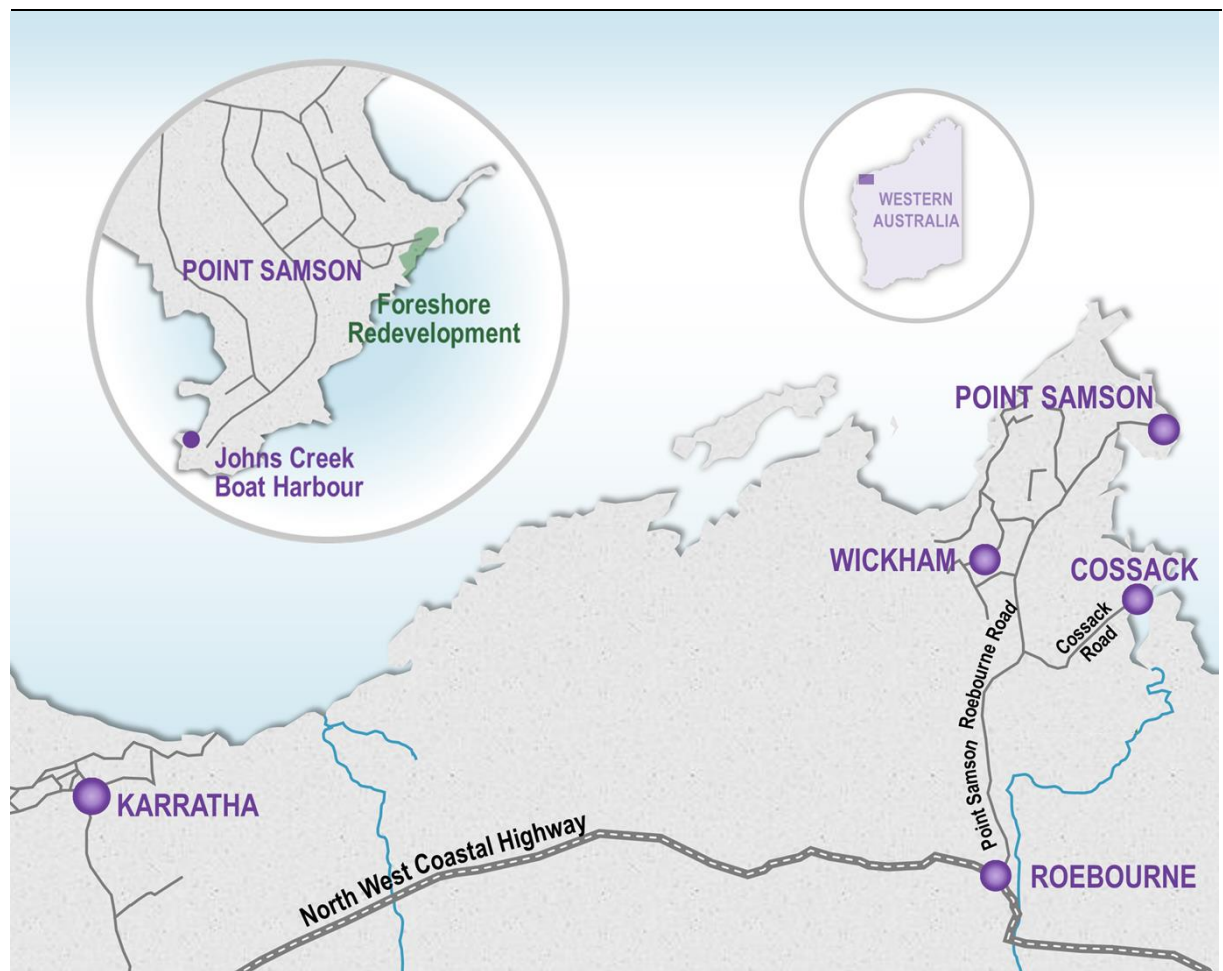
2

This Chapter outlines the history of the Point Samson foreshore and the social and economic importance it has in the local community.

2.1 Economic and regional context

Point Samson is a small coastal settlement in the Pilbara region of Western Australia located around 58 kilometres to the east of Karratha, and 1,579 kilometres north of Perth. It is located on the eastern tip of the Dampier Archipelago and is close to the regional population centres of Karratha, Dampier, Roebourne, and Wickham (**Figure 2.1**).

Figure 2.1 Point Samson and surrounds

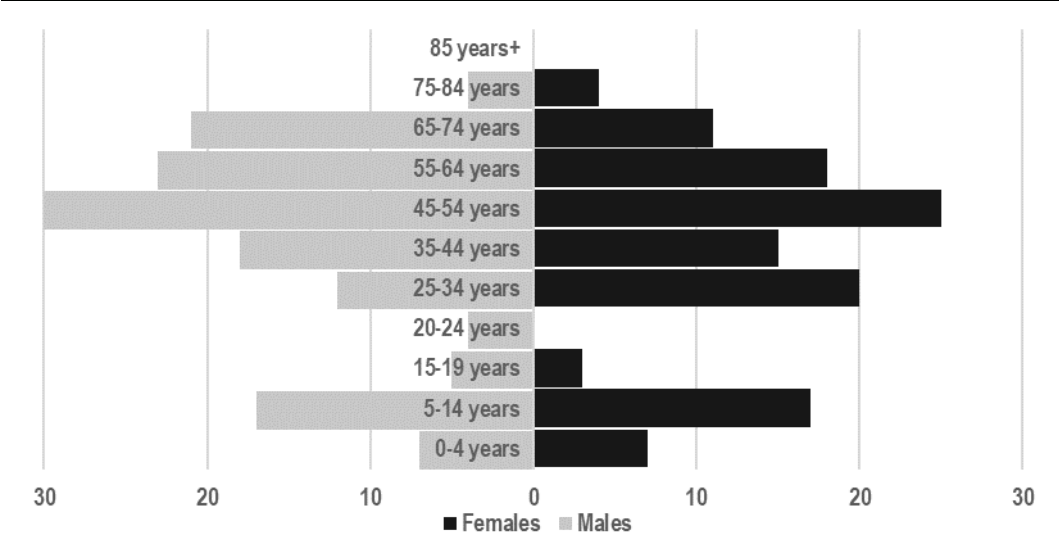


Source: ACIL Allen

In 2021, the City of Karratha Local Government Area had an estimated resident population of 23,243 people of which the majority live in the towns of Karratha and Dampier.⁴ The City's population is forecast to grow by around 2.6 per cent per annum which will see its population surpass 35,000 people by 2036.⁵ The population of Point Samson is relatively small comprising of around 250 people or one per cent of the City of Karratha.

The median age of people living in Point Samson is 45 which is well above the median age for the State of 38 years. **Figure 2.2** presents the population of Point Samson by gender and age. It shows that half of the people who live in the town are aged between 45 and 75 years of age. There are very few people aged between 15 and 25 or over 75 that live in the town which is most likely due to the lack of education and health facilities in or around Point Samson.

Figure 2.2 Point Samson demographic profile 2021, number of persons



Source: Australian Bureau of Statistics 2021 Census by place of usual residence

The economy of Point Samson is small with the key contributors the tourism sector and the fishing industry with a commercial fishing fleet that operates from John's Creek boat harbour. The harbour includes seven commercial boat pens, a land-backed wharf, a service jetty, a boat ramp, fuelling facilities, 200m rock causeway fishing platform, toilets, and parking.⁶

Point Samson is on the doorstep of the Dampier Archipelago which comprises of 42 islands and inlets and is known for its natural beauty and rich Aboriginal culture and history. Point Samson's main attractions include its beaches including Point Samson Beach also known as Town Beach, Honeymoon Cove, and John's Creek boat harbour which appeal to a range of recreational users. The town is easily reached by visitors from Karratha, Dampier, Wickham, Roebourne, and Port Hedland as part of a day trip. A range of accommodation options cater for overnight visitors including caravan parks, bed and breakfasts, self-contained holiday homes, chalets, and a four-star resort.

⁴ Australian Bureau of Statistics (2022), Table 5. Estimated resident population and components, Local Government Areas, Western Australia

⁵ Karratha Destination Management Plan 2018

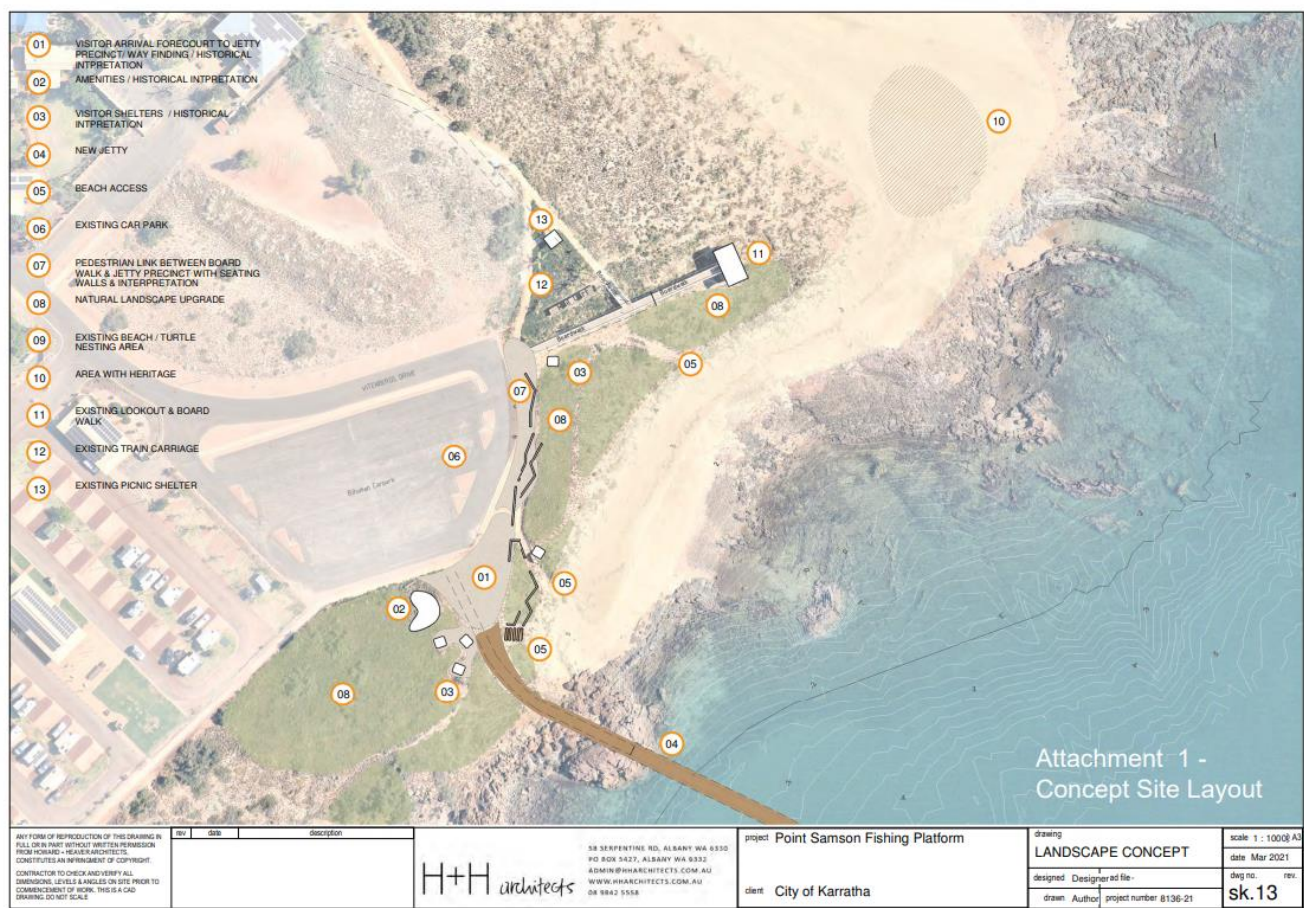
⁶ Department of Transport (2017), Johns Creek Boat Harbour (Point Samson), Government of Western Australia

2.2 Point Samson foreshore redevelopment concept

The Point Samson Peninsula has been occupied by the Ngarluma peoples for more than 30,000 years and Native Title within the Point Samson foreshore area has been formally recognised as residing with the Ngarluma people. The first non Indigenous settler was Mr Walter Padbury who established a sheep station in the area in 1863. Accompanying him on his journey was Michael Samson after whom the town and the peninsula are named.

The port of Point Samson was established in 1904 as a deep water port when the nearby port of Cossack became unable to service the growing number of larger ships. The Point Samson jetty became the key port in the Pilbara region servicing the nearby town of Roebourne and the surrounding pastoral stations. It later facilitated the shipment of asbestos produced in the Wittenoom area and was also used by Hamersley Iron Pty Ltd and Cliffs Robe River Iron Associates before their own shipping facilities were completed. The jetty stopped functioning as a working jetty in March 1976.

Figure 2.3 Point Samson foreshore redevelopment concept



Source: H+H architects

The original T head jetty at Point Samson was nearly 1,900 feet long and included sheep yards, a goods shed, and a tramway which connected the port to nearby Cossack and Roebourne. It was destroyed by a cyclone in 1925 and the remaining part of the jetty was badly damaged by Cyclone Orson in 1989. The jetty was removed in 1991 and a viewing platform was built nearby on the Point Samson foreshore as a reminder of the jetty's significant role in the town's past.

The Point Samson foreshore area is used for recreational purposes and is of particular importance to the town's local community. The area around The Point lies adjacent to the south east end of Town Beach and includes the viewing platform as illustrated in **Figure 2.3**. The area is well used by the community and visitors for swimming and passive recreation purposes however there is no formal access to the beach for pedestrians or vehicles and there are no built recreational facilities other than the viewing platform. Adjacent to the foreshore are The Cove Holiday Village and the Samson Beach Tavern which cater for the resident population and visitors to the town.

2.2.1 Redevelopment plan

The Point Samson foreshore redevelopment concept includes options for parkland and picnic areas, carpark upgrades, a public amenities block, a plaza, a boat shed, a skate park and pump track, interpretative signage, beach access and boardwalks, and fishing jetty that are designed to improve the area around The Point and Town Beach. Concept designs for these elements are illustrated in **Figure 2.4** and include:

- Parkland, Picnic, Play Area – including grassed and paved areas with informal seating, shade, barbeques, and a playground area
- Forecourt, Plaza, Kiosk, Amenities, Beach Access – construction of an amphitheatre, public amenities, and a hard stand area allowing for its use as an area to host pop up retail outlets and community events. Formal pedestrian access to the beach will be constructed including steps and handrails
- Roadway and Carparks – upgrades to the roads and carparks to create a defined arrival point to the foreshore including landscaping, footpaths, and lighting
- Viewing platform – further integration of the viewing platform into the foreshore redevelopment precinct
- Activities, Picnic, Paving – additional grassed and paved areas with seating, shade, and barbeques as well as additional interpretative signage including the potential to link the site to other parts of the town and the wider Point Samson Peninsula
- Boat Shed - construction of a boat shed for use as a storage facility for small craft such as kayaks, canoes, jet skis, and bicycles
- Fishing Jetty – construction of a new jetty structure approximately 150m in length and 4m wide allowing for universal access and to a depth to allow fishing. The jetty will include a fish cleaning station, and interpretative signage to create a connection between the cultural heritage of the area, the history of the previous jetty, and the ocean.

Figure 2.4 Point Samson redevelopment concept design incorporating all design elements

Source: City of Karratha

2.3 Options for foreshore development

For the purposes of this report, three scenarios for analysis have been developed that are based on the construction of some or all of the elements of the foreshore design. The options have been developed based on consideration of their ability to make a return on investment given their construction costs. Note that the construction of a fishing jetty has not been considered in isolation as the costs to construct this type of structure is significant compared to the benefits that it is likely to generate. To offset the high construction costs, the development of complementary facilities that generate additional benefits is essential. In this case, the construction of the jetty has been

considered with all elements of the redevelopment of the Point Samson foreshore in order to return as a higher benefit as possible.

The redevelopment of the Esperance foreshore is an example of the construction of a fishing jetty as part of a foreshore redevelopment. Details of the history of the Esperance foreshore redevelopment is presented in Box 2.1. It includes upgrades to the foreshore that were undertaken as a staged approach over six or so years. The construction of the fishing jetty was the final key part of the foreshore redevelopment that was designed to cater for local residents and visitors to the town.

Box 2.1 Esperance Tanker Jetty

The Esperance Tanker Jetty was a heritage listed jetty of approximately 670 metres in length that began construction in 1935 to serve the shipping needs of Esperance and the surrounding region. It was connected to the rail network to facilitate the export of grain and other primary produce and the import of key agricultural inputs and town supplies. Following the construction of land backed berths in 1965 and 1972, the jetty was modified to become a tanker berth and was replaced in 1983 by the Bandy Creek boat harbour.

Over time the jetty began to deteriorate and in 2015, it was closed to the public. The Shire of Esperance adopted a staged development of the Esperance waterfront incorporating the jetty. Stage 1 included the construction of rock and retaining walls to protect the foreshore from coastal erosion and the creation of a headland around the base of the jetty. Stage 2 included the construction of modern amenities along the broader foreshore including a playground, barbeques, and seating which was completed in 2014.

Stage 3 was opened in 2021 and involved the construction of a 415 long jetty and the redevelopment of the headland at the base of the jetty. The new jetty is built primarily from concrete and steel with some timber sections of the original jetty incorporated along with its curved design and in interpretive features. At the end of the jetty is a dive trail and there are fishing and diving platforms and interpretive signage. The redevelopment of the headland includes a nature based playground, sheltered seating, barbeques, and hardstands designed to cater for commercial outlets.



Over time, other developments have been constructed along the Esperance foreshore which adds to its recreational values. This includes a skate park and pump track that was opened in 2016 and an all access swimming enclosure that was completed in 2021.

The redevelopment of the jetty has allowed the commencement of commercial activities at the site. Fishing tours are run from the jetty while there is currently a coffee van and a juice bar. Opposite the jetty is The Jetty Resort which sells bait and hires out fishing gear, stand up paddle boards, and kayaks.

Source: ACIL Allen from various

The three scenarios analysed in this report are summarised in **Table 2.1** and described in further detail in the following sections.

Table 2.1 Scope of capital components, by redevelopment option

Item	Option 1	Option 2	Option 3
Description	Foreshore upgrade	Medium level redevelopment including commercial opportunities and beach access	Full redevelopment including fishing jetty
Asbestos removal from site	✓	✓	✓
Item 1: Fishing Jetty	×	×	✓
Item 2: Parkland, Picnic, Play Area	✓	✓	✓
Item 3: Forecourt/Plaza, Kiosk, Amenities, Beach Access	×	✓	✓
Item 4: Roadway & Carparks	✓	✓	✓
Item 5-8: Viewing platform	×	✓	✓
Item 9-11: Activities, Picnic, Paving	✓	✓	✓
Item 12: Boat Shed	×	✓	✓
Loose Furniture & Equipment	✓	✓	✓

Source: ACIL Allen: Note: ✓ = in scope, X = out of scope

2.3.1 Option 1 – Foreshore upgrade

Option 1 is a foreshore upgrade that complements the existing viewing platform to include the development of parkland, picnic, and play areas (item 2), roadway and carparks (item 4), and activity, picnic, and paving areas (items 9-11). This option focuses on landscaping and amenity upgrades to enhance the foreshore area and make it more attractive to visitors and recreational users. No commercial opportunities are assumed for this scenario.

2.3.2 Option 2 – Commercial opportunities and enhanced beach access

Option 2 builds on Option 1 to include the addition of a forecourt/plaza with kiosk and amenities and access to the beach (item 3), as well as further integration of the viewing platform (items 5-8). Option 2 will also include the construction of a boat shed (item 12) for the storage of small watercraft and other recreational equipment.

This option makes commercial opportunities possible by allowing for the potential establishment of a coffee van or pop-up catering facilities. Under this Option, it is assumed that a commercial operation makes use of the boat shed for the hire of fishing equipment, stand up paddle boards, kayaks, bicycles, and so on. It also presents the opportunity for a tour businesses to establish including those that incorporate Cossack and the surrounding waters of the Dampier Archipelago including fishing tours, whale watching tours, kayak experiences, and Indigenous cultural tours.

2.3.3 Option 3 – Full redevelopment including fishing jetty

Option 3 will build on Option 2 to include the construction of 150m long, four meter wide steel fishing jetty extending from the southern end of the foreshore as illustrated in **Figure 2.3**. The jetty will be suitable for fishing through the full tidal range and is designed to have an upper and lower level with universal access to the upper level.

Additional business opportunities resulting from the development of Option 3 include those assumed in Option 2 as well as further retail sales associated with the sale of bait and increased spending from visitors and locals who stay at the foreshore for longer than under the other development options.

The assumptions, quantified costs and benefits, and qualitative costs and benefits of the foreshore redevelopment for each option will be discussed in more detail in Chapter 4.

2.4 Alignment with Government policy

Table 2.2 summarises how the Point Samson foreshore redevelopment aligns with Government policies and plans, including alignment with strategies, focus areas, and how the redevelopment may fill gaps in the local tourism market, address barriers to growth, and attract visitors.

The foreshore redevelopment aligns well with the goal of the City of Karratha to enhance the recreational offering in Point Samson and the City of Karratha to local residents and visitors identified in the Karratha Destination Management Plan. The redevelopment will cater for key target markets including the short break leisure and short break 4-5 day fishing markets as well as visitors seeking art and cultural experiences, and interstate travellers. Through its enhancement and protection of cultural values, and the potential to enhance the connection with nearby Cossack via the Cultural Heritage Trail, the Point Samson foreshore redevelopment aligns with the aim to activate heritage and Aboriginal visitor attractions and products identified.

The redevelopment aligns with the City of Karratha’s Strategic Community Plan which has a strategic theme to develop serviced land for a variety of new enterprise purposes by providing an opportunity for new retail and recreation businesses to establish. The inclusion of universal access to the foreshore areas and the jetty meets the vision of the City of Karratha’s Disability Access and Inclusion Plan 2018-2022 which aims to ensure that all new community projects are physically accessible to people with a disability.

The goals of the City of Karratha are consistent with those of the Pilbara Development Commission including its blueprint for economic and social growth of the region, and its Strategic Plan 2019-21.

Table 2.2 Alignment of the Point Samson Redevelopment with Government Policy

Policy/Plan	Description	Alignment
City of Karratha 2018 Karratha Destination Management Plan	This Plan aims to sustainably grow the region's visitor economy by identifying new development opportunities, identifying funding programs, overcoming challenges, and undertaking marketing activities to be in the top ten places to visit in Western Australia with the aim of doubling the current visitor spend.	Activation area 2 <ul style="list-style-type: none"> Growing demand through development and investment (new and unique things for visitors to do which leverage off natural assets) Gaps to be filled <ul style="list-style-type: none"> Fishing events, guided Indigenous tours Barriers to growth <ul style="list-style-type: none"> Access to natural attractions, activating Aboriginal tourism products, lack of tourism investment, limited visibility of the City's Indigenous significance Target markets <ul style="list-style-type: none"> Short break leisure market, special interest art and cultural tours, short break 4-5 day special interest fishers, interstate travellers.
City of Karratha 2016 Strategic Community Plan 2016 - 2026	This Plan outlines a ten-year vision for the City of Karratha, focusing on the development and support of its community and economy. It includes the strategies to achieve the vision.	Strategic theme outcome responses: <ul style="list-style-type: none"> (1.a.1) A full range of city-standard facilities and community infrastructure are provided (2.c.1) Serviced land is prepared and available for a variety of new enterprise purposes (2.c.2) Public private partnerships are in place for the development of key infrastructure (3.a.2) Natural assets are well-managed and promoted.
City of Karratha 2018 Disability Access & Inclusion Plan 2018-2022	This plan is part of an extensive community consultation, which aims to deliver universal inclusion and accessibility in the community.	Outcome 2 strategies <ul style="list-style-type: none"> Ensure accessible facilities and services are clearly indicated through signage Ensure that all new community projects such as playgrounds and parks are physically accessible to people with a disability where practical Ensure all buildings and facilities are accessible to people with a disability.
Pilbara Development Commission 2018 Pilbara Development Commission Regional Blueprint	The vision for the Pilbara region is to accommodate over 200,000 people, and become a vibrant, modern, and inclusive region offering high quality services. The region's economy will be resilient, diverse, and innovative, underpinned by the energy and resource industries.	Strategic priorities <ul style="list-style-type: none"> Liveability, population growth and retention, local employment growth, Aboriginal development Regional pillars <ul style="list-style-type: none"> Enabling – economic infrastructure Diversifying – tourism 2050 objectives <ul style="list-style-type: none"> Economic infrastructure: Urban environments are attractive and promote a strong sense of place Tourism: The Pilbara is a recognised tourism destination, attracting a range of visitors with its natural and man-made attractions Heritage and Aboriginal tourist attractions are recognised by the international market as unique offerings.
Pilbara Development Commission 2019 Pilbara Development Commission Strategic Plan 2019-21	The vision of this Plan is to make the Pilbara region a vibrant and sustainable community underpinned by a strong, diverse economy.	Vision <ul style="list-style-type: none"> Strong social connections and a vibrant community Key opportunity sectors <ul style="list-style-type: none"> Tourism Strategic Goal initiatives <ul style="list-style-type: none"> Celebrating and promoting the Pilbara's unique attributes and distinctiveness, particularly its rich history, diversity and Aboriginal heritage and culture Creating vibrant public places that enable social and cultural exchange and interaction.

Source: ACIL Allen

Visitor Analysis

3

This chapter profiles the current visitor market using data published by TourismWA and is supplemented through consultation.

3.1 Potential tourism activation potential

Visitors are drawn to the coastal beauty of Point Samson and the opportunity to visit Cossack

Point Samson is recognised for its natural coastal beauty and is a popular destination for day and overnight visitors. The town is a popular destination for residents of the Pilbara region and for visitors from other parts of Australia and overseas.⁷ The main attractions include its beaches, lookouts, beach and deep water fishing, and heritage trails. Point Samson is on the doorstep of the Dampier Archipelago which is known for its natural beauty and its rich Aboriginal culture and history. The Archipelago offers visitors boating, camping, canoeing, fishing, scuba diving and swimming experiences. John's Creek boat harbour provides an access point to the Archipelago for boats and is a popular fishing spot.

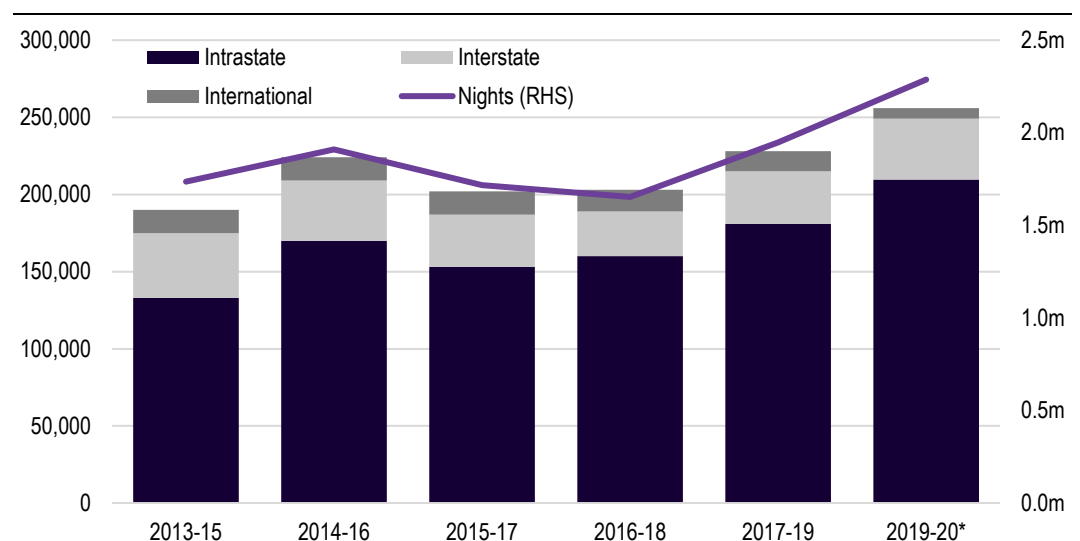
There are other attractions on the way to Point Samson which visitors are drawn to including the Cossack Heritage town which is a 5 km or 10 minute drive from Point Samson. Other nearby visitor offerings extend further inland and along the coastline such as those identified in **Figure 3.1**.

Cossack includes some of the oldest buildings in Western Australia and until the jetty at Point Samson was constructed, was the main port in the Pilbara region. The town is a visitor attraction in its own right with its primary attractions the history of the town and the original buildings. Visitor attractions in the town include the Cossack Museum, heritage trail which includes separate walking and driving trails, and nature based activities such as bird watching.

The Cossack Art Gallery opens for three weeks from July to August to host the annual Cossack Art Awards. The Awards have grown substantially over its 30 year history and are now a nationally significant art event. Cossack caters for tourists including budget accommodation, a café, and venue hire building which hosts public events of which the Cossack Art Awards is the most notable. There is a boat hire business that is operated from the Cossack Jetty.

The proximity of Point Samson and Cossack offers visitors an opportunity to build an itinerary that incorporates attractions of the two locations (**Figure 3.1**). The only access between the two towns is currently via road and there are no pedestrian or cycle tracks. There are opportunities to encourage a safe connection between the two to allow the development of additional visitor offerings such as walk and cycle trail, guided tours, and equipment hire including bicycle, segway, and e-bike hire.

⁷ Essential Environmental (2014), Point Samson Foreshore Management Plan, Shire of Roebourne



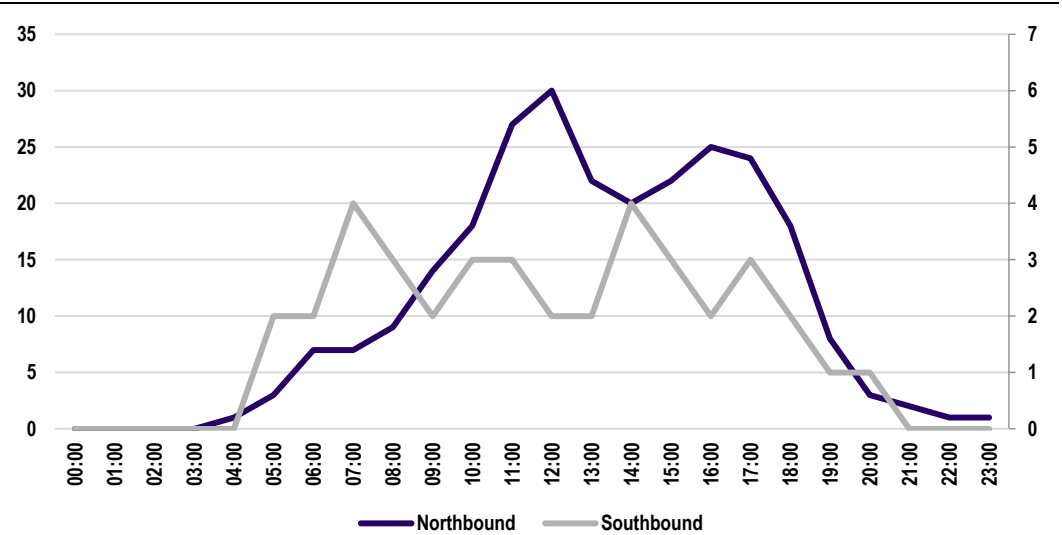
Most visitors to the City of Karratha are from Western Australia

In comparison, the wider Pilbara region reported an average of 940,000 visitors per annum, suggesting that around a quarter of all visitors to the Pilbara region visited the City of Karratha during their stay.

Nearly 80 per cent of visitors to the City of Karratha are from within Western Australia and are most likely business visitors. Around 16 per cent of visitors are from the rest of Australia and five per cent are from overseas. International visitors typically spend more time in the region, staying an estimated 24.2 nights on average per stay, compared to intrastate (6.9 nights), and interstate visitors (11.6 nights).

Main Roads Western Australia recorded an average of 1,249 vehicles entering Point Samson each week during 2020-21 of which 93.2 per cent were cars. This is equivalent to 64,948 vehicles per annum including 60,532 cars. For vehicles travelling into the town, the peak travelling times are between 10:00 am and 1:00 pm and the peak times for vehicles leaving the town fall between 6:30 am and 9:00 am and again at 1:45 pm to 2:45 pm as illustrated in **Figure 3.3**.

Figure 3.3 Volume of traffic passing through Point Samson, number of cars by time of day: 2020-21, average Monday to Sunday



Source: Main Roads WA

Day visitors

There are an estimated 64,750 day visitors and 20,200 overnight visitors to Point Samson who stay 52,500 visitor nights

Consultation with visitor related businesses in the town found that day visitors visit the town for its beaches and fishing spots with most visitors remaining for between one and four hours. There is evidence of seasonal fluctuation amongst day visitors from outside the region however regional day visitors are drawn to the town throughout the year.

Vehicle count data was used to estimate the number of day visitors to Point Samson. It was assumed that day visitors were those that entered the town during peak times and departed the town during the second peak noting that some of this traffic could include local residents as they return from school drop offs in the morning and returning for school pick up in the afternoon. The Australian Bureau of Statistics records four families in Point Samson with dependent children aged under the age of 15. It is assumed that each of these families represents one car during the peak morning and afternoon periods and they were therefore removed from the analysis. This resulted in around 71 vehicles per day driven by day visitors who tended to stay in the town for around four

hours. Assuming that each vehicle carried an average of 2.5 people⁸ indicates around 177 day visitors per day or around 64,750 day visitors per annum.

Overnight visitors

Overnight visitor counts were based on information provided by accommodation providers in Point Samson regarding the seasonality of occupancy rates and the total number of beds available in the town. There are three key accommodation providers who between them operate around 44 rooms and 89 caravan sites, and approximately 10 sites for campers. In total, there is a total overnight visitor capacity of around 320 overnight visitors.

Overnight visitors stay in the town throughout the year with the peak season for overnight accommodation taking place during the cooler months from June to September when visitors stay an average of around two to three nights. Seasonality is mainly associated with visitors from outside the region with regional visitors staying overnight in the town throughout the year. Based on occupancy rates provided by accommodation providers, it is estimated that there are around 20,200 overnight visitors to Point Samson each year who stay an average of around two to three nights resulting in total visitor nights of around 52,500 per annum.

3.3 Current visitor spending

On average, there was overnight visitor spending of \$223 million per annum in the Pilbara region over the period from 2017 and 2019. Each visitor type reportedly spends a similar total amount per trip however daily spending differed with visitors from Australia spending \$129 per day and international visitors spending \$42 per day resulting in an average spend per visitor of \$115 per day.⁹

It is estimated that there is around \$7.0 million per annum of visitor spending in Point Samson with spending confined to accommodation providers, meals, and retail spending on fuel, groceries, and other minor items. Based on the number of visitors, it is assumed that each day visitor spends around \$30 per day while overnight visitors spend between \$53.50 per day and \$155 per day with the lower amount attributed to overnight visitors who stay in budget accommodation and the higher amount based on overnight visitors who stay in serviced accommodation such as hotel rooms and units. **Table 3.1** provides a breakdown of the spending by visitor type in Point Samson.

Table 3.1 Current visitor spending by visitor type, \$ per visitor per day

	Day visitor	Overnight visitor – room/unit	Overnight visitor - caravan
Lunch	27.50	27.50	0.00
Dinner	0.00	30.00	10.00
Existing retail incl fuel	2.50	7.50	7.50
Accommodation	0.00	78.50	24.50
Total	30.00	155.00	53.50
Source: ACIL Allen			

There is total visitor spending of around \$7.0 million per annum in Point Samson

⁸ Australian Bureau of Statistics 2021 Census median Western Australian household size

⁹ Tourism WA (2020), City of Karratha Overnight Visitor Factsheet 2017/18/19, Government of Western Australia

3.4 Visitor forecasts

Current visitors to Point Samson are attracted to its beaches and fishing spots. Visitors have identified a lack of sheltered seating areas overlooking the beach, food and beverage facilities on the foreshore, and links to other visitor attractions as the key factors to staying longer in the town.¹⁰ The redevelopment of the Point Samson foreshore will assist in attracting further visitation to the town through the development of these types of amenities. It has been assumed that the redevelopment will encourage existing visitors to the town to stay longer as well as attracting new visitors.

For the purposes of this report, an increase in the number of day visitors and visitor nights has been assumed to understand the impact on total visitor spending in the town which is a key input to the benefit cost assessment. Two increases in visitor scenarios have been assumed. The first scenario assumes a 10 per cent increase in the number of day and overnight visitor nights resulting in the total number of day visitors increasing from 64,750 to 71,250 and the total number of visitor nights increasing from 52,500 to 57,700. A second scenario assumes a 20 per cent increase in the number of day and overnight visitors resulting in the total number of day visitors increasing to 77,750 and the number of visitor nights increasing to 63,000 as presented in **Table 3.2**.

Table 3.2 Forecasts of the number of day visitors and overnight visitors

	Current	10 per cent increase	20 per cent increase
Day visitors	64,750	71,250	77,750
Visitor nights	52,500	57,700	63,000

Source: ACIL Allen

3.5 Visitor spending forecasts

The increase in visitation to Point Samson from the redevelopment of the foreshore will result in an increase in visitor spending. This increase in visitor spending will be a function of:

1. An increase in the number of visitors to the town attracted to the new foreshore facilities resulting in new visitor spending
2. The same number of visitors but an increase in the length of stay because of the foreshore redevelopment resulting in more spending particularly associated with an increase in the length of stay of overnight visitors
3. The same number of visitors but an increase in the number of retail outlets allowing visitors to spend more.

The foreshore redevelopment will facilitate an increase in per visitor spending made possible by the increase in the number of businesses and from the establishment of new businesses at the foreshore including the kiosk, and the boatshed in which an equipment hire business could be located. The construction of the jetty could also stimulate additional retail spending such as through purchases of bait and fishing equipment and other retail spending at businesses elsewhere in town.

Table 3.3 shows the additional per visitor spending made possible by the foreshore development for each option. It is assumed that additional spending will be made possible from:

- Additional food and drink spending at the kiosk
- Additional retail spending at the kiosk or elsewhere in town
- Hire of equipment from the boatshed.

¹⁰ Essential Environmental (2014), Point Samson Foreshore Management Plan, Shire of Roebourne

No increase in visitor spending has been assumed under Option 1 which does not include any additional businesses. For options 2 and 3, an increase in visitor spending has been made possible by the inclusion of the kiosk, and boatshed which allow for the establishment of food and beverage outlets and equipment hire businesses.

Table 3.3 Forecasts of increase in spending per visitor as a result of the Point Samson foreshore redevelopment by option, \$ per visitor

Item	Option 1	Option 2	Option 3
Food and drink at kiosk	\$0.00	\$4.00	\$4.00
Retail (bait, and other retail)	\$0.00	\$0.00	\$2.50
Recreation (equipment hire)	\$0.00	\$5.00	\$5.00
Total increase in spending	\$0.00	\$9.00	Day visitor = \$9.00 Overnight = \$11.50

Source: ACIL Allen. Note: it is assumed that day visitors do not make retail purchases under Option 3

Total visitor spending in Point Samson is currently around \$7.0 million per annum. Under Option 1, visitor spending ranges between \$7.72 million given a 10 per cent increase in visitation and \$8.43 million given a 20 per cent increase in visitation. This is equivalent to a corresponding 10 per cent and 20 per cent increase in spending respectively with the increase in spending under Option 1 driven by the increase in the number of visitors to Point Samson.

Table 3.4 Forecasts of increase in total visitor spending as a result of the Point Samson foreshore redevelopment by option, \$ million

Item	Current	Option 1	Option 2	Option 3
10 per cent visitor increase				
Day visitors	1.94	2.14	2.78	2.78
Overnight visitors - rooms	4.07	4.47	4.75	4.83
Overnight visitors - caravan	1.01	1.11	1.35	1.42
Total	7.02	7.72	8.89	9.03
20 per cent visitor increase				
Day visitors	1.94	2.33	3.03	3.03
Overnight visitors - rooms	4.07	4.88	5.18	5.27
Overnight visitors - caravan	1.01	1.22	1.48	1.55
Total	7.02	8.43	9.69	9.85

Source: ACIL Allen. Note: it is assumed that day visitors do not make retail purchases under Option 3

The increase in visitor spending under Option 2 is driven by the increase in visitors in addition to an increase in the spending per visitor that is made possible from the additional businesses located at the foreshore redevelopment. Under this scenario, total visitor spending ranges from \$8.89 million given a 10 per cent increase in visitation and \$9.69 million given a 20 per cent increase in visitation representing a 27 per cent and 38 per cent increase in visitor spending respectively.

Under Option 3, the spending per visitor increases further resulting in total visitor spending ranging from \$9.03 million given a 10 per cent increase in visitation and \$9.85 million given a 20 per cent increase in visitation as illustrated in **Table 3.4**. This is equivalent to a 29 per cent and 40 per cent respective increase in spending from the current level of visitor spending.

The spending estimates used in this report are intentionally conservative so as not to inflate the benefits of the foreshore redevelopment. It is likely that other spending under all options will be enabled such as through holding events at the foreshore and the possibility of pop up businesses

during peak visitor seasons. The increase in visitors to the town as a result of the foreshore redevelopment could also provide the catalyst for other businesses to establish such as additional accommodation and restaurant businesses and businesses that offer tours of the local area including those that focus on fishing, diving, and Indigenous cultural experiences.

Benefit Cost Assessment

4

This chapter presents the framework for assessing each of the foreshore development options and the overall results of the benefit cost assessment.

4.1 Benefit Cost Assessment framework

A benefit cost assessment framework has been used to project the net social impacts of the options for the Point Samson foreshore redevelopment. A benefit cost assessment is a commonly used quantitative framework for logically analysing the social and economic costs of a particular policy, project or investment compared to its benefits.

Box 4.1 Benefit Cost Assessment

For a given investment proposal or policy reform, a benefit cost assessment compares the total projected costs (including opportunity cost) to the community and economy of the investment or policy with the total projected benefits. This determines whether the benefits outweigh the costs, and by how much.

The output of a benefit cost assessment is typically expressed as a Benefit-Cost Ratio (BCR) where total benefits are divided by total costs. A BCR of greater than one indicates that the quantifiable net benefits of the policy, project or investment exceed the quantifiable costs. All things being equal, this suggests there is economic and social value in investing in the option. The reverse applies for a BCR below one.

A benefit cost assessment provides a framework for analysing information in a logical and consistent way by assisting policymakers to determine which investment option is the most economically effective and efficient in achieving the desired outcomes. A BCR of less than one does not automatically preclude the implementation of the policy, project, or investment however the business case would typically require strong alternate reasoning such as a clear social policy mandate.

Source: ACIL Allen

The benefit cost assessment considers the costs and benefits of the decision to invest in the Point Samson foreshore redevelopment. A range of quantitative and qualitative benefits and costs have been considered with each of these discussed in the following sections.

4.1.1 Costs

The following economic, financial, and social costs have been considered in the benefit cost assessment of the Point Samson foreshore redevelopment. All identified costs are financial costs including:

1. **Initial capital expenditure** required to construct each element of the Point Samson foreshore redevelopment
2. **Ongoing capital expenditure** required to maintain the condition of the development for its useful life

3. **Incremental operating expenditure** associated with minor repairs and maintenance, monitoring and management of the Point Samson foreshore redevelopment that takes in to account the current spending by the City of Karratha on the foreshore area being developed.

4.1.2 Benefits

The benefits associated with the Point Samson foreshore redevelopment are principally centred on the additional recreation opportunities for the residents of Point Samson, the attraction of new visitors to the town resulting in increased visitor spending, the regional employment that the development creates, and other unquantified economic benefits enabled by the decision to invest. The following economic, financial, and social benefits are considered in the benefit cost assessment.

1. **Recreational use for fishing** considers the recreational value associated with opportunities to undertake fishing by the regional population
2. **Visitor spending** considers an estimate of the potential increase in visitor expenditure which could be attributed to the redevelopment from additional visitors to the town and from additional spending by current and potential visitors
3. **Sustainable regional employment** ascribes a value to the assumed regional jobs created in management, maintenance and oversight of the redevelopment, and any employment supported by the additional businesses that establish because of it
4. **Avoided foreshore maintenance costs** considers the current operation and maintenance costs that the City of Karratha is able to avoid from the investment in the foreshore.

4.2 Identification of benefits and costs

The following sections provide details of the identified quantified and other benefits and costs associated with the Point Samson foreshore redevelopment over the construction period and the first ten years of its establishment.

4.2.1 Quantitative costs

There are three key identified costs associated with the foreshore redevelopment including the construction costs, ongoing operation and maintenance costs, and the ongoing capital costs to replace key infrastructure.

Capital expenditure

The capital expenditure required to construct each element of the foreshore redevelopment has been sourced from feasibility cost estimates.¹¹ The cost estimates consider itemised construction costs associated with the development of each component of the foreshore redevelopment, plus the associated costs including design and construction contingencies, and overheads such as professional fees. It is assumed that Option 1 and Option 2 takes 18 months of construction time, and Option 3 takes two years to construct. The capital costs for each of the three options are presented in **Table 4.1**.

Quantitative costs are driven by the capital costs to construct the foreshore redevelopment

¹¹ HW & Associates for the City of Karratha (2021), Point Samson Jetty and Redevelopment Works Feasibility Estimate, City of Karratha

Table 4.1 Capital costs by option, \$ million

Cost item	Option 1	Option 2	Option 3
Asbestos removal	0.25	0.25	0.25
Built infrastructure costs	11.55	19.08	29.45
Design contingency (10.0% of costs)	1.15	1.91	2.95
Construction contingency (5.0% of costs)	0.58	0.95	1.47
Authority costs	0.08	0.08	0.08
Loose furniture and equipment	0.05	0.05	0.05
Professional fees (8.1% of costs)	0.93	1.54	2.38
Escalation 24 months (10.9% of all costs)	1.56	2.57	3.97
Total (\$ million)	15.90	26.18	40.34

Source: HW & Associates

Operations and maintenance expenditure

Operating expenditure refers to spending required to ensure the Point Samson foreshore redevelopment is managed and maintained safely over time. This is likely to include ongoing monitoring, inspections, minor maintenance, and repairs which do not meet the criteria of a capital reinvestment as these are captured in the ongoing capital expenditure cost.

It is assumed the development would require ongoing minor maintenance and other operational expenditure equivalent to 1.5 per cent of the capital expenditure in each year of its operation commencing in the first full year of operation. This is in line with the experiences of other heritage jetties in Western Australia, including the Busselton Jetty which has recorded a non-wage operational spend of between \$190,000 per annum and \$260,000 per annum over the past five years.¹² This rate is applied to all capital costs associated with the foreshore redevelopment.

Table 4.2 Operational costs by option, \$ million

Cost item	Option 1	Option 2	Option 3
Operational expenditure (1.5% p.a.)	2.48	4.07	6.26

Source: ACIL Allen based on capital costs provided by HW & Associates

Ongoing capital expenditure (renewals)

The ongoing capital expenditure for each option is determined using a standard ratio of sustaining capital expenditure for marine infrastructure, developed by the World Association for Waterborne Transport Infrastructure.¹³ The document provides guidance on approaches to capital renewal budgeting for marine infrastructure, ranging from full trading ports to breakwaters. The ratios suggest an average of one to two per cent per annum should be set aside for most of the individual assets used to maintain the Point Samson Fishing Jetty including its piles and decking.

Renewals expenditure does not begin immediately, as the initial build of the infrastructure is such that it does not require attention for some years. A rate of 2.0 per cent of total capital costs has therefore been applied on a per annum basis commencing in the sixth year of operations. This cost

¹² Australian Charities and Not-for-Profits Commission (2021), Busselton Jetty Inc Annual Reports. Accessed online at <http://www.acnc.gov.au>

¹³ PIANC (2014), Sustainable Ports – A Guide for Port Authorities. Accessed online at www.sustainableworldports.org/projects/pianc-sustainable-ports-guide

only applies to Option 3 as illustrated in **Table 4.3** as it is the only one to include the jetty construction. The costs associated with upkeeping the infrastructure of the other foreshore elements are assumed to be included in the operations and maintenance expenditure estimates.

Table 4.3 Ongoing capital expenditure by option, \$ million

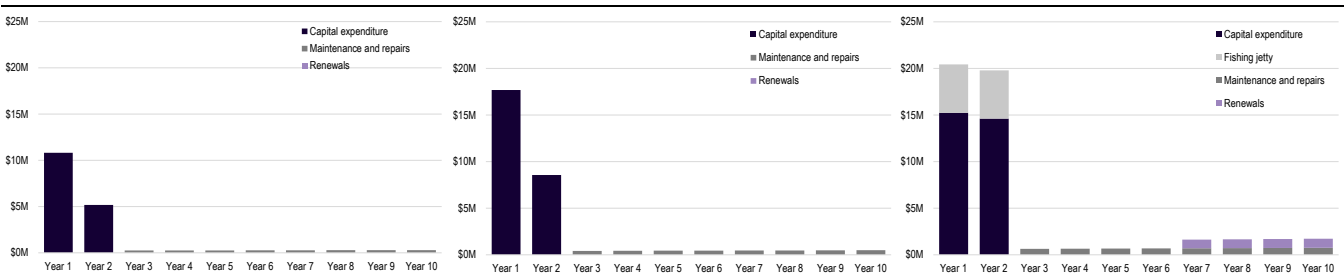
Cost item	Option 1	Option 2	Option 3
Ongoing capital expenditure (2% p.a.)	0.00	0.00	4.84

Source: ACIL Allen based on capital costs provided by HW & Associates

Summary of costs

Figure 4.1 provides a summary of each of the costs associated with the development options for the Point Samson foreshore redevelopment over a ten year period. The Figure clearly shows the higher capital and ongoing costs associated with Option 3.

Figure 4.1 Summary of costs by option, \$ million



Source: ACIL Allen based on capital costs provided by HW & Associates

4.2.2 Quantitative benefits

The quantitative benefits of the Point Samson foreshore redevelopment differ according to the option being analysed. They include the increase in visitor spending, regional employment creation, and the recreation benefit that the fishing jetty allows.

Visitor spending

The increase in visitor spending as a result of the foreshore redevelopment is summarised in **Table 4.4** for each assumed increase in visitation. The increase in visitor spending is the key benefit of the foreshore redevelopment and the main driver of the benefit cost ratio. It is a function of the increase in the visitation assumed by all options, and the increase in the spending per visitor that is assumed under Option 2 and Option 3.

Table 4.4 Forecasts of increase in total visitor spending by option, \$ million

Benefit item	Option 1	Option 2	Option 3
10 per cent increase	7.63	21.15	21.80
20 per cent increase	15.26	30.31	30.72

Source: ACIL Allen

Start-up regional employment

The construction of the foreshore redevelopment will require a workforce of which some will be sourced from the local Pilbara region thereby providing a boost to regional employment. This regional employment has a further impact on the local economy as these workers spend their wages on goods and services purchased from the region providing a boost to local businesses.

The key benefit is the increase in spending by the visitors that are attracted to the foreshore redevelopment

The foreshore redevelopment will provide employment for regional workers in its construction and operation

The wages also allow workers to invest in the local economy such as through the purchases of housing and land which has a positive economic impact.

The foreshore redevelopment is expected to have a high local employment content under Option 1 and Option 2 as the majority of the work is likely to require skills that are available in the region such as those to do with earthworks, concreting, equipment installation, landscaping, painting, and electrical works. It is assumed that Option 1 will require 6.0 full time equivalent employees over the 18 months of construction and Option 2 will require 9.0 full time equivalent workers.

The construction of the jetty under Option 3 is likely to require specialised skills that will be sourced from outside of the region. The increase in regional employment compared to Option 2 is therefore a function of the additional workers required to integrate the jetty structure into the foreshore redevelopment. It is assumed that 16.0 full time equivalent workers will be sourced from the local Pilbara region to construct Option 3 over the two years of construction.

The full time equivalent workforce is the number of full time workers required over a year rather than a headcount of roles which may only last for part of the year. It is an aggregation of all of the roles required to construct the foreshore redevelopment to create a full time worker estimate. The number of roles required to construct the foreshore redevelopment will therefore be far higher.

The value of this employment is expressed as the total value of the wages paid to the regional workers as presented in **Table 4.3** where wages have been sourced from the Australian Bureau of Statistics for construction workers.¹⁴

Table 4.5 Regional employment (FTE) and wages (\$ million) in construction by option

Benefit item	Option 1	Option 2	Option 3
Construction (FTE)	6.0	9.0	16.0
Total wages (\$ million)	0.41	0.62	1.10

Source: ACIL Allen. Note: FTE = full time equivalent

Sustained regional employment

The foreshore redevelopment will create ongoing sustainable employment required to operate and maintain the redevelopment and in the new businesses that are made possible including the kiosk and the equipment hire business.

Option 1 assumes that a small workforce will be required to maintain the foreshore with this workforce increasing as the number of facilities at the foreshore increases under Option 2 and Option 3. These options also include new business employment as presented in **Table 4.6** which shows total annual employment and the corresponding wages by option over the ten years of analysis.¹⁵

Table 4.6 Ongoing regional employment (FTE per annum) and wages (\$ million) by option

Benefit item	Option 1	Option 2	Option 3
Operations and maintenance (FTE per annum)	0.25	1.0	2.0
New business employment (FTE per annum)	0.0	7.0	7.0
Total wages (\$ million)	0.15	4.75	5.34

Source: ACIL Allen. Note: FTE = full time equivalent

¹⁴ Australian Bureau of Statistics, 6333.0 Characteristics of Employment, Australia, August 2021

¹⁵ Ibid

Recreational fishing value

The construction of the jetty under Option 3 is designed to encourage fishing with the inclusion of a lower and upper deck, fish cleaning facilities, and interpretive signage that could include information on the local species of fish and the regulations for catching fish.

The value of fishing is estimated to be \$123.90 per trip based on the recreational or enjoyment value of a fishing trip.¹⁶ There are currently around 6,600 residents of the Pilbara region who hold a recreational fishing licence¹⁷ which is 11 per cent of the regional population. The benefit calculation for Option 3 assumes that 11 per cent of the residents of Point Samson will participate in one additional fishing trip each year because of the construction of the jetty. This results in a benefit of \$0.04 million under Option 3 as illustrated in **Table 4.7**.

Table 4.7 Recreational fishing value by option, \$ million

Benefit item	Option 1	Option 2	Option 3
Recreational fishing value (\$ million)	0.00	0.00	0.04

Source: ACIL Allen

Avoided maintenance costs

The City of Karratha currently incurs costs of around \$120,000 per annum to operate and maintain the foreshore in Point Samson including maintaining the existing viewing platform and carrying out parks and gardens works. The redevelopment of the foreshore will result in around \$60,000 per annum of these costs being avoided as they are either reduced through the improved facilities or they are now included in the operational costs of the upgraded foreshore.

Table 4.8 Ongoing avoided maintenance costs by option, \$ million

Benefit item	Option 1	Option 2	Option 3
Total avoided costs (\$ million)	0.65	0.65	0.65

Source: ACIL Allen

4.2.3 Unquantified benefits and costs

There are important benefits of the Point Samson foreshore redevelopment which have not been quantified because it is difficult to place a value on them. These are described in the following sections. It is likely that their impact will contribute to a more favourable benefit cost ratio particularly as they relate to protecting Indigenous heritage, adding to the recreational enjoyment of the community, and in boosting the visitor offering on the Point Samson Peninsula.

Protecting Aboriginal heritage

Native Title within the Point Samson foreshore area has been formally recognised as residing with the Ngarluma people. Access to fishing and heritage sites around the Point Samson Peninsula including those located in the town are of great importance and have high cultural values. The redevelopment of the foreshore will assist in protecting the coastline and the Aboriginal heritage of the area.

The design of the redevelopment includes the provision of interpretative signage which could include information describing the Aboriginal heritage and values of the area. The incorporation of

There are significant unquantified benefits associated with the foreshore redevelopment which are likely to make the benefit cost ratio more favourable under all options

¹⁶ Oregon State University (2022), Recreation Use Values Database and converted to 2022 Real Australian Dollars. Accessed online at <https://recvaluation.forestry.oregonstate.edu/database>

¹⁷ Department of Primary Industries and Regional Development (2019), Statewide survey of boat-based recreational fishing in Western Australia 2017/18, Government of Western Australia

interpretative signage and other elements that recognise the occupation of the area for over 30,000 years by the Ngarluma peoples will assist in recognising and protecting Aboriginal heritage.

Protecting non-indigenous heritage

The State Heritage Office online database lists the Point Samson jetty (Heritage Place No. 8661) and offshore Bezout Island located off Point Samson (Heritage Place No. 8679) as having heritage value. Interpretive signage will assist in recognising the non-Indigenous heritage of the foreshore and the incorporation of the viewing platform into its redevelopment will further protect this history.

Community enjoyment and other recreational values

The redevelopment of the foreshore will provide a focus for the community and visitors to safely access a range of community and recreational activities including picnicking, swimming, walking, cycling, dog walking, and water based activities. The inclusion of an amphitheatre allows for the ability of the foreshore area to hold community events. Providing a focal point on the foreshore will provide residents and visitors with a place destination and will improve the recreation and community offerings in the town. It will assist in developing a sense of pride in the foreshore and will act as a promoter of the town by becoming a destination point.

Role in the wider regional tourism offering

Point Samson is the last location along the Point Samson – Roebourne Road and is located around 19 km from the North West Coastal Highway and 58 km from the town of Karratha. The redevelopment of the Point Samson foreshore will expand the tourism offering on the Point Samson Peninsula encouraging visitors to explore the Peninsula and to stay longer which is a key aim of the Karratha Destination Management Plan.¹⁸

Other spending

The foreshore redevelopment under all options provides for the potential to generate additional revenue such as from holding community events such as night markets, sporting events, community fairs, and concerts. There is also the potential to allow pop up businesses to operate particularly during peak tourism seasons or as a way of complementing other events held in the region such as the Cossack Art Awards.

Improved safety

The design of the Point Samson foreshore redevelopment is aimed at providing universal access for all users. This includes providing safe access to public facilities, recreation areas, the jetty, as well as access to the beach. The redevelopment allows users of the foreshore a more inclusive and safe way to enjoy recreational and community activities which is an aim of the City of Karratha's Disability Access and Inclusion Plan 2018-2022.¹⁹

Reduced risk of a future flooding and coastal erosion

The foreshore redevelopment will assist in the protection of coastal assets that are at risk of erosion during storms and surge events leading to loss of dune and mangrove ecosystems, and beach degradation. As well as reducing visual amenity of the coastline, there are social and cultural implications from the reduction of foreshore and beach access.

¹⁸ City of Karratha (2018), Karratha Destination Management Plan

¹⁹ City of Karratha (2018), City of Karratha's Disability Access and Inclusion Plan 2018-2022

4.3 Benefit cost model assumptions

The benefit cost assessment makes assumptions regarding the length of analysis, and the discount rate that are presented in **Table 4.9**.

The discount rate is the rate at which future costs and benefits are converted into current values. It is meant to reflect society’s weighting of benefits and costs that occur in the present vis a vis the future. In theory people prefer immediate benefits over future benefits which is known as social time preference. The discount rate also enables other factors to be reflected such as the aversion to future fluctuations in income (known by economists as the elasticity of the marginal utility of consumption) and expected future growth of per capita consumption.²⁰ For this report, a real discount rate of 7.0 per cent is used and compared against a 4.0 per cent discount rate to test the sensitivity of the results.

The benefit cost assessment is analysed over a ten year period including the time taken to construct the foreshore redevelopment under each option and during its operation.

Table 4.9 Benefit Cost Model assumptions

Assumption	Value
Reporting type	Financial year
Modelling period	10 years
Base discount rate	7.00%

Source: ACIL Allen

4.4 Benefit Cost Assessment results

The following sections outline the results of the benefit cost assessment for each option.

4.4.1 Option 1 – Foreshore upgrade

The quantified benefits of Option 1 include the benefits from the increase in visitor spending from the increase in visitors, the regional employment during the construction and operation phases, and the maintenance costs that the City of Karratha is able to avoid due to the improvements at the foreshore. The quantified costs of Option 1 are associated with the construction of the foreshore redevelopment and its ongoing operation and maintenance costs. The total benefits and costs of Option 1 are presented in **Table 4.10**.

Total quantified costs under Option 1 are \$18.48 million whilst total quantified benefits range between \$8.83 million assuming a 10 per cent increase in visitation, and \$16.46 million assuming a 20 per cent increase. There is a net loss for each visitation scenario of \$9.65 million assuming a 10 per cent increase in visitation, and \$2.02 million assuming a 20 per cent increase.

The net loss is increased under either discount rate with the net loss assuming a 10 per cent increase in visitation rising to \$10.63 million assuming a 4.0 per cent discount rate and \$11.17 million under a 7.0 per cent discount rate. For a 20 per cent increase in visitation, the net loss is \$4.55 million assuming a 4.0 per cent discount rate and \$5.97 million under a 7.0 per cent discount rate. This would indicate that the choice of discount rate has little impact on the outcome of the

Visitation would need to increase by 32 per cent in order for Option 1 to return a favourable benefit cost ratio

²⁰ David Pearce, Giles Atkinson and Susana Mourato, Cost-Benefit Analysis and the Environment, OECD, 2006, pp187-188. The rate can be expressed in algebraic form as $r = p + ug$, where r is the discount rate, p is the ‘pure’ rate of time preference, g is the growth rate of future per capita consumption, and u is the elasticity of the marginal utility of consumption ie: the percentage change in welfare derived from a percentage change in consumption, or income.

benefit cost assessment and is a result of the costs being incurred early on in the foreshore redevelopment while the benefits are realised later.

Table 4.10 Net present value of benefits and costs by discount rate: Option 1, \$ million

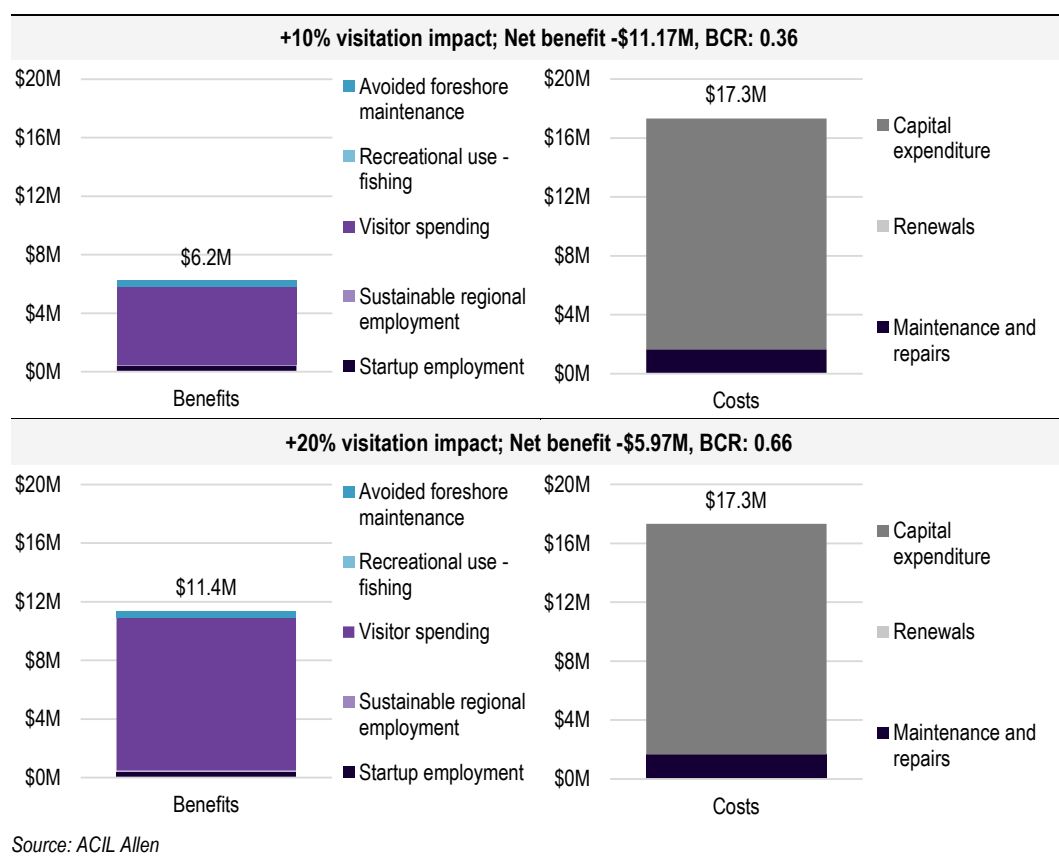
	Discount Rate		
	Total costs/benefits	4.0 per cent	7.0 per cent
10 per cent increase in visitation			
Benefits (\$ million)	8.83	7.13	6.15
Costs (\$ million)	18.48	17.76	17.32
Net benefit (\$ million)	-9.65	-10.63	-11.17
20 per cent increase in visitation			
Benefits (\$ million)	16.46	13.21	11.36
Costs (\$ million)	18.48	17.76	17.32
Net benefit (\$ million)	-2.02	-4.55	-5.97

Source: ACIL Allen

Source: ACIL Allen

The contribution of visitor spending to overall benefits under Option 1 is evident in **Figure 4.2** which shows the value of each benefit and cost and the overall benefit cost ratio assuming a 7.0 per cent discount rate. The Figure clearly shows that the costs outweigh the benefits under Option 1 with the key contributing cost the construction of the redevelopment.

Figure 4.2 Benefit cost ratio under a 7.0 per cent discount rate: Option 1, \$ million



Assuming the base discount rate of 7.0 per cent results in a benefit cost ratio of 0.36 assuming a 10 per cent increase in visitation, and 0.66 under a 20 per cent increase, indicating that the redevelopment does not return a favourable outcome under these visitation scenarios. A breakeven

analysis suggests that visitation would need to increase by 32 per cent resulting in a corresponding increase in visitor spending of around 32 per cent to reach \$9.27 million per annum.

4.4.2 Option 2 – Foreshore upgrade including commercial opportunities

The quantified benefits of Option 2 include the benefits from the increase in visitor spending as a result of the increase in the number of visitors as well as the increase in the spending enabled by the new businesses. There are also benefits from the regional employment created during the construction and operation phases, and the maintenance costs that the City of Karratha is able to avoid due to the foreshore redevelopment. The quantified costs of Option 2 are associated with the construction of the foreshore redevelopment and its ongoing operation and maintenance costs. The total benefits and costs of Option 2 are presented in **Table 4.11**.

Total quantified costs under Option 2 are \$30.31 million. Total benefits range between \$27.16 million assuming a 10 per cent increase in visitation, and \$36.32 million assuming a 20 per cent increase which are considerably higher than under Option 1 and are a result of the inclusion of the additional spending at the kiosk and equipment hire businesses. Despite this, there is a net loss of \$3.15 million assuming a 10 per cent increase in visitation. The net loss is increased under either discount rate rising to \$7.20 million assuming a 4.0 per cent discount rate and \$9.47 million under a 7.0 per cent discount rate. The declining net impact is due to the costs being incurred early on in the foreshore redevelopment while the benefits are realised later.

A 20 per cent increase in visitation results in a net benefit of \$6.02 million and this net benefit is maintained with a 4.0 per cent discount rate which generates a net benefit of \$0.18 million. When the benefits and costs are discounted at a 7.0 per cent discount rate there is a net loss of \$3.12 million suggesting that there is merit in investing in the foreshore redevelopment if the discount rate can be held at 4.0 per cent.

Table 4.11 Net present value of benefits and costs by discount rate: Option 2, \$ million

	Total costs/benefits	Discount Rate	
		4.0 per cent	7.0 per cent
10 per cent increase in visitation			
Benefits (\$ million)	27.16	21.93	18.93
Costs (\$ million)	30.31	29.12	28.40
Net benefit (\$ million)	-3.15	-7.20	-9.47
20 per cent increase in visitation			
Benefits (\$ million)	36.32	29.31	25.29
Costs (\$ million)	30.31	29.12	28.40
Net benefit (\$ million)	6.02	0.18	-3.12

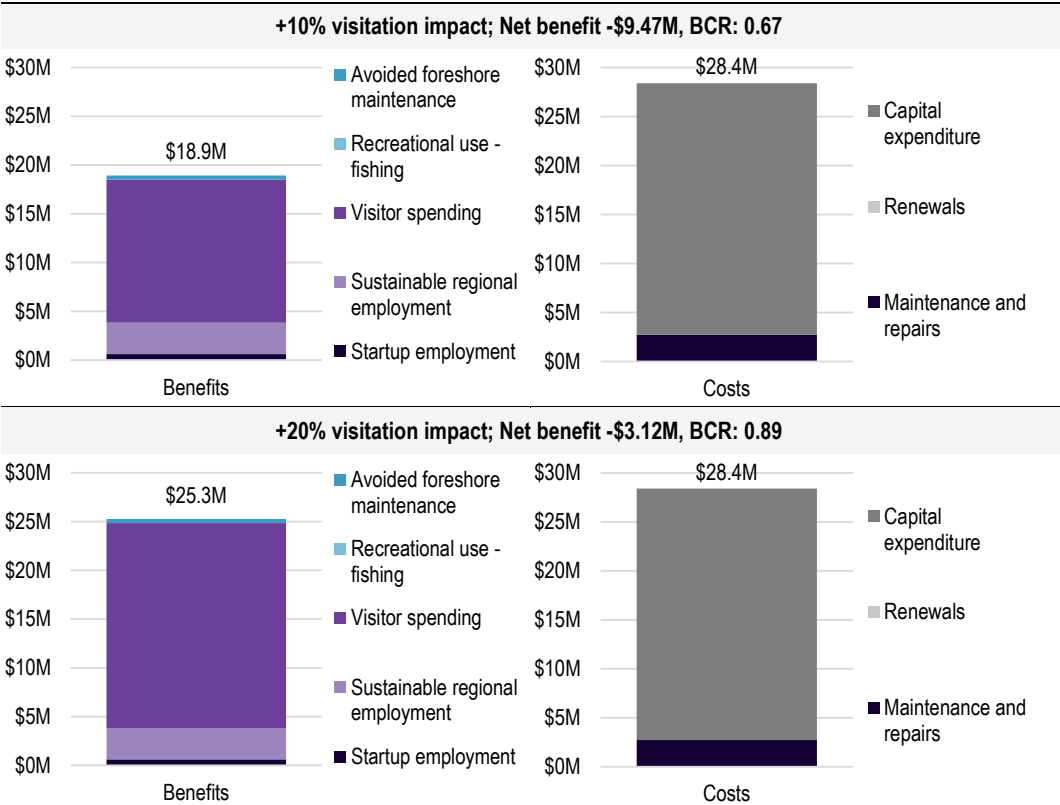
Source: ACIL Allen

The benefits and costs under Option 2 are presented in **Figure 4.3** along with the overall benefit cost ratio for the two different visitation scenarios assuming a 7.0 per cent discount rate. The Figure shows that the inclusion of additional visitor spending potential has a favourable impact. Assuming the base discount rate of 7.0 per cent results in a benefit cost ratio of 0.67 assuming a 10 per cent increase in visitation, and 0.89 under a 20 per cent increase in visitation indicating that the redevelopment does not return a favourable outcome under these visitation scenarios.

A breakeven analysis suggests that visitation would need to increase by around 26 per cent resulting in a corresponding increase in visitor spending of 45 per cent from current levels to reach \$10.18 million per annum.

Option 2 returns the most favourable benefit cost ratio particularly when unquantified benefits are included

Figure 4.3 Benefit cost ratio under a 7.0 per cent discount rate: Option 2, \$ million



Source: ACIL Allen

4.4.3 Option 3 – Foreshore upgrade including commercial opportunities, and fishing jetty

The quantified benefits of Option 3 include the benefits from the increase in visitor spending as a result of the increase in the number of visitors and the increase in the spending by visitors enabled by the new businesses, the regional employment during the construction and operation phases, and the maintenance costs that the City of Karratha is able to avoid due to the foreshore redevelopment. This Option also includes the recreational benefits of fishing that the construction of the jetty allows. The quantified costs of Option 3 are associated with the construction of the foreshore redevelopment, its ongoing operation and maintenance costs, and the replacement costs that are required to keep the foreshore and the jetty maintained at a standard. The total benefits and costs of Option 3 are presented in **Table 4.12**.

Total costs under Option 3 are \$51.28 million which are significantly higher than the other options and are due to the cost of the construction of the jetty and the maintenance that it will require. Total benefits are also higher because of the benefit that arises from the additional visitor spending and the recreational benefit of fishing. They range between \$28.94 million assuming a 10 per cent increase in visitation, and \$37.85 million assuming a 20 per cent increase. There is a net loss for each visitation scenario of \$22.34 million and \$13.43 million respectively.

The net loss is increased under either discount rate with a 10 per cent increase in visitation resulting in a \$24.63 million net loss assuming a 4.0 per cent discount rate and \$25.87 million net loss under a 7.0 per cent discount rate. For a 20 per cent increase in visitation, the net loss is \$17.51 million assuming a 4.0 per cent discount rate and \$19.78 million under a 7.0 per cent discount rate. This is the highest net loss of any option and more than double the net loss of Option 1 and Option 2 under a 10 per cent increase in visitation. Under a 20 per cent increase in visitation, the net loss is even more significant at over three times the net loss of Option 1 and over six times the net loss of Option 2.

Option 3 returns the least favourable benefit cost ratio even when unquantified benefits are included

Table 4.12 Net present value of benefits and costs by discount rate: Option 3, \$ million

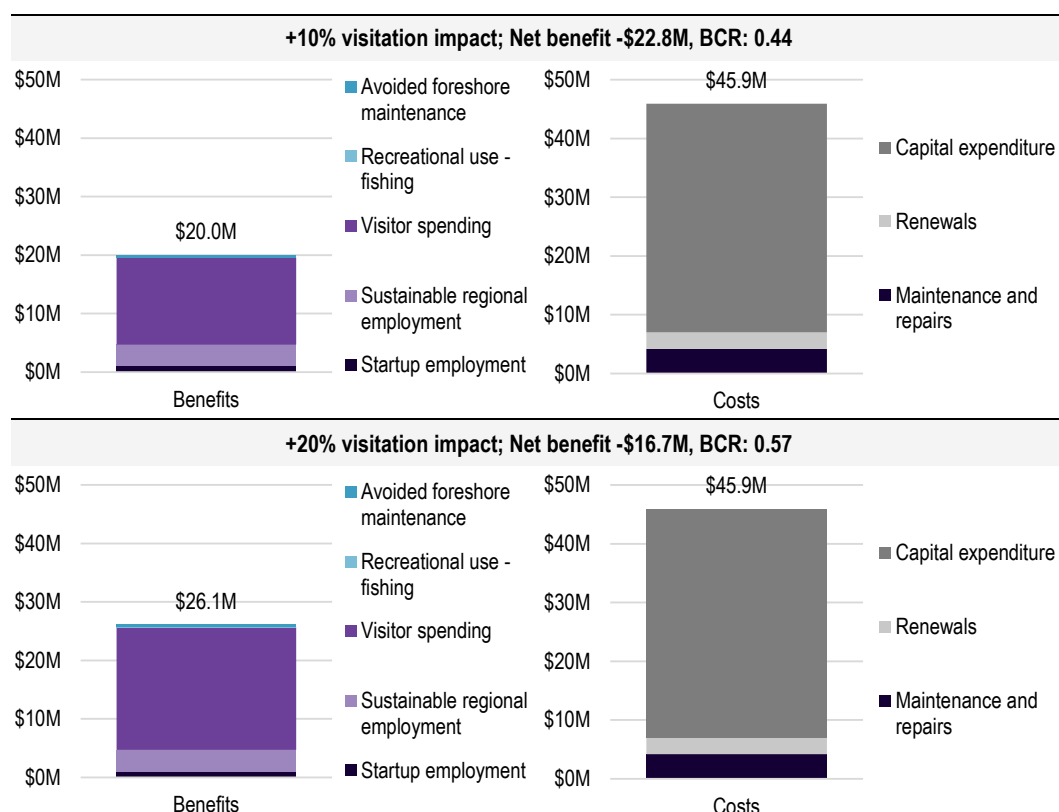
	Total costs/benefits	Discount Rate	
		4.0 per cent	7.0 per cent
10 per cent increase in visitation			
Benefits (\$ million)	28.94	23.28	20.05
Costs (\$ million)	51.28	47.91	45.91
Net benefit (\$ million)	-22.34	-24.63	-25.87
20 per cent increase in visitation			
Benefits (\$ million)	37.85	30.40	26.13
Costs (\$ million)	51.28	47.91	45.91
Net benefit (\$ million)	-13.43	-17.51	-19.78

Source: ACIL Allen

Source: ACIL Allen

Figure 4.4 shows the value of the benefits and costs of Option 3 and the overall benefit cost ratio. The Figure clearly shows that the costs significantly outweigh the benefits under Option 3 with the construction of the redevelopment the key contributing cost. Assuming the base discount rate of 7.0 per cent results in a benefit cost ratio of 0.44 assuming a 10 per cent increase in visitation, and 0.57 under a 20 per cent increase in visitation indicating that the redevelopment does not return a favourable outcome under these visitation scenarios.

Figure 4.4 Benefit cost ratio under a 7.0 per cent discount rate: Option 3, \$ million



Source: ACIL Allen

The results of the benefit cost ratio are impacted by the higher construction costs of Option 3 and particularly those associated with the construction of the jetty and the comparatively small increase

in benefits. It is unlikely that the inclusion of the unquantified benefits will be enough to return a favourable benefit cost ratio.

A breakeven analysis suggests that visitation would need to increase by 55 per cent resulting in a corresponding increase in visitor spending of around 81 per cent to reach \$12.72 million per annum.

Recommendations

5

This chapter outlines the key findings of the report along with the recommendations for a preferred option for the redevelopment of the Point Samson foreshore.

5.1 Key findings

The analysis of the redevelopment options for the Point Samson foreshore found that **the key driver of costs was the cost to construct the redevelopment while the key benefits flow from the increase in visitor spending** in the town that the redevelopment attracts.

The analysis found that **it will be critical for the development to attract additional visitor spending in order to return a net benefit**. Additional visitor spending can be achieved through an increase in the number of visitors attracted to Point Samson together with an increase in the spending per visitor. The inclusion of new businesses as part of the foreshore redevelopment has a positive impact with Option 2 the closest to achieving a favourable net benefit of any of the scenarios analysed in this report. This outcome is highlighted in **Table 5.1** which shows the results of the analysed scenarios assuming a 7.0 per cent discount rate are illustrated in .

The choice of discount rate has an impact with a 20 per cent increase in visitation and a 4.0 per cent discount rate under Option 2 the only scenario returning a net benefit (**Table 4.11**).

Table 5.1 Summary of Benefit Cost Assessment results under a 7.0 per cent discount rate, by option, \$ million

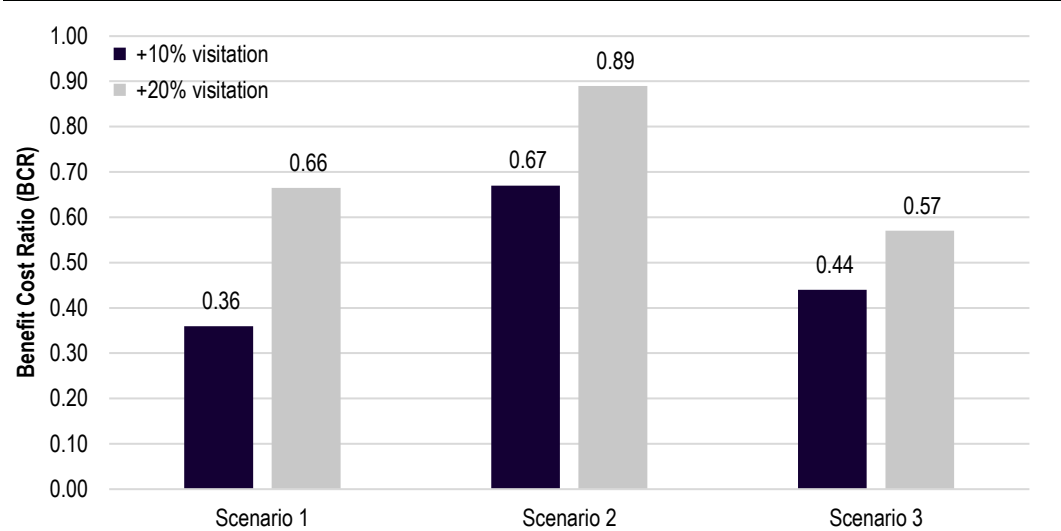
Measure	Scenario 1	Scenario 2	Scenario 3
+10% visitation impact			
Total benefits (\$ million)	6.15	18.93	20.05
Total costs (\$ million)	17.32	28.40	45.91
Net benefit (\$ million)	-11.17	-9.47	-25.87
BCR	0.36	0.67	0.44
+20% visitation impact			
Total benefits (\$ million)	11.36	25.29	26.13
Total costs (\$ million)	17.32	28.40	45.91
Net benefit (\$ million)	-5.97	-3.12	-19.78
BCR	0.66	0.89	0.57
Sensitivity analysis			
Breakeven visitation	32%	45%	55%

Source: ACIL Allen

The only option to return a favourable net benefit is Option 2 assuming a 20 per cent increase in visitation and a 4.0 per cent discount rate

None of the options returned a favourable benefit cost ratio under a 7.0 per cent discount rate with **Option 2 achieving the most favourable outcome** of 0.67 assuming a 10 per cent increase in visitation, and 0.89 under a 20 per cent increase in visitation as illustrated in **Figure 5.1**. A breakeven analysis for Option 2 suggests that visitation would need to increase by around 26 per cent resulting in a corresponding increase in visitor spending of 45 per cent from current levels to reach \$10.18 million per annum which is around \$3.0 million higher than current visitor spending.

Figure 5.1 Summary of Benefit Cost Ratios, by option



Source: ACIL Allen

Including unquantified benefits is likely to return a favourable benefit cost ratio for Option 2

Consideration of the unquantified benefits is likely to return a favourable benefit cost ratio for Option 2 only. The protection and enhancement of the foreshore is likely to have significant benefit in ensuring that Indigenous cultural values are sustained. The recreational value for local residents and the wider community of the Pilbara region is also a key consideration whilst the role of the foreshore redevelopment in enhancing the tourism offering along the Point Samson Peninsula will also benefit Cossack.

5.2 Recommendation as to preferred development option

There is merit in parts of the foreshore redevelopment if additional visitors can be attracted to Point Samson, and value can be attributed to unquantified benefits

The most favourable option for the development of the Point Samson foreshore is Option 2 because of the lower construction costs and the inclusion of the potential for new businesses which increases the value of visitor spending. Whilst this option did not return a favourable benefit cost ratio, the consideration of unquantified benefits are likely to make it favourable if a 26 per cent increase in visitation and the corresponding 45 per cent increase in visitor spending is achieved.

It is concluded that **there is merit in the redevelopment of the Point Samson foreshore if the increase in visitation is able to be achieved and that weighting is given to the unquantified benefits of the redevelopment.** The construction of a fishing jetty is not considered to return a net benefit or a favourable benefit cost ratio unless a significant increase in visitation and visitor spending is realised. This finding suggests that **without the development of retail outlets and additional recreation facilities at the foreshore, it would be highly unlikely that a jetty alone could attract enough benefits to warrant its construction.**

It is essential that any redevelopment option has elements that can attract as many visitors as possible together with an increase in visitor spending as has been the experience of the Esperance foreshore redevelopment which has focused on the construction of the lower cost parts of its foreshore redevelopment plan to attract visitors and encourage them to stay longer.

Authors:

Antonia Hodby

a.hodby@acilallen.com.au
0404 822 301

Marshall Roberts

m.roberts@acilallen.com.au

Ryan Buckland

r.buckland@acilallen.com.au

Melbourne

Suite 4, Level 19; North Tower
80 Collins Street
Melbourne VIC 3000 Australia
+61 3 8650 6000

Sydney

Suite 603, Level 6
309 Kent Street
Sydney NSW 2000 Australia
+61 2 8272 5100

Brisbane

Level 15, 127 Creek Street
Brisbane QLD 4000 Australia
+61 7 3009 8700

Canberra

Level 6, 54 Marcus Clarke Street
Canberra ACT 2601 Australia
+61 2 6103 8200

Perth

Level 12, 28 The Esplanade
Perth WA 6000 Australia
+61 8 9449 9600

Adelaide

167 Flinders Street
Adelaide SA 5000 Australia
+61 8 8122 4965

ACIL Allen Pty Ltd
ABN 68 102 652 148

acilallen.com.au