m p rogers & associates pl ABN 14 062 681 252

creating better coasts and ports

R1211 Rev 0

October 2019

City of Stirling

Mettams Pool Defensive Works Concept Design Report

marinas

boat harbours

canals

breakwaters

jetties

seawalls

dredaina

reclamation

climate change

waves

currents

tides

flood levels

water quality

siltation

erosion

rivers

beaches

actuaries

www.coastsandports.com.au

m p rogers & associates pl

creating better coasts and ports

Suite 1, 128 Main Street, Osborne Park, WA 6017

p: +618 9254 6600

e: admin@coastsandports.com.au w: www.coastsandports.com.au

K1644, Report R1211 Rev 0 Record of Document Revisions

Rev	Purpose of Document	Prepared	Reviewed	Approved	Date
А	Draft for MRA review	L De Lucia	T Hunt	T Hunt	7.10.2019
0	Issued for Client use	Delucia L L De Lucia	Touthut T Hunt	7mHut T Hunt	9.10.2019

Form 035 18/06/2013

Limitations of this Document

This document has been prepared for use by the Client in accordance with the agreement between the Client and M P Rogers & Associates Pty Ltd. This agreement includes constraints on the scope, budget and time available for the services. The consulting services and this document have been completed with the degree of skill, care and diligence normally exercised by members of the engineering profession performing services of a similar nature. No other warranty, expressed or implied, is made as to the accuracy of the data and professional advice included. This document has not been prepared for use by parties other than the Client and its consulting advisers. It may not contain sufficient information for the purposes of other parties or for other uses.

M P Rogers & Associates takes no responsibility for the completeness or form of any subsequent copies of this document. Copying this document without the permission of the Client or M P Rogers & Associates Pty Ltd is not permitted.

Table of Contents

1.	Introdu	ction	6
1.1	Project	t Methodology	7
2.	Knowle	dge Summary	8
2.1	Site Se	etting	8
2.2	Previo	us Coastal Process Studies	9
2.3	Geomo	orphology & Geology	12
3.	Coasta	Erosion Hazard Assessment	17
3.1	Severe	e Storm Erosion (S1)	17
3.2	Long T	erm Shoreline Changes (S2)	21
3.3	Coasta	al Erosion Caused by Sea Level Rise (S3)	23
3.4	Summa	ary of Erosion Allowances	24
4.	Commu	ınity Values Survey	27
4.1	Comm	unity Values Survey (Elton 2019)	27
5.	Adapta	tion Options	29
5.1	SPP 2	6 Hierachy	29
5.2	City OI	pjectives	30
5.3	Option	1 – Relocate Facilities	31
5.4	Option	2 – Lower Activated Space	32
5.5	Option	3 - Revetment Protection	32
6.	Commu	inity Forum	34
6.1	Comm	unity Forum Outcomes	34
7.	Concep	t Design	36
7.1	15 % 0	Concept Design	36
8.	Constru	uction Considerations	38
9.	Cost Es	stimates	39
10.	Recomi	mendations	41
11.	Conclus	sions	42
12.	Referer	nces	43
13.	Append	lices	45
Арр	endix A	Community Values Survey Summary	46
Арр	endix B	Concept Options	47

Appendix C	Community Forum Summary	48
Appendix D	Preferred Concept 15% Design	49

Table of Figures

Figure 1.1	Site Location	6
Figure 2.1	Site Characteristics	8
Figure 2.2	Undercutting of Assets at Mettams Pool	9
Figure 2.3	Previous Undercutting of Infrastructure at Mettams Pool	10
Figure 2.4	Coastal Vulnerability based on 170 m Coastal Erosion Hazard Zor (BMT JFA 2016)	ne 12
Figure 2.5	Sediment Cell Boundaries	13
Figure 2.6	Estimated Rock Model Contours (GBGMAPS 2018)	15
Figure 2.7	DCP Investigation Results	16
Figure 3.1	Comparison of Model vs Recorded at Cottesloe Wave Buoy	18
Figure 3.2	Profile Locations	19
Figure 3.3	100 Year ARI Erosion Event at Profile 6	20
Figure 3.4	100 Year ARI Erosion Event at Profile 7	20
Figure 3.5	Vegetation Line Mapping	22
Figure 3.6	Recommended sea level rise scenario for use in coastal planning within Western Australia (DoT 2010)	23
Figure 3.7	Mettams Pool Coastal Erosion Hazard Zones	26
Figure 5.1	SCPP 2.6 Strategy Hierarchy	29
Figure 5.1	WCD Realignment (City 2019)	31
Figure 7.1	Typical Cross Section	36

Table of Tables

Table 3.1	Sea Level Rise Allowances	24
Table 3.2	Summary of Erosion Allowances	25
Table 5.1	Management & Adaptation Approaches at Mettam's Pool	30
Table 5.2	Option 1 Summary	31
Table 5.3	Option 2 Summary	32
Table 5.4	Option 3 Summary	33
Table 6.1	Recommended Actions from Community Forum	35
Table 7.1	Key Features of Refined Concept	37
Table 9.1	Cost Estimates	40

1. Introduction

Mettams Pool is a popular recreational beach in North Beach, north of Trigg Point and approximately 4.5 km south of Hillarys Boat Harbour on the coastline of the City of Stirling (the City). The beach fronts a number of important assets such as West Coast Drive (WCD) and a heavily used Recreational Shared Path (RSP), shown below.

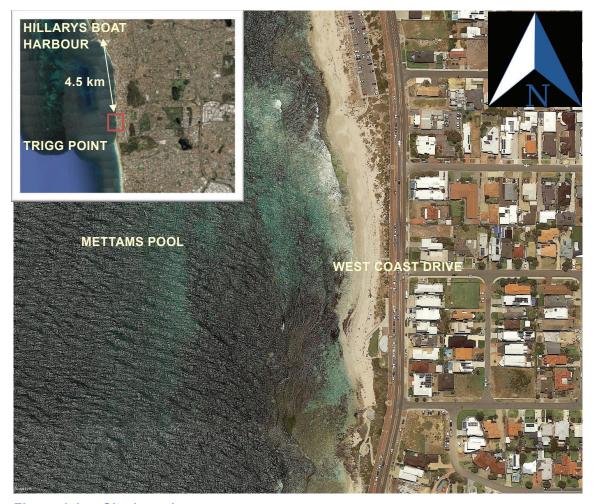


Figure 1.1 Site Location

The site is experiencing erosion along its length impacting beach amenity and exposing a number of assets to unacceptable short-medium term risks. The City engaged coastal engineers M P Rogers & Associates (MRA) to undertake a detailed assessment of the site to further define these risks and prepare adaptation options to mitigate them. Community consultation was to be utilised to develop adaptation options and ultimately select a preferred strategy for design progression.

The outcomes of these works are detailed herein. The works have been partially funded by the Department of Transport (DoT) under the Coastal Adaptation & Protection grants program.

1.1 Project Methodology

The intent of the works was ultimately to determine a preferred adaptation strategy to mitigate coastal erosion risks at the site and progress concept design for this strategy. The approach adopted by MRA to achieve this, as defined by the City's scope, is summarised below.

- Review of existing conditions and information including a site inspection with the City to identify key assets, risks and objectives for the site.
- Undertake a review of the previously completed coastal processes studies at the site.
- Review of the previously completed geophysical investigation. Scope and obtain a geotechnical investigation to 'ground-truth' this data and identify locations and elevations of competent rock along the site.
- Undertake a site-specific coastal erosion hazard assessment of the site. Utilise the hazard assessment methodology recommended by SPP2.6 to identify assets and areas vulnerable to coastal erosion hazards, and locations which may be afforded protection by competent rock at the site.
- Obtain a community values survey for the site to: inform the community of the requirement and the purpose of the works; and determine the consequences and their acceptability or otherwise of coastal erosion hazards. It is noted that a community values survey was not included in the original scope of works. MRA identified this as a required input for the development of adaptation strategies which was agreed to by the City and incorporated into the works.
- Utilise the outcomes of the community values survey to develop 3 adaptation options to mitigate erosion risks and achieve the City's objectives for the site.
- Undertake a community forum to obtain feedback on the 3 adaptation options and ultimately determine a preferred approach.
- Progress the preferred approach to 15% concept design to allow consideration of a construction methodology and preparation of cost estimates.

2. Knowledge Summary

2.1 Site Setting

On 29 May 2019, MRA undertook an inspection of the site with representatives from the City and DoT. At the time of inspection, there were a number of members of the public utilising the beach for various activities including swimming, sunbathing and snorkelling highlighting the site's importance as a highly utilised recreational space. A number of assets and shoreline characteristics were identified during the site inspection (Figure 2.1)



Figure 2.1 Site Characteristics

Several assets were identified as at risk due to ongoing erosion at the site. This was determined by the following observations made during the site inspection.

- The access ramp had been fenced off by the City as a result of undercutting. A void approximately 0.3 m high was observed underneath the access ramp exposing the structure's foundations (Figure 2.2).
- A significant erosion scarp, approximately 2-3 m high, was identified either side of the northern concrete access stairs, exposing the structure's foundations. The stairs were largely undercut and founded on a single soak well (Figure 2.2). The City noted that they had not been designed to be undercut and further dune erosion may render them unsafe.
- Beach access stairs near the changerooms were undermined. These were also founded on a single soakwell. The City regularly closes these due to the safety concerns related to the undercutting.
- Further erosion, particularly at the northern section of the site, may place additional assets at risk.





Figure 2.2 Undercutting of Assets at Mettams Pool

2.2 Previous Coastal Process Studies

A number of coastal studies of Mettams Pool have been undertaken previously. These include both studies at a broad scale which include the site and more detailed site-specific assessments. These are summarised in the following sections.

2.2.1 Watermans Bay & Mettams Pool Coastal Investigations (MRA 2010)

In 2010, the City engaged MRA to complete a coastal assessment of the dynamics at Watermans Bay and Mettams Pool. The coastal assessment included:

- A review of the fundamental driving forces in the area, including waves, water levels, currents and coastal processes.
- A review of the coastal structures and recent coastal works in the area.
- A review of historical shoreline movement at the two beaches.

- Identifying possible causes of the recent shoreline erosion at the two beaches.
- Investigation of options to minimise and/or manage the erosion experienced at the two beaches.

Based on this investigation, the following issues and management measures for Mettams Pool were identified.

- The universal access ramps at the southern end of Mettams Pool can be undercut during certain conditions (Figure 2.3). Furthermore, the infrastructure may need to be temporarily closed following and during elevated marine conditions.
- At the time of investigation there was a reasonable buffer to the toilet block, RSP and WCD. However, it was recommended the long-term risks are assessed including investigation of underlying rock levels at the site.
- It was recommended the City monitor the beach and endeavour to determine the underlying rock levels to make a responsible assessment of the likely impacts of future climate change.



Figure 2.3 Previous Undercutting of Infrastructure at Mettams Pool

2.2.2 Strategic Coastal Processes Study (BMT JFA 2016)

In 2013 the City engaged BMT JFA to undertake a Strategic Coastal Processes Study. The purpose of this was to develop an understanding of the coastal processes impacting 6.5 km of the City's shoreline from Scarborough to Watermans beach. To achieve this, BMT JFA collated and reviewed the following information:

- Available Literature.
- Survey, LIDAR & LADS bathymetric and topographic information.
- Aerial photography to 2013.

Based on a review of the available literature, it was noted that beaches along the 6.5 km stretch of shoreline adhered to the following characteristics.

■ The beaches from Fremantle to Trigg form an almost self-contained sediment compartment with net northward transport, displaying seasonally oscillatory alongshore transport within internal cells (Masselink and Pattiaratchi, 2001).

- Given the persistent weather systems and sea breeze activity there is a net northward longshore sediment transport in summer driven by persistent sea breeze and net southward longshore sediment transport in winter from the northwest and west-northwesterly swells. The net movement north during summer is considered greater than that observed in winter, resulting in a northward bias (Masselink and Pattiaratchi, 2001).
- In the vicinity of coastal structures or natural headlands, the seasonal variation in littoral drift direction induces a seasonal cycle of beach change that is different from the classic transition from summer to winter profile. During summer, a beach located south of an obstacle becomes progressively wider due to accumulation of sediment against the obstacle. At the same time, the beach located north of the obstacle becomes narrower; and the opposite will occur during winter.

BMT JFA's assessment of aerial photography involved preparation of a shoreline movement plan from 1953 to 2013. Trends in key areas of interest, including Mettams Pool, were summarised in the study. The following trends at Mettams Pool were noted:

- Little change in net movement, equating to approximately 5 m, was experienced between 1965 and 2013.
- Based on this data, there appeared to be a small erosion trend across the site. However, it was noted that the net movements were considered to be within the margin of error of shoreline mapping.

Following a review of available information, a first pass assessment of the potential hazard zone was undertaken. It is important to note that this was not a detailed assessment. The assessment, undertaken over a large scale, was the first step in identifying areas which may be vulnerable to coastal hazards over various planning horizons.

Preliminary estimates of the factors which contribute to coastal hazards were provided to allow a first pass assessment of the 6.5 km of shoreline. These factors provided a preliminary estimate of the coastal erosion hazard zone of 170 m over a 100-year planning horizon. This allowed identification of a number of sites which may be vulnerable to coastal erosion over this horizon.

Through this process, Mettams Pool was identified as a potential 'hot spot' which may be vulnerable to coastal hazards. As shown in the figure below, the 170 m coastal erosion hazard zone indicates that important infrastructure such as the RSP and WCD may be vulnerable to coastal hazards over a 100-year planning horizon.



Figure 2.4 Coastal Vulnerability based on 170 m Coastal Erosion Hazard Zone (BMT JFA 2016)

The coastal erosion hazard zone above was prepared based on high level estimates useful for initial identification of 'hot spots' or high-risk areas. However, limited site-specific information was utilised and therefore further site-specific analysis and modelling is required to define these risks and allow preparation of adaptation strategies.

2.3 Geomorphology & Geology

2.3.1 Sediment Cells

Investigations by Searle & Semeniuk (1985) and Eliot et al (2005) classified the Mandurah to Two Rocks coastline in terms of primary and secondary sediment cells. More recently Damara WA (2012) and Seashore Engineering (Seashore 2015) classified the coastline between Cape Naturaliste and Moore River in terms of primary, secondary and tertiary level sediment cells.

The differences in cell hierarchy reflect the varying timescales for assessment of each sediment cell level. Primary cells relate to geological processes and trends that may alter over geological timescales, but are considered to be relatively constant in the shorter developmental planning timeframes. Secondary cells describe the contemporary sediment movement and inter-decadal trends and landform response (Damara WA, 2012a). Tertiary cells generally cover the reworking and movement of sediment in the nearshore area with shoreline responses of the seasonal to

inter-annual timescales. Figure 2.5 shows an extract from Seashore (2015) presenting the boundaries of the sediment cells containing the Mettams Pool site.

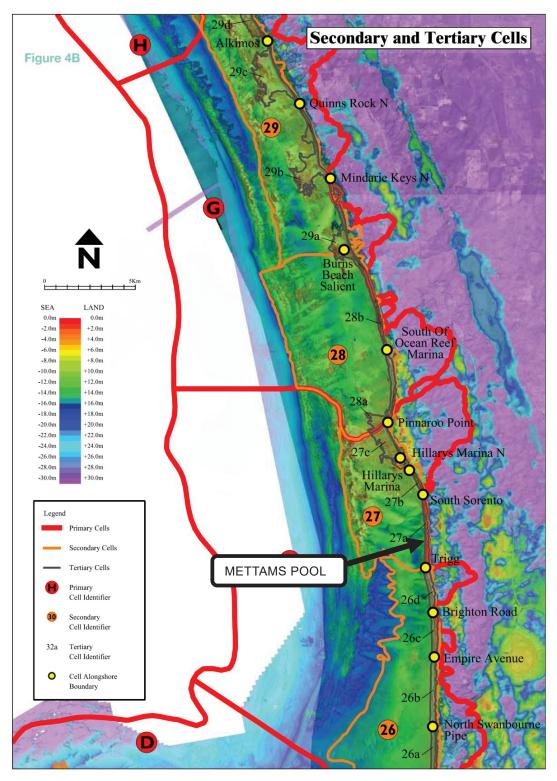


Figure 2.5 Sediment Cell Boundaries

2.3.2 Geophysical Investigation (GBGMAPS 2018)

In September 2016 and May/June 2018 GBGMAPS Pty Ltd (GBGMAPS) carried out geophysical subsurface investigations along an approximate 3.8 km section of the City's coastal dune system from Trigg Island to Watermans Bay.

The geophysical investigation was carried out following the identification of a number of areas within the City's shoreline, such as Mettams Pool, which may be vulnerable to coastal hazards. Several of these areas are located between rocky headlands or at locations where rock lenses are observed but rock levels underneath the dune system are unknown. Hence, investigation of rock levels was undertaken to provide some clarity of the level of protection afforded by underlying rock.

The investigation comprised of 44 Seismic Refraction transects and 10 Multi-channel Analysis of Surface Waves (MASW) transects. The objective of the investigation was to determine and model the interface between the underlying limestone rock and overlying sand strata. Specifically, the following key outputs were provided.

- The depth to competent limestone bedrock relative to the current mean sea level.
- The thickness of the overlying sand cover.

For the Mettams Pool site, Figure 2.6 shows the rock level contour model determined from the geophysical assessment. The investigation suggests the rock levels vary across the site. The model suggests that near Sholl St rock elevations are approximately 6 to 7 mAHD at the rear of the dune, potentially affording the shoreline significant protection. The portions of the site in front of Giles and Lynn St appear to be afforded minimal protection by underlying rock. The model suggests rock elevations at these locations may be less than 4 mAHD.

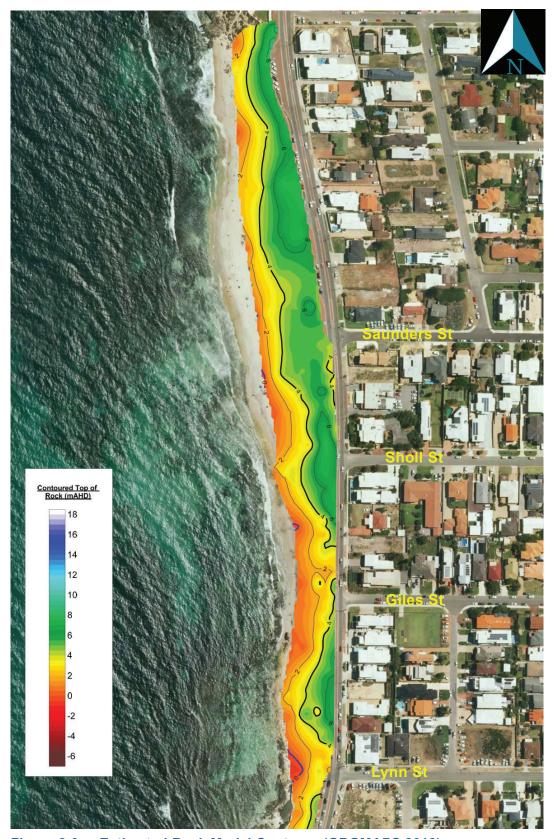


Figure 2.6 Estimated Rock Model Contours (GBGMAPS 2018)

2.3.3 DCP Investigation (DTE 2019)

Experience with geophysical investigations in the coastal dunes and beach is that actual rock levels encountered can vary from the rock levels modelled using the outcomes of geophysical investigations.

Therefore, as part of the current assessment, MRA engaged DTE Geotechnical to complete probing with Dynamic Cone Penetrometers (DCP's) along the front of the RSP to confirm rock levels from the geophysical investigations.

The results of this investigation indicate that rock levels on site are at lower elevations than suggested by the geophysical investigation. This is illustrated in Figure 2.7, which plots the DCP results against the geophysical data.



Figure 2.7 DCP Investigation Results

Interrogation of the DCP investigation indicates the actual rock level may be around 0.5 to 1.5 m lower than the results of the geophysical investigation suggest.

It is likely that the presence of rock in the tidal range will alter and potentially slow down erosion of the shoreline. WAPC (2013) suggests competent rock should extend 1 m above the active limit of the shoreline in order to provide coastal protection.

The locations and extents of competent rock likely to resist erosion have been estimated based on the geophysical and DCP investigations. These are presented in Section 3.4.

3. Coastal Erosion Hazard Assessment

Within Western Australia, State Planning Policy 2.6: State Coastal Planning Policy (SPP2.6; WAPC 2013) provides guidance regarding land use planning and management within the coastal zone. Specifically, SPP2.6 provides guidance on different aspects of shoreline evolution that need to be considered when assessing the potential impacts of coastal hazards. Typically, SPP2.6 recommends consideration be given to the potential impacts of the following on the shoreline:

- Severe storm erosion events (termed the "S1" allowance within SPP2.6).
- Long term shoreline changes caused by ongoing effects of coastal processes ("S2" allowance).
- Recession of the shoreline caused by potential sea level rise ("S3" allowance).
- Allowance of the risk of storm surge inundation ("S4" allowance).

Previous assessments of coastal erosion hazards at Mettams Pool have been prepared based on generalised or default estimates useful for initial identification of 'hot spots' or high-risk areas. However, as these utilise limited site-specific information, further detailed analysis and modelling is required to define these hazards. The method of hazard assessment recommended by SPP2.6 was utilised to identify assets and areas vulnerable to coastal erosion hazards, and locations which may be afforded protection by competent rock at the site. This assessment is outlined in the following sections.

The aim of the more detailed assessment is intended to provide further definition of the risks of coastal erosion and for use in developing the adaption options.

3.1 Severe Storm Erosion (S1)

Severe storm events have the potential to cause increased erosion to a shoreline through the combination of higher, steeper waves generated by sustained strong winds, and increased water levels. These two factors acting in concert allow waves to erode the upper parts of the beach not normally vulnerable to wave attack.

MRA (2018) recently completed an investigation for DoT which provided recommendations for the selection of design storm events for use in assessment of storm erosion hazards (S1). To allow for consideration of erosion risks presented by storm conditions, design events for a range of Annual Recurrence Intervals (ARI) were determined. Extreme analyses of cumulative powers of historical storm clusters were undertaken to determine that of various ARIs. Design events were then identified or synthesized from historical events. The annual recurrence probability of the erosion risk represented by the synthesised events was then confirmed via simulation in the 2D beach profile evolution model SBEACH.

To estimate the coastal erosion risk profile at Mettams Pool, MRA undertook storm erosion modelling of the 1, 25 and 100-year storm sequences. As there are 2 sequences for each recurrence interval provided a total of 6 events were simulated.

3.1.1 Assessment Methodology

A summary of the approach adopted by MRA to assess hazards due to short term storm erosion is provided below.

- Setup the Delft3D SWAN model suite for a domain appropriate for modelling of design conditions at the site over a calibration period.
- Apply summary parameter wave data obtained from the Rottnest wave buoy, wind data obtained from the Rottnest wind station and water level data obtained from the Fremantle tide gauge as input conditions for the model.
- Calibrate and validate the model via comparison of the captured wave data at the Cottesloe Wave Buoy during the calibration period and the outputs of the model at the same location.
- Simulate the 1, 25 and 100-year storm sequences (a total of 6) storm sequences in the calibrated Delft 3D SWAN model.
- Extract wave conditions at a location in approximately 5 m of water depth during each of the events and simulate these as boundary conditions at 2 locations in the beach profile evolution model SBEACH to provide estimates of erosion risk during each event and at each profile.

Delft 3D Model

MRA has validated the Delft 3D (Deltares 2011) model at numerous locations across Western Australia's coastline including Cockburn (MRA 2015), Ocean Reef (MRA 2014) and Joondalup (MRA 2016). The model was further calibrated for the purpose of this study for a period in September 2013. This period encompasses one of the severe storm events chosen for erosion modelling.

The model was calibrated against data collected at Cottesloe Wave Buoy. A comparison of the calibration period is shown in Figure 3.1.



Figure 3.1 Comparison of Model vs Recorded at Cottesloe Wave Buoy

SBEACH

The SBEACH model was developed by the Coastal Engineering Research Centre to simulate beach profile evolution in response to storm events. It is described in detail by Larson & Kraus (1989). Since this time the model has been further developed, updated and verified based on field measurements (Wise et al 1996). SBEACH has also been validated locally by MRA (2005).

3.1.2 Results

MRA undertook the assessment methodology previously outlined for the two profiles shown in Figure 3.2.



Figure 3.2 Profile Locations

Model results indicated that the site is exposed to the risk of significant cross-shore movement during periods of elevated marine conditions. Results indicated that around 7 to 10 m of erosion relative to the Horizontal Shoreline Datum (HSD) may be expected during the 1-year ARI event. It should be noted that such an event may correspond to an extended period, of around 4 to 6 weeks of intermittent stormy conditions, similar to that observed over the 2019 winter.

During the 100-year storm event, results indicate around 15 to 20 m of erosion relative to the HSD may be expected. Model results for this event are shown at each of the profiles is shown in Figures 3.3 and 3.4 below. The 100-year storm event was also used to determine a HSD of 1.9 mAHD.

Based on model results an S1 allowance of 20 m was determined.

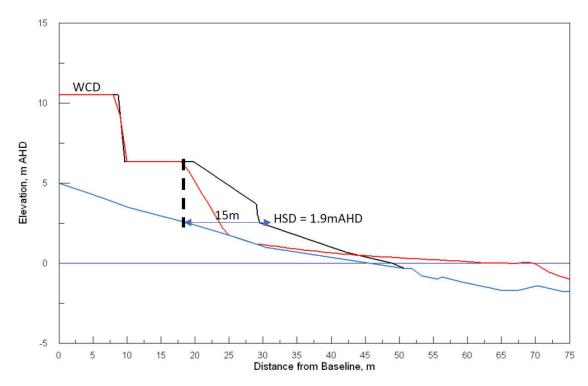


Figure 3.3 100 Year ARI Erosion Event at Profile 6

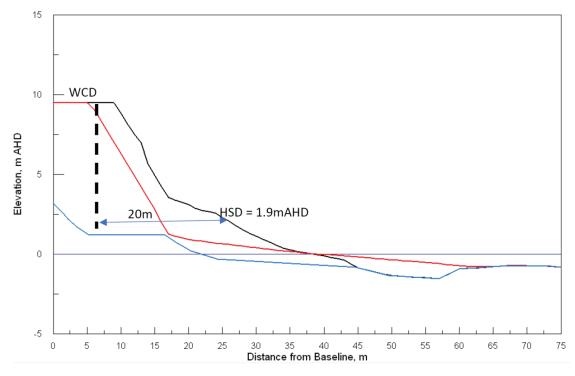


Figure 3.4 100 Year ARI Erosion Event at Profile 7

3.2 Long Term Shoreline Changes (S2)

Changes in shorelines occur on varying timescales from storm to post storm, seasonal and longer term (Short 1999). The S1 allowance accounts for the short-term storm timescale of beach change. The S2 allowance is intended to account for the longer-term movement of the shoreline that may occur within the planning horizon. To determine the S2 allowance, historical shoreline movement trends are examined, and likely future shoreline movements predicted.

SPP2.6 recommends that shoreline movement trends be based on the review of available shoreline records. This can include analysis of historical aerial photography, High Water Mark (HWM) surveys or previously extracted coastal vegetation lines available from DoT.

Available aerial photographs extend back 77 years to 1942. The images were rectified and the coastal vegetation lines were extracted using the methodology outlined in DoT (2009). The accuracy of the photogrammetry technique is expected to be in the order of ±5m.

Furthermore, survey profile information was provided by the City extending back to 2011. Changes in the shoreline estimated from aerial photographs were validated with the survey profile information.

Changes in the vegetation line across the data period were extracted and trends assessed. Vegetation line mapping is presented in Figure 3.5.

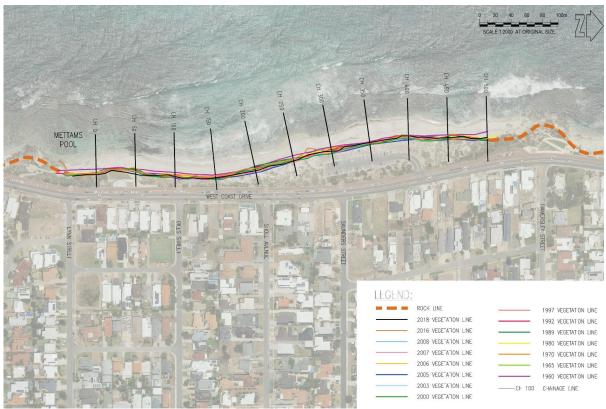


Figure 3.5 Vegetation Line Mapping

m p rogers & associates pl

City of Stirling, Mettams Pool Defensive Works K1644, Report R1211 Rev 0, Page 22 The mapping indicates a generally consistent trend of shoreline recession. Isolated periods of recovery are observed across the data period. However, this is not unusual given the annual variability of shoreline change.

Based on the long-term shoreline recession trend, an S2 allowance of 0.2 m/year was considered.

3.3 Coastal Erosion Caused by Sea Level Rise (S3)

Coastal planning in Western Australia is guided by the results of a review into potential sea level rise which was completed by DoT in 2010. This document – Sea Level Change in Western Australia – Application to Coastal Planning (DoT, 2010) – presents the following scenario for sea level change and recommends that it be used for all coastal planning in Western Australia. These recommendations were adopted by SPP2.6 and are presented in Figure 3.6.

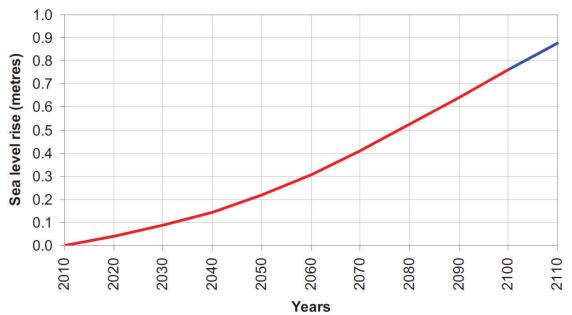


Figure 3.6 Recommended sea level rise scenario for use in coastal planning within Western Australia (DoT 2010)

The recommended allowances for future sea level rise over each of the planning timeframes have been determined and are presented in Table 3.1. All of these increases in sea level are referenced to 2019.

Table 3.1 Sea Level Rise Allowances

Planning Timeframe	SLR Allowance (m)
Present Day (2019)	0
2044	0.14
2069	0.37
2094	0.65
2119	0.90

The effect of sea level rise on the coastline is difficult to predict. Komar (1998) provides a reasonable treatment for sandy shorelines, including examination of the Bruun Rule (Bruun 1962).

The Bruun Rule relates the recession of the shoreline to the sea level rise and slope of the nearshore sediment bed:

$$R = \frac{1}{\tan(\Theta)}S$$

Where: R = recession of the shore.

 θ = average slope of the nearshore sediment bed.

S = sea level rise.

Komar (1998) suggests that the general range for a sandy shoreline recession is 50S to 100S. SPP2.6 recommends that for sandy shorelines the recession be taken as 100 times the estimated rise in sea level. In line with the recommendations of the SPP2.6, these allowances will be applied for all sections of the site that are not protected by competent rock.

3.4 Summary of Erosion Allowances

Each of the erosion allowances were determined over planning horizons to 2044, 2069, 2094 and 2119. A present-day scenario was also considered. The allowances are combined with a 0.2 m/yr allowance for uncertainty to create a coastal erosion hazard zone for each planning horizon. Table 3.2 summarises the coastal erosion allowance combinations. These allowances are to be measured from the HSD. For the rocky shoreline the allowance for uncertainty has also been applied, as measured from the HSD.

Table 3.2 Summary of Erosion Allowances

Year	Planning Horizon	Shoreline (m)	S1 (m)	S2 (m)	S3 (m)	Allowance for Uncertainty (m)	Total
Present	0	Sandy	20	0	0	0	20
Present	U	Rocky	0	0	0	0	0
2044	25	Sandy	20	5	14	5	44
2044	25	Rocky	0	0	0	5	5
2069		Sandy	20	10	37	10	77
2009	50	Rocky	0	0	0	10	10
2094	75	Sandy	20	15	65	15	115
2094	75	Rocky	0	0	0	15	15
2112	400	Sandy	20	20	90	20	150
2119	100	Rocky	0	0	0	20	20

Based on these allowances, the coastal erosion hazard lines have been mapped, with consideration of the HSD and the locations of competent rock estimated from the geophysical and DCP investigations.

The coastal erosion hazard zones highlight the following:

- Parts of the site are afforded a level of protection by competent rock.
- In some locations WCD is within the present-day coastal erosion hazard rose. This means it is currently at risk of undercutting due to erosion during the 100-year ARI erosion event.
- Across the majority of the site, WCD is within the coastal erosion hazard zone for the 25-year (and greater) planning horizons. Across the entire site, WCD is within the coastal hazard zone for the 100-year planning horizon.
- For extents of the site that are not afforded protection by competent rock, residential lots at the rear of WCD are within the coastal erosion hazard zone for the 25-year (and greater) planning horizons.
- It is important to note that competent rock protection has been estimated based on geophysical and DCP investigations in the foreshore zone (Section 2). It is possible that additional competent rock is located behind these areas however there is no data available to determine this.

Based on this assessment, it is clear that a number of important assets are exposed to unacceptable risks due to coastal erosion. Therefore, adaptation strategies to mitigate this risk are required.

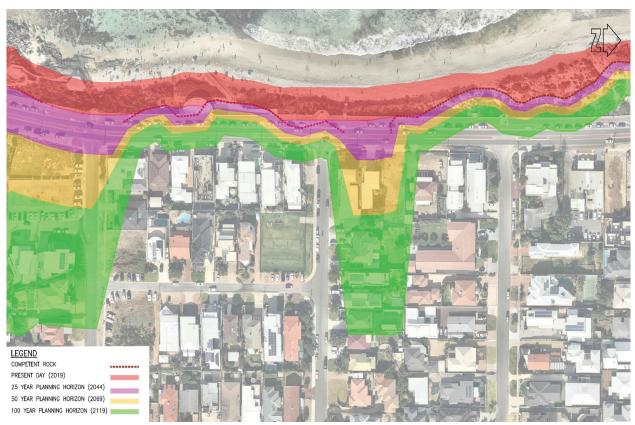


Figure 3.7 Mettams Pool Coastal Erosion Hazard Zones

m p rogers & associates pl

City of Stirling, Mettams Pool Defensive Works K1644, Report R1211 Rev 0, Page 26

4. Community Values Survey

Community consultation was undertaken as a key input into the design of coastal adaptation measures at Mettams Pool. The intent of this consultation was to achieve the following (WAPC 2013):

- Inform the community of the requirement and the purpose of the works to promote understanding and support across the community.
- Determine the consequences and their acceptability or otherwise of a given set of coastal hazards, as these are best determined by those who will be most directly affected by those consequences.
- Identify more innovative risk management and adaptation measures potential solutions or responses to identified unacceptable/intolerable risks should be sought from as many sources as possible to encourage innovative and locally tailored solutions.

A two-step community consultation process was undertaken as part of these works. This consisted of a coastal values survey and a community forum (Section 6). Development of adaptation options to mitigate coastal risks at the site was informed by the outcomes of the community values survey. Following development of three adaptation options a community forum was undertaken to obtain feedback on these options and determine a preferred concept for further development.

4.1 Community Values Survey (Elton 2019)

A community values survey was not included in the original scope of works. However, MRA identified this as a required input for the development of adaptation strategies. This was agreed to by the City and incorporated into the early stages of the works.

MRA engaged Elton Consulting to assist with the community consultation. Elton and MRA developed a coastal values survey in consultation with the City. The City's community values survey was undertaken between 22 June and 16 July 2019. In total 491 online surveys were completed. The survey was promoted by a number of communication channels including:

- City of Stirling digital channels website and direct email to database.
- Letterbox drop to residents within a 400 m catchment of Mettams Pool.
- Variable Message Signs along the section of WCD alongside Mettams Pool.
- Signage at Mettams Pool.
- Flyers in local businesses in the locality of Mettams Pool.

A more detailed summary of the outcomes of the survey is provided in Appendix A. However, the key themes of the survey are summarised below.

The community highly valued both the active and passive activity opportunities Mettams Pool provides to local residents and visitors. The sheltered nature of the bay and the natural coastal amenity are both key draw cards.

- Respondents made it clear that there was no appetite to see Mettams Pool become overly developed and commercialised with retail opportunities. The majority of respondents favoured Mettams untouched and natural appeal, with environmental values an important consideration when considering options for future proofing the area.
- A strong overarching theme was anti-development reflected by the large number of comments opposed to any 'Retail / Café'. This sentiment was not simply about the commercialisation of the area, it was also about not developing any imposing structures that detracted from the natural feel of the place. There was a sense that there is a level of capacity that positive amenity could support and this would be adversely affected by any form of kiosk, café or restaurant in the area. It was also acknowledged that if people wanted to buy food or drinks at the beach then they should go to other areas such as Scarborough.
- With the area identified as providing visitors with recreational opportunities, just as important was enhancing passive recreational space such as exploring the opportunity to enhance grass spaces and provide BBQs and additional seating. People were also in favour of upgrading current ablutions and changing facilities and improving shelter and shade, but without compromising the natural charm and vibe.
- Universal access is equally important for all visitors to the beach including access to the water. The removal or finding a solution to the problem of rock hazards was repeatedly mentioned and identified as one of the main barriers to people accessing Mettams Pool.
- In general people see an opportunity to slow down traffic along WCD and ensure clear separation between the public realm and traffic to support improved pedestrian and cycling safety. Although additional car parking is unlikely to be supported by the community, visitors did value parking and the need for it to be close to Mettam's facilities.
- Overall the community recognise the need to take action to prevent the impact of coastal erosion at Mettams Pool, as long as it is not at the expense of the natural and simple appeal of the place. Many people would prefer 'no change' but recognise that to future proof the area, the City needs to consider options that will protect the major asset of WCD and allow for a number of facilities to support the community's continuous enjoyment of the place.

These outcomes were incorporated into the development of three adaptation options.

5. Adaptation Options

The current scope of works did not include undertaking a complete CHRMAP assessment. However, where possible, MRA has utilised the methodologies recommended in SPP2.6 for risk assessment, community consultation and development of mitigation and adaptation strategies for Mettams Pool.

5.1 SPP 2.6 Hierachy

SPP 2.6 provides the following strategy hierarchy for approaches to management and adaptation responses to coastal risks.



Figure 5.1 SCPP 2.6 Strategy Hierarchy

A summary of the implications of these strategies and general commentary of their applicability at Mettam's Pool is provided below.

Table 5.1 Management & Adaptation Approaches at Mettam's Pool

Strategy	Site Implications & Opportunities
Avoid	Relates to the construction of new assets. This approach is not applicable at this site as built assets such as WCD are already in place.
Planned or Managed Retreat	Opportunity to undertake managed retreat of some assets such as access points and toilet blocks/changerooms. Managed retreat of WCD and residential lots behind is unfeasible and not supported by the City.
Accommodate	Design of replacement assets selected for managed retreat shall consider the future changes to the shoreline. Replacement assets to be founded on rock.
Protect	Appropriate for assets where other options are not feasible, such as for WCD.

5.2 City Objectives

The following objectives for the adaptation options were provided by the City.

- WCD to be protected and retained.
- Universal access for swimming to be retained and improved.
- General beach access to be retained and improved in several locations.
- A similar level of facilities (toilets/changerooms) to be maintained.

Based on these requirements and outcomes of the community values survey three adaptation options were prepared. The intent, key features, pros and cons of each option are summarised in the following sections. The adaptation options as presented at the community forum are attached in Appendix B.

5.2.1 Realignment of WCD

The City's current policy for the site includes realignment of WCD for a range of reasons including for traffic management purposes. This realignment involves removal of the central median strip and reduction in lane widths to minimise the horizontal footprint of WCD and the RSP. The current layout plans for this proposal provided by the City are included below.



Figure 5.1 WCD Realignment (City 2019)

One outcome of this realignment is the provision of additional area on the seaward side of WCD which may be utilised by the City. This realignment has been incorporated into each of the concepts below with the additional area proposed to be utilised as an upper level activated space. It has been assumed in the development of the concepts that the additional area would also be able to be utilised as a working pad for construction of the ultimate adaptation strategy.

5.3 Option 1 – Relocate Facilities

The intent of this option is to retreat existing facilities as far as possible and implement a vertical wall to protect WCD. This would provide the existing beach/dune system the greatest amount of space to retreat before being lost. The vertical wall and relocated facilities would be founded along the line of competent rock 'future proofing' them against ongoing shoreline change.

The key features, pros and cons of this option are provided in Table 5.2.

Table 5.2 Option 1 Summary

Key Features	Pros	Cons
 Managed retreat of key access. Access points to be relocated and improved. Change rooms and toilets to be relocated. WCD to be protected with new vertical walls. Activated space at upper (WCD) level will be provided. 	 Improved access to beach and water. Maximises the retention of the dunes and beach as much as possible. New facilities to be provided at the southern end of the site. A direct universal access link from the beach to the water to be provided. 	 Limited additional recreational space provided. Limited/no recreational space would be provided once the sand/dune system is lost. Vertical walls utilised would be very large. Requires relocation of facilities.

5.4 Option 2 – Lower Activated Space

The intent of this option is to establish a larger lower level recreational space in front of the existing vertical wall. This would provide recreational space into the future even once the existing sand/dune system is lost. The lower level recreational space and relocated facilities would be founded on competent rock 'future proofing' them against ongoing shoreline change. The key features, pros and cons of this option are provided in Table 5.3.

Table 5.3 Option 2 Summary

Key Features	Pros	Cons
Managed retreat of key access.	Improved access to beach and water.	Would require relocation of facilities.
Access points to be relocated and improved.	 Lower activation space provides recreation area at all times of year, even 	Removes large portions of the existing dunes.
Split levels to allow utilisation of smaller vertical walls.	when recession of beach and dune system occurs. New facilities to be	Less sandy beach space would be available throughout the year.
WCD to be protected with new vertical walls.	provided.	
 Facilities and change rooms to be relocated underneath upper level. 	link from the changerooms to the water to be provided.	
Activated space at upper (WCD) level will be provided.		

5.5 Option 3 - Revetment Protection

The intent of this option is to retain a large number of the existing assets via protection with a revetment. Such a solution would have a significant horizontal footprint encroaching into the existing beach space. The key features, pros and cons of this option are provided in Table 5.4.

Table 5.4 Option 3 Summary

Key Features	Pros	Cons
 Managed retreat of key access. Access points to be relocated and improved. Utilisation of Geotextile Sand Containers similar to Waterman's. Activated space at upper (WCD) level will be provided. 	 Improved access to beach and water. Allows retention of a large number of the existing assets and infrastructure. Lowest cost comparatively. Possibility to re-establish some dune and vegetation over the revetment. 	 Large construction footprint which would likely require closure of the beach during this period. Design of GSC bags is limited (10-20 years) providing a short to medium term solution only. Removes large portions of the existing dunes. Less sandy beach space would be available throughout the year. No direct universal access link would be provided from the change rooms to the beach.

6. Community Forum

Following development of the three adaptation options a community forum was undertaken to obtain feedback on these options and determine a preferred concept for further development.

The community forum for the Mettams Pool Defensive Works was held on 6 July 2019 at the Charles Riley Memorial Reserve, from 2:00 to 4:00 pm.

The following attendees formed the Project Team for the forum:

- Jon Offer, Murray Woods, Gemma Taavale, Kate Phillips, Thomas Cramsie & Patricia Tan (City of Stirling).
- Lucya Roncevich (Department of Transport).
- Claire Paddison (Elton Consulting).
- Trent Hunt, Liam De Lucia & Ben Turner (M P Rogers & Associates).

Claire Paddison facilitated the forum. In addition, Councillor Karen Caddy attended and introduced the forum for the City.

The purpose of the forum was to present the following:

- Background information to the observed coastal erosion at Mettams Pool.
- Outcomes of the recent community values survey.
- Three adaptation options to address the coastal erosion and ask for consideration and comment from the community.

The aim of the forum was to gather feedback on each of the presented 3 options and identify a preferred option for design progression.

A total of 72 community members attended the community forum and participated in discussions. Community participants were seated on tables of up to 10 to enable group discussions during the review of the adaptation options. Feedback on pros, cons and other comments were encouraged from the participants. Members of the Project Team facilitated and assisted across the tables. Following completion of the community forum, attendees were provided a green dot to stick onto one of the three adaptation options to 'vote' for their preferred option.

6.1 Community Forum Outcomes

Pros, cons and general comments from the community forum were summarised for each of the adaptation options. Each of the comments were considered and general responses provided. A detailed summary of the community forum outcomes is provided in Appendix C.

A count of the individual "green dots" indicating participants preferences showed a clear preference for Option 2 - Lower Activated Space. This option was supported by approximately 78% of the total attendees. The next preferred was Option 1 - Relocate Facilities, with only very low support for Option 3 - Protect Existing Facilities.

Some of the key comments and observations are highlighted below.

- There was a difference of opinion around the changes to WCD and the RSP, with modifications seen as both a positive and negative in a number of comments.
- There were far more comments on Option 2 than the others, this may be due to greater discussion around the strategy which was ultimately preferred.
- There was strong support for landscaping of the lower activated space with areas of either natural planting or dunes, or sand, along with shade and shelter.
- There was a lot of comment on the appropriate locations of the access ramps and stairs, with a preference for locations closer to the existing toilet block.
- There were a number of comments on artificial reefs and in-water structures to protect the sheltered nature of the swimming area into the future, along with removal of rock from the shoreline.

The comments were all considered in developing the following recommendations for the progression of the adaptation strategy.

Table 6.1 Recommended Actions from Community Forum

- Progress the design of Option 2 Lower Activated Space to 15% concept design.
- Further consider the location and form of access structures in the progressed design.
- Further consider the landscaping form and function of the lower activated space. It is recommended that a landscape architect is engaged to assist with this process in future progression of the design.
- Complete further investigation and potential community consultation on any permanent changes to WCD, the RSP and the on-street car parking.
- Investigate the approval requirements and consider removing sections of rock from the shoreline to improve access to the water.
- Investigate the approval requirements and consider adding to the reef or an alternative structure to enhance and protect the swimming area into the future (potential future stage of works).

7. Concept Design

7.1 15 % Concept Design

Following selection of a preferred adaptation option, progression of the concept design undertaken. This involved the following refinements:

- Updating the concept with feedback from the community forum.
- Determination of appropriate grades for providing universal access to the water.
- Determination of appropriate forms, locations and layouts for stair access to the lower activated space and beach areas.
- Consideration of the levels, sizes, forms and alignments of retaining walls required to achieve the preferred concept.

A typical cross section of the refined concept is shown in Figure 7.1. The full set of Concept Sketches are provided in Appendix D.

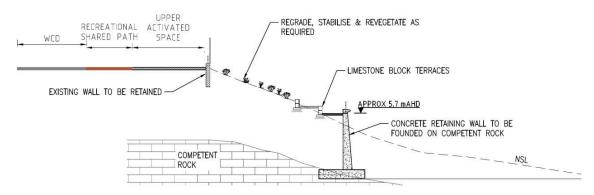


Figure 7.1 Typical Cross Section

The key features of the refined concept are summarised in the following table:

Table 7.1 Key Features of Refined Concept

- A high-grade concrete wall is to be founded in front of WCD at the level of competent rock at the site. The intention of this structure is to provide long term protection against coastal hazards such as erosion, inundation and overtopping.
- Retention of the majority of the existing wall between WCD and the dunes.
- The concrete wall will establish area for a lower level recreational space. The level of this recreational space is based on the existing level of the changerooms and paved area estimated to be approximately 5.7 mAHD.
- The concrete wall shall be founded on the existing competent rock which is of varying levels. At locations where this rock is around 2 to 3 mAHD (retained height ~3 m), a concrete T/L wall or similar is likely to be an appropriate solution. At locations where the competent rock level is lower than this elevation, alternative wall types such as a clad sheet pile wall may be more cost effective. Refinement of the wall will be required in detailed design.
- Two limestone block walls will be utilised to establish two terraced sections which will transition levels from the 5.7 mAHD activated space and WCD. The terraced areas may be utilised for footpaths, turfed areas, or alternatives.
- Where required, regrading, stabilisation and revegetation of the dune will be undertaken to enable construction and to tie-in with the terraced sections. It is the intent to retain as much of the existing dunes as possible however this will require further consideration in detailed design.
- Demolition & removal of the two sets of existing beach access stairs. Construction of two new sets of beach access stairs connecting the recreational space to the beach area. Construction of two new sets of stairs connecting WCD to the lower recreational space. It is proposed that each of the new sets of stairs are reinforced in-situ concrete structures.
- Retention of the existing ramp which connects WCD to the existing changerooms.
- Demolition & removal of the existing vehicle access ramp adjacent to the current changerooms.
- Provision of access to the pool via the existing access ramp at the southern end of the site. Replacement and realignment of the in-water access ramp at the southern end of the site to provide access at a more appropriate location. It is proposed that this structure is a piled Fibre Reinforced Polymer (FRP) structure.
- Removal of a section of rock to enhance access to the Pool.
- Relocation of the changerooms to underneath the upper WCD level.

8. Construction Considerations

Access at the site is constrained by the close proximity of WCD to the steep dune and beach system. In-line with the City's current strategy for the site, it is assumed that a working pad will be able to be established at the upper level as part of the realignment of WCD. Based on this it is proposed that the following general methodology would allow construction of the proposed concept:

- Establishment of a working platform at the upper level in the space provided by the realignment of WCD.
- Demolition of access stairs and placement of fill material to establish an access track down onto the foreshore area. The City has highlighted its commitment to maintain access to the beach throughout the works. To allow this, it is likely that staging of portions of the works will be required. It is proposed that access to the northern portion of the site can be obtained via the area remaining from demolition of the northern set of access stairs. Access to the mid-southern portion of the site can be obtained via the area remaining from demolition of the sets of stairs adjacent the changerooms.
- Installation of temporary shoring to allow excavation of the dune for construction of the concrete retaining walls. The alignment of this shoring would run some distance behind the proposed alignment of the concrete retaining walls. The shoring is intended to protect the existing walls along the RSP which are intended to be retained. Further investigation of the footing and details of these walls will be required in detailed design.
- Supply and construction of retaining walls. At this stage T/L concrete retaining walls are proposed which may be pre-cast or in-situ walls. Pre-cast walls would likely need to be craned into position from the working pad at the upper level whilst materials for the in-situ walls may be transported down to the beach along the access track. Alternatives walls that requiring piling may be more cost effective for sections where competent rock is located at deeper elevations. Materials and machinery for construction of these would also be transported to the beach via the temporary access tracks.
- The new access ramp into the Pool is proposed to be a piled FRP structure. This would be founded on the underlying rock. The FRP would allow a lighter-weight structure which is permeable and non-corrosive. Materials and machinery for this structure would need to be transported to the beach via the temporary access tracks.
- Progressive backfilling and compaction behind the concrete retaining walls. This would allow temporary access to the lower recreational level for construction of the various landscaping elements such as limestone block walls, footpaths, turf and etc.
- The new stairs are proposed to be in-situ reinforced concrete structures. Materials and machinery for these structures would need to be transported to the beach via the temporary access tracks.

Construction cost estimates have been based on this construction methodology. The proposed methodology would be refined through design development, detailed design and tender.

9. Cost Estimates

The construction cost estimates provided are MRA's best estimate based on its internal cost database of similar tendered works for local governments. The costs provided are for concept budgetary purposes only and would require further design works to improve the accuracy of the estimates for preliminary and detailed design purposes. Costs for gaining necessary approvals, additional investigations and management plans have not been included.

Marine works generally have a large range of tendered prices compared to other civil works, with the highest tendered price often double the lowest price. This is due to a number of factors including but not limited to:

- The Contractor's chosen methodology, particularly in the situation where temporary access is required for the works.
- Contractor's perceived risks associated with the works.
- Contractor's available resources and plant.
- Contractor's experience and understanding of the local conditions.
- Perceived competitiveness for the works.
- Environmental conditions imposed on the works.
- General market conditions.

Table 9.1 presents a summary of the concept cost estimates for the preferred concept. In addition, a cost risk assessment to determine contingency allowances for 50% and 90% confidence probabilities of not being exceeded has also been completed and incorporated (DPTI 2012).

Table 9.1 Cost Estimates

,		-				
Item	Activity	Quantity	Units	Unit Rate	Subtotal	Total for Item
						A 400 000
1.1	Preliminaries Mobilisation and site establishment	1	Item	\$ 20,000	\$ 20,000	\$ 400,000
1.2	Insurances and other preliminaries	1	Item	\$ 50,000		
1.3	Preparation and implementation of Management Plans	1	Item	\$ 50,000		
1.4	Installation and removal of temporary access to facilitate	2	Item	\$ 10,000		
	construction		1,0111	4 10,000	7 20,000	
1.5	Installation and removal of temporary shoring and works to	1	Item	\$ 220,000	\$ 220,000	
	facilitate construction of new retaining walls					
1.6	Demobilisation and site cleanup	1	Item	\$ 40,000	\$ 40,000	
2	Demolition, Site Access & Temporary Works				\$ -	\$ 80,000
2.1	Demolition and removal of beach access ramp	1	Item	\$ 20,000		
2.2	Demolition and removal of beach access stairs	2	Item		\$ 40,000	
2.3	Demolition and removal of existing retaining walls	40	m	\$ 500	\$ 20,000	
3	Concrete Retaining Wall				\$ -	\$ 2,246,500
3.1	Excavation to allow construction of a concrete retaining wall	5,500	m ³	\$ 20	\$ 110,000	\$ 2,240,500
3.2	Supply and placement of high-grade, reinforced concrete	135	m	\$ 4.400		
5.2	retaining wall (pre-cast or in-situ)	155		Ψ,400	Ψ 334,000	
3.3	Allow to supply and place deep founded retaining wall where	115	m	\$ 11,800	\$ 1,357,000	
	competent rock levels are below 2 mAHD			,	.,,	
3.4	Backfill and compact behind retaining wall	3,300	m ³	\$ 30	\$ 99,000	
3.5	Place excess suitable material on beach	1,200	m ³	\$ 5	\$ 6,000	
3.6	Concrete capping block	230	m	\$ 350		
0.5.5.50						
4	Landscaping & Regrading				\$ -	\$ 381,125
4.1	Construction of 2 block limestone wall	370	m		\$ 111,000	
4.2	Construction of larger block walls	85	m		\$ 51,000	
4.3	Supply and place coir matting	1,200	m ²	\$ 15		
4.4	Revegetate dunes	1,200	m ²		\$ 24,000	
4.5	Supply and install turf	875	m ²	100	\$ 13,125	
4.6	Supply and install footpath / paving	440	m ²	\$ 100	\$ 44,000	
4.7	Supply and install stainless balustrade	300	m	\$ 400	\$ 120,000	
5	Access 9 Equilities				\$ -	6 262 000
5.1	Access & Facilities Supply & construction of concrete beach access stairs	80	m ²	\$ 2,600		\$ 363,000
5.2	The state of the s	60		\$ 2,500		
5.3	Supply & construct pool access ramp	1	m ²	\$ 5.000		
5.3	Allowance to remove rock for access to pool	1	Item	\$ 5,000	\$ 5,000	
6	Works by City				\$ -	s -
6.1	Relocation of facilities underneath upper activated space,	1	Item	\$ -	\$ -	
	associated servicing (by City)					
6.2	Realignment of West Coast Drive & car parking (by City)	1	Item	\$ -	\$ -	
6.3	Landscaping works to upper activated space (by City)	1	Item	\$ -	\$ -	
	Subtotal 1 (ex GST)				\$ 3,470,625	\$ 3,470,625
	Contingency (50% confidence of not being Exceeded)	23	%		\$ 798,244	\$ 798,244
	Subtotal 2 (50% confidence level - ex GST)				\$ 4,268,869	\$ 4,268,869
	Contingency (90% confidence of not being Exceeded)	58	%		\$ 2,012,963	\$ 2,012,963
	Subtotal 3 (90% confidence level - ex GST)				\$ 5,483,588	\$ 5,483,588

Notes

- 1. Concept level estimates for budgetary purposes.
- 2. Do not include allowances for works relating to the realignment of West Coast Drive. It is assumed this will be completed prior to the works to allow establishment of a working pad at the upper level.

 3. Do not include allowances for detailed design, project management or obtaining approvals.

 4. Do not include allowances for supplementary works such as relocation of facilities.

- 5. GST not shown on cost estimates.

10. Recommendations

Concept design has been completed for a preferred adaptation strategy which is intended to address erosion risks present at the site. To progress the implementation of this strategy, a number of additional items require further investigation and consideration. These are summarised below.

- A full feature survey of the entire site is a priority. This should include all man-made and natural features including beaches, dunes, kerbs, stairs, ramps, walls, kerbs, handrails, exposed rock and all other features at the site. It needs to be appropriate for design and estimating quantities.
- Design details and drawings on existing structures at the site including stairs, ramps, walls, kerbs, handrails and all other man-made features. Of particular importance is the foundation depth of the retaining wall between WCD and the dunes which is a critical input into the design. This will assist in determining any temporary shoring requirements.
- Consideration of approvals is required. Impacts on the marine park may require consideration and approval from the Department of Biodiversity, Conservation & Attractions (DBCA). Discussions with the Western Australian Planning Commission (WAPC) are also likely be required.
- Further consideration of the landscaping form and function of the lower activated space should be undertaken. It is recommended that a landscape architect is engaged to assist with this process in future progression of the design. Relocation of associated services to achieve landscape features will likely require consideration.
- Further development of the proposal to relocate facilities underneath the upper WCD level is required. It is recommended that a structural engineer is engaged to assist with this process in future progression of the design. Additionally, relocation of associated services to achieve this will require consideration.
- Consideration of staging of the works will require further consideration and may impact the construction costs and works methodology.
- Geotechnical data obtained as part of this assessment was for the purposes of assessing coastal erosion hazards and concept design. Further geotechnical assessment may be required to obtain soil properties and rock depths for detailed design of any retaining structures, piled foundations or similar.

11. Conclusions

Mettams Pool is a popular recreational beach in North Beach, north of Trigg Point and approximately 4.5 km south of Hillarys Boat Harbour on the City of Stirling's shoreline. The beach fronts a number of important assets such as West Coast Drive and a heavily used Recreational Shared Path which are currently exposed to unacceptable risks due to coastal erosion hazards.

M P Rogers & Associates were engaged by the City to further define these risks. Three adaptation options to mitigate these risks were prepared with input from a community values survey. These were presented at a community forum to allow selection of a preferred option. Progression of the option to 15 % concept design stage was undertaken to allow preparation of cost estimates and development of a preliminary construction method for the works. Recommendations on how to progress the works towards implementation are also provided.

12. References

- BMT JFA Consultants, 2016. Strategic Coastal Processes Study, Report R-233 07-01. Prepared for the City of Stirling
- Bruun, P, 1962. Sea level rise as a cause of shore erosion, *Journal Waterways and Harbours Division*, American Society of Civil Engineers. WWI, **88**, pp. 117-130.
- Damara WA (2012). Coastal Sediment Cells between Cape Naturaliste and the Moore River, Western Australia. Report prepared by Damara WA Pty Ltd and Geological Survey of Western Australia for the Western Australian Department of Transport, Fremantle.
- Deltares, 2011. *Delft3D-Wave Simulation of Short-Crested Waves With SWAN*. Version 3.04, Deltares, The Netherlands.
- DoT, 2010. Sea Level Change in Western Australia Application to Coastal Planning. Coastal Infrastructure. Fremantle.
- Department of Transport, 2009. Coastal Demarcation Lines for Administrative & Engineering Purposes: Delineation Methodology & Specification. Government of Western Australia, Perth.
- DPTI, 2012. *Estimating Manual*, Prepared by the Department of Planning, Transport and Infrastructure (DPTI) of South Australia.
- Elrick, C. 2005, City of Stirling: Coastal Foreshore Action Plan, Trigg Island to Beach Road, Watermans Beach, Institute for Regional Development, School of Earth and Geographical Sciences, University of Western Australia.
- Elton, 2019. *Mettams Pool Community Values Survey, Outcomes Report*. Prepared for the City of Stirling.
- GBGMAPS, 2018. City of Stirling Remainder of Rock Coastline: Geophysical Investigation to Determine Rock Profile, Report 70428 Rev1. Prepared for the City of Stirling.
- Komar, P D 1998. Beach Processes and Sedimentation (2nd Edition). Prentice Hall Inc, New Jersey, USA.
- Larson M & Kraus N.C, 1989. SBEACH: Numerical Model for Simulating Storm-Induced Beach Change. Report 1: Empirical foundation and model development. Technical Report CERC-89-9. Coastal Engineering Research Centre, Vicksburg, MS.
- Masselink, G. and Pattiaratchi, C.B. 2001. Seasonal changes in beach morphology along the sheltered coastline of Perth, Western Australia. Marine Geology 2001.
- MRA, 2005. Living on the Coast But How Close is Safe?. Proceedings of the Coasts and Ports 2005 Conference, Adelaide, Australia.
- MRA, 2010. Wartermans Bay & Mettams Pool Coastal Investigations. M P Rogers and Associates, Western Australia. Report 250 Rev 0 prepared for the City of Stirling.
- MRA, 2014. Cockburn Wave Modelling-Predictive Wave Modelling. Report R702 Rev 1 prepared for BMT Oceanica.

- MRA, 2015. Ocean Reef Marina Coastal Processes Modelling. MRA Report R519 Rev 2, prepared for the City of Joondalup.
- MRA, 2016. *City of Joondalup Cyclone Modelling*. Report R774 Rev 0, prepared for the City of Joondalup.
- MRA, 2018. Design Event Selection for Erosion Hazard Assessments West & South Coasts of WA, R1004 Rev 2. Prepared for Department of Transport.
- Searle, P. & Semeniuk, V., 1985. The natural sectors of the inner Rottnest Shelf coast adjoining the Swan Coastal Plain, Journal of the Royal Society of Western Australia, vol. 67, no. 3-4, pp. 116 136.
- Seashore Engineering (2015). Coastal Sediment Cells for the Vlamingh Region between Cape Naturaliste and Moore River, Western Australia. Prepared by Seashore Engineering Pty Ltd and Geological Survey of Western Australia for the Department of Transport, Fremantle.
- Short, A. D. 1999. *Handbook of Beach and Shoreline Morphodynamics*. John Wiley & Sons Ltd. England.
- WAPC, 2013. Statement of Planning Policy No. 2.6 State Coastal Planning Policy. Western Australian State Government, Perth.
- Wise, R. A., Smith, S. J. & Larson, M. 1996. SBEACH: Numerical Model for Simulating Storm-Induced Beach Change; Report 4, Cross shore transport under random waves and model validation with SUPERTANK and field data. Technical Report CERC-89-9 rept. 4. Coastal Engineering Research Centre, Vicksburg, MS.

13. Appendices

Appendix A Community Values Survey Summary

Appendix B Concept Options

Appendix C Community Forum Summary

Appendix D Preferred Concept 15% Design

Appendix A Community Values Survey Summary





Mettams Pool - Managing Coastal Erosion

Community Values Survey - Outcomes Report

Client: City of Stirling **Date:** 17 July 2019



Contact:

Claire Paddison claire.paddison@elton.com.au 08 6241 3394

PERTH 08 6241 3394

Level 10, 3 Hasler Road Perth WA 6017

www.elton.com.au consulting@elton.com.au Sydney | Brisbane | Canberra | Darwin | Melbourne | Perth ABN 56 003 853 101

Prepared by	Claire Paddison		
Reviewed by	Trent Hunt, M P Rogers & Associates		
Date	17 July 2019		
Version	FINAL		

Contents

1	INTRODUCTION	3
2	COMMUNICATIONS AND ENGAGEMENT APPROACH	4
3	ONLINE COMMUNITY SURVEY	5
4	CONCLUSION	13
TABLES		
Table 1	Stakeholder Analysis	4
APPEND	ICES	
Α	Online FAQs	16
В	Survey Results – Community Flyer	17
С	Full Survey Results - My Say Stirling	18

1 Introduction

Following a series of significant storms in 2009 the City of Stirling (City) underwent a number of activities to better understand the factors affecting the coastal responses to sea rise for the coast between Scarborough and Waterman's Bay. From these investigations, Mettams Pool was identified as requiring more detailed assessment. Results outlined that there is no resilience left in the coastline in the vicinity of and north of the facilities around Mettams Pool along with potential loss of functionality of West Coast Drive (WCD).

Mettams Pool is one of a series of sheltered beaches that runs along the northern part of the Stirling coastline. Due to its sheltered nature, Mettams Pool is a popular spot for swimming and snorkelling as well as being used for surfing. In the 2018 Perth Coastal Recreational Use Study by the Department of Local Government, Sport and Cultural Industries, Mettams Pool was identified as a moderate activity node. It is the range of uses and accessibility of Mettams Pool that makes it a popular recreational area for both the local and broader Perth community. Therefore, as part of developing any proposed engineering works, understanding the values the community attribute to the area is an important consideration.

The City subsequently sought consultancy services to balance the community needs associated with a functional West Coast Drive and beach and property access with those of prudent and cost-effective coastal engineering. Engaging the community in the project was as much about understanding the values and level of importance the community attribute to the surrounding assets, as it was about mitigating the social risks and achieving public understanding and support for long-term solutions.

Elton Consulting was engaged to develop and implement a stakeholder and community engagement plan and in collaboration with coastal engineering consultancy, M P Rogers & Associates and the City, engage with the community to better understand the values they attribute to Mettams Pool and how these would shape the preparation of engineering solutions.

2 Communications and Engagement Approach

The overall aim of the engagement approach was designed to meet the following communications and engagement objectives:

- » To enable a range of community values, priorities and expertise / local knowledge to inform the preparation of engineering outcomes
- » To ensure the engineering outcomes reflect the sense of place and identity the community attributes to the project area now and into the long-term future and the role the coastal land uses play in supporting the City of Stirling's coastal lifestyle.
- » To promote a shared understanding and dialogue around issues and opportunities relating to potential coastal hazard risks; community and cultural values; and key coastal infrastructure and assets at risk.
- » To promote a high level of stakeholder and community understanding and ownership of the final engineering outcomes and the pathway on how the City will address these risks over time.

To achieve these objectives, an initial online engagement approach was agreed, to allow for continuous and interactive engagement with the community and visitors to Mettams Pool throughout the project. It was agreed that the City's 'My Say Stirling' online engagement platform would be used to provide a single source of information for all stakeholders to access up to date project information and understand how the public could provide their feedback.



The strategy focused on providing opportunities to engage the public between **Inform and Involve on the IAP2** Spectrum and the provision of accurate and timely information was also an important aspect of this strategy.

An online survey was developed to gather the community's values regarding Mettams Pool, with the results to inform the design of initial concept options.

Table 1 Stakeholder Analysis

Key Stakeholders included:

Likely Stakeholder Issues

- City of Stirling Disability Access Group »
- Local Ward Councillors
- » Local Member
- » Other local and interested community groups
- » Residents dependent on access from WCD
- » Regular users of Mettam's Pool
- » Local community
- » Broader community

- Continuous access to properties from WCD is maintained
- Functionality of WCD both as a distributor road and as a scenic drive remains
 - Impacts on walking and cycling route on WCD around Mettam's Pool continues
- Impact on beach amenity both to water and land based activities and ongoing use of the viewing deck
- » Continuous accessibility to beach and water by vulnerable beach users
- Engagement of community during off peak visitation period at beach may result in low awareness and participation in the engagement process

3 Online Community Survey

Between Friday 24th May and Sunday 16th June, an online community values survey was opened for the Community on the City's My Say Stirling website.

The survey was promoted by a number of communication channels including:

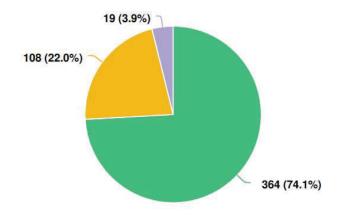
- » City of Stirling digital channels website and eDM to database
- » Letterbox drop to residents within a 400m catchment of Mettams Pool
- » Variable Message Signs along the section of West Coast Drive running alongside Mettams Pool
- » Signage at Mettams Pool
- » Flyers in local businesses in the locality of Mettams Pool

To provide broader project context for visitors to the City's online website, additional information regarding previous investigations were presented on the site along with Frequently Asked Questions (refer to appendices for a copy of the FAQs).

Results

In total 491 online surveys were completed, with a number of individual submissions made directly to the City. Below is an overview of the results. Please refer to the appendices for a full copy of the results as produced through the analysis section of Bang the Table, the operating platform for My Say Stirling and a copy of the Community Flyer, designed specifically to provide the community with an overview of the key findings.

Q1. Please let us know what best describes you?



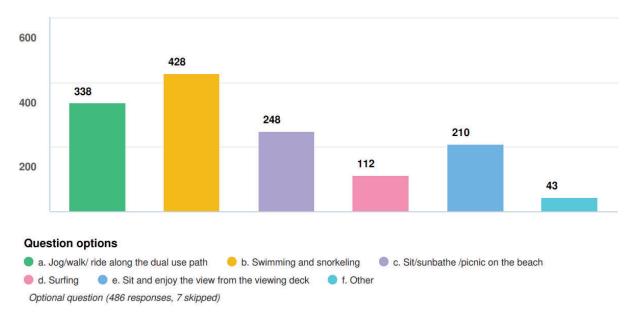
Question options



I am a regular user of Mettams Pool, who lives outside of the City of Stirling

Optional question (491 responses, 2 skipped)

Q2. If you visit Mettam's Pool which of these activities do you usually do?



Q2. Other - Please provide a brief description of why you visit Mettams Pool

For this question there were 43 responses up to the close of the survey that referred to their reason for visiting as 'Other'. Of the responses provided the following stood out as the major uses:

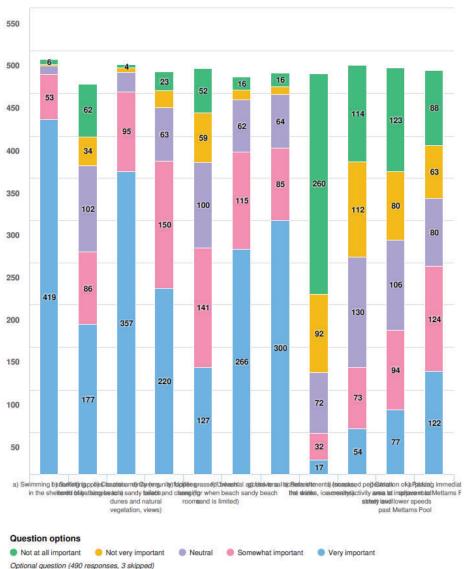
- 24 responses referred to windsurfing as a reason for visiting the area
- The other uses mentioned in the 'Other' category referred to visiting the beach for general outdoor
 activities including walking the beach, swimming, photography and enjoying the natural environment with
 family

[&]quot;Unique and versatile part of the northern beaches. Have windsurfed there for many years."

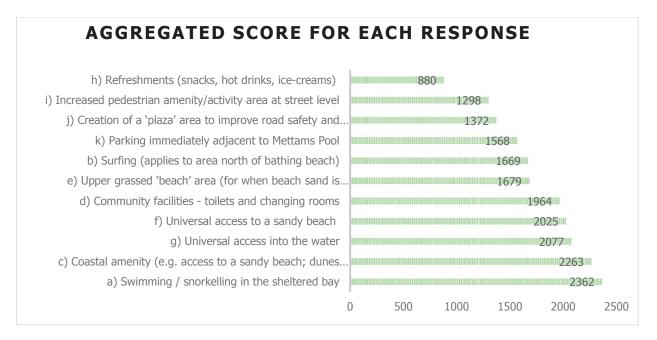
[&]quot;Social aspect of daily swimming with my friends in a safe ocean environment."

[&]quot;I swim, walk (on the pathway and on the beach), enjoy the coastline, meet up with people or say hello to newcomers. A great community hub for all ages."

Q3. When thinking about facilities and amenity at Mettams Pool, how important are the following?



- a) Sheltered Bay
- b) Surfing
- c) Coastal Amenity (e.g. access to a sandy beach, dunes and natural vegetation and views)
- d) Community Facilities toilets and changing rooms
- e) Upper grassed 'beach area' (for when beach sand is limited)
- f) Universal access to sandy beach
- g) Universal access into the water
- h) Refreshments (snacks, hot drinks, ice creams)
- i) Increased pedestrian amenity / activity area at street level
- j) Creation of a plaza area to improve rad safety and lower speeds past Mettams Pool
- k) Parking immediately adjacent to Mettam's Pool

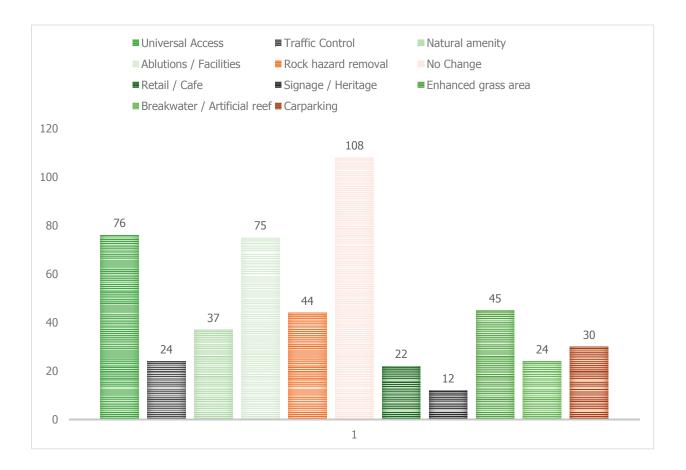


Q4a) When thinking about the future of Mettams Pool, are there any facilities you would like to see at Mettams Pool, which are not currently provided?

This question had 353 responses. The general themes of the responses were categorised as follows:

- No change
- Natural Amenity this includes limiting access to dune areas
- Universal access
- Traffic Control this included pedestrian and cycle path traffic and cross walks across the road
- Ablutions/ Facilities This includes improvements to showers in the toilet areas as well as outdoor shower
- Rock hazard removal
- Retail / Café
- Signage / Heritage
- Enhanced grass area this included expanding the grass area, addition of BBQs, play equipment and shade/shelter
- Breakwater / Artificial reef This included addition of in water structures to mitigate erosion
- Carparking this includes the rationalisation of the number of disabled bays

It should be noted that each response may have mentioned several comments and these were captured as standalone points making the overall tally higher than the number of responses. The breakdown of the results are as follows:



- The highest response to the above question was 'No change' with this being mentioned 108 times
- Secondly 76 of the comments mentioned 'Universal access' with 'Ablutions / Facilities coming in a very close third at 75
- 'Enhanced grass area and 'Rock hazard removal' were also mentioned as important improvements to be considered for the area, coming in with 45 and 44 mentions respectively

Overarching Themes

The key messages that came out of this part of the survey were as follows:

- A significant number of responses that stated 'No Change' were also interested in retaining the "Natural
 Amenity" of the pool area and did not want to see an increase of any form of commercialisation. This is
 also reflected in the low numbers of responses suggesting a 'Retail / Café' development in the location
 would be suitable. There was a strong theme of beach goers enjoying the secluded and
 unpretentiousness feel of the place that would be lost if over development or more carparking were
 created.
- The views relating to "Universal Access" were not simply related to disability access but to access for all pool users more broadly. These related to steps and railing improvements and access for long time users of the area that where now becoming older and wanted safe access for their regular swim. There were several comments referring to the slippery nature of the existing access.
- There was also quite a number of windsurfers who were interested in seeing the grass area improved or even expanded. This space is used for rigging windsurf boards and was considered too small an area for the demand it generated.
- Discussions about the 'Ablutions / Facilities' generally referred to the standard of the ablutions, privacy for the showers and odour issues. Shelter and/or shade was also discussed as a factor that could be improved.
- Finally, the 'Rock hazard removal' was raised many times as this detracted from the use of the beach and in some cases was considered dangerous with many references to difficulty walking in the area and injuries sustained from tripping or slipping on the rocks.

"Please do not spoil this area from its natural beauty. This is its biggest strength. We do not want another commercial development. Avoid lots of concrete, not another Scarborough."

"Keep it as natural and untouched as possible. Environmental safety is of upmost importance."

"Upgraded (enlarged) changing/shower room. Coastal management to allow more sand retention on the beach. Removal of sharp edges to the shore rocks which sooner or later will cause serious injury to beach users particularly the elderly. This is perhaps only one of two (the other being the very small Hamersley Pool) shark-safe swimming beaches on the metropolitan coast."

"more grassed area for windsurfers to set up on. An improved ramp leading down to the beach. More parking reduced traffic and traffic speed."

"There are too many rocks on the main beach of Mettams pool which are causing hazards to beach goers. Negotiating walking to the water is a problem. people are stepping on sharp pointed rocks and hurting themselves. Perhaps it should be considered to remove most of the large rock on the beach."

"Universal design so people with wheelchairs can easily access."

"Larger grassed area for rigging windsurfers."

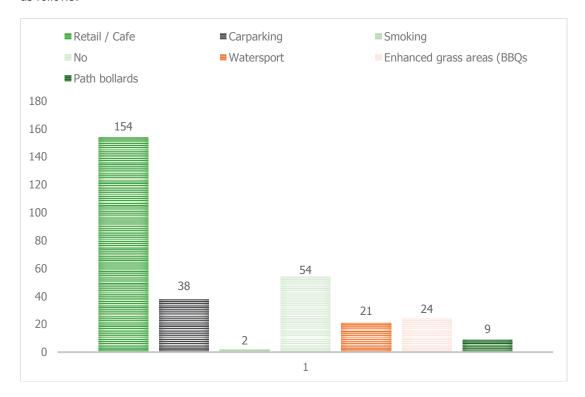
"Better change rooms. Hot showers with doors that close for privacy. Hand soap provided."

Q10. 4b) When thinking about the future of Mettams Pool, are there any functions and/or facilities that are not appropriate for Mettams Pool?

This question had 327 responses. The general themes of the responses for features to avoid were categorised as follows:

- Retail / Café This includes kiosks, bars and general over commercialisation of the area
- Carparking This is in relation to expansion of the car parking area
- Smoking
- No this was considered as there were no features that could not be considered for the area
- Water sports this included surfing, windsurfing, fishing and motor sports such as jet skis. This does not
 include general swimming
- Enhances grass area this included the addition of play equipment, BBQs and additional seating
- Path bollards these are the traffic calming bollards on the path along West Coast Highway

It should be noted that each response may have mentioned several comments and these were captured as standalone points making the overall tally higher than the number of responses. The breakdown of the results are as follows:



- The strongest theme by a considerable margin was the desire to not see any 'Retail / Café' in the area with 154 comments opposing this
- Next being the 'No' answer. This may have actually been a misread of the question and a desire to NOT
 see any development in the area. If this is the case then 208 of the 327 responses are opposed to any
 development at all.
- The third most popular comment is a desire to not see the expansion of any additional carparking with this being mentioned 38 times.

Overarching Themes

- The strongest overarching theme was anti-development; this is reflected in the large number of comments opposed to any 'Retail / Café'. This sentiment was not simply about the commercialisation of the area it was also about not developing any large or imposing structures that detracted from the natural feel of the place. There was also a sense that there is a level of capacity that positive amenity could support and this would be adversely affected by any form of kiosk, café or restaurant in the area. It was also acknowledged that if people wanted to buy food or drinks at the beach then they could go to other areas such as Scarborough.
- Additional parking was also opposed in so much as it was considered an attractor to additional people
 who would consider visiting Mettams Pool, a concept that commenters felt would over crowd the area
 and ruin the secluded amenity.
- Water sports, such as jet skiing and surfing were opposed as were fishing in the area.
- There also appears to be a dislike for the traffic calming on the footpath.

"No cafes, bars, restaurants, or extended entertainment opportunities beyond what exists with respect to beach, reef and water. Keep it simple and keep it clean that's it."

"More parking, cafe or playground - keep it wild."

"I don't believe additional facilities should be provided, if anything the area should be returned to a more natural and native area."

"Keep the area reasonably natural. Do not add children's slides or painted/colourful play areas. Development should be tasteful and sympathetic to environment."

"Bare concrete structures disrupting the current natural views. If concrete is required for structural purposes, to do it combined with natural elements and sensible design taste."

"Please don't turn it into a Scarborough or Cottesloe."

"No skateboarding No kids swings etc... there are other areas for this along the beach. Swimmers love the pool for swimming and snorkelling. Kitesurfing is not recommended as it is a small zone to work in."

"Bollards on the dual-use path are completely superfluous. Cyclists slow briefly to negotiate the bollards, then speed up between them. The main reason a cyclist slows down in a pedestrian area is the presence of pedestrians. Each pedestrian constitutes an unpredictable moving obstacle, and is much more effective at slowing cyclists than fixed bollards or signs stating the obvious."

"- Any sort of restaurant/cafe/shop is highly inappropriate. - Reclaiming any beach area for infrastructure is inappropriate - Those poles on the footpath need to go too. absolute eye saw. let common sense prevail."

"All of them. The car park needs to be removed - it has gone downhill ever since. If people want a full service beach, then go to Scarborough or Hilary's."

"Motorised boating, fishing."

"A kiosk, Cark park, restaurant, ridiculous unnatural landscaping or anything with branding. We need to have a special place to go where it feels like a natural retreat from the overwhelming anxieties people face in life. Please don't mess up the opportunity to do our natural coast the justice and respect it deserves."

4 Conclusion

The participation rate in this online survey was the highest recorded by the City of Stirling for a Community Engagement Exercise. This outcome clearly demonstrates the effectiveness of the promotional and communications reach for this engagement opportunity, with a third of respondents living outside of the City's boundaries.

There were no surprises in regards to the main reasons people visit Mettams Pool, to recreate either at the beach or within the vicinity, using the dual use path for walking and cycling. Windsurfing, once a significant popular past time at the beach was also recognised as another reason people visited Mettams Pool and is an important activity to be considered in the design of the concept options.

Overall the community highly valued both the active and passive activity opportunities Mettams Pool provides to local residents and visitors. The sheltered nature of the bay and the natural coastal amenity are both draw cards. Equally respondents made it clear that there was no appetite to see Mettams Pool become overly developed and commercialised with retail opportunities. With the majority of respondents favouring Mettams untouched and natural appeal, with environmental values an important consideration when considering options for future proofing the area.

With the area identified as providing visitors with recreational opportunities, just as important was enhancing passive recreational space such as exploring the opportunity to enhance grass spaces and provide BBQs and additional seating. People were also in favour of upgrading current ablutions and changing facilities and improving shelter and shade, but without compromising the natural charm and vibe.

Universal access is equally important for all visitors to the beach including access to the water. The removal or finding a solution to the problem of rock hazards was repeatedly mentioned and identified as one of the main barriers to people accessing Mettams Pool.

In general people see an opportunity to slow down traffic along West Coast Drive and ensure clear separation between the public realm and traffic to support improved pedestrian and cycling safety. Although additional car parking is unlikely to be supported by the community, visitors did value parking and the need for it to be close to Mettam's facilities.

Overall the community recognise the need to take action to prevent the impact of coastal erosion at Mettams Pool, as long as it is not at the expense of the natural and simple appeal of the place. Many people would prefer 'no change' but recognise that to future proof the area, the City needs to consider options that will protect the major asset of West Coast Drive and allow for a number of facilities to support the community's continuous enjoyment of the place.

Consideration of these themes and values will be imperative when shaping the final concept option and presenting detailed design back into the community.

Appendices

- A Online FAQs
- B Survey Results Community Flyer
- C Full Survey Results My Say Stirling

A Online FAQs

FAQs

City of Stirling



Mettams Pool Coastal Engineering Options

FAQs prepared for Your Say Stirling website

1. Why is the City investigating coastal engineering options for Mettams Pool?

In 2009, a series of large storms caused significant coastal erosion at Watermans Bay. This highlighted that the northern section of the City's coastline between Trigg Island and Beach Road could be under threat from coastal erosion related to rising sea levels. The City commissioned a number of studies to better understand the situation and possible impacts on this section of coastline.

This investigation also identified that parts of West Coast Drive, an important District Distributer Road, which supports a popular coastal cycling and walking route and provides direct access to properties, could also be under threat.

The City is now investigating a range of coastal engineering options, with the aim of balancing the protection of West Coast Drive with retaining or enhancing the attributes of Mettams Pool so valued by the community.

2. What is causing the coastal vulnerability at Mettams Pool?

The coastal vulnerability at Mettams Pool is a result of a number of factors including:

- Changes to sand movements
- Severe storm events which may be being exacerbated by climate change
- Sea level rise which is expected to increase significantly in the short term and substantially in the long term.

Due to a combination of the above, the coastal vulnerability is likely to increase significantly in the future. These factors are now putting coastal assets at greater risk and requiring a more strategic approach to coastal hazard mitigation and coastal adaptation.

3. What is coastal vulnerability?

Coastal vulnerability is the extent to which the coast is able to cope with the effects of erosion, storms and sea level rise. Coastal areas that are exposed, sensitive and less able to adapt are vulnerable.

4. What is coastal adaptation?

Coastal adaptation refers to the actions taken to respond to climate change and coastal vulnerability. It aims to maximise the gains and minimise the losses associated with coastal hazards.

5. What is coastal risk management planning and what engineering options will be considered for Mettams Pool?

Coastal risk management planning is about being ready to manage the risks to the assets and values within the Mettams Pool locality, which are associated with the impacts of changes to our coast line, by planning for the most appropriate decisions and options to implement over time.

FAQs

City of Stirling



Mettams Pool Coastal Engineering Options

A range of engineering options will be considered, largely informed by the outcomes of community feedback. , Following this, a number of concept solutions will be presented and discussed at a community workshop.

6. How will the engineering options address erosion at Mettam Pool?

The risk management option/s chosen will determine how the infrastructure related to Mettams Pool can be adapted to optimise the unique features of Mettams Pool. Coastal adaptation options may include, but are not limited to, relocating assets, placement of sand, structures such as vertical walls or revetments, as well as providing alternative 'beach' spaces for when the sandy beach is compromised.

7. How will the engineering options be evaluated?

The engineering options will be evaluated using a multi-criteria analysis frameworks, which will rank the engineering options based on the relative benefits of each option across a range of criteria. The analysis will consider the community values, environmental impacts, economic impacts and construction and operation/maintenance costs.

8. Will the engineering options impact facilities and amenity at and around Mettams Pool, such as:

- a. Universal access to beach and water
- b. West Coast Drive functionality
- c. Cycling and Pedestrian Routes
- d. Public toilets and changing room
- e. Viewing Deck
- f. Dunes and vegetation

The community consultation process will help to establish the community values attributed to the facilities and amenity at Mettams Pool. Those values that are deemed to be very important, will be given greater consideration for accommodation within the engineering options.

9. How much will it cost to implement the engineering options and how long will it take?

Once the community have been consulted, then an initial design for the preferred option can be undertaken. This will enable a cost estimate to be prepared to be reported to Council for consideration in future budgets.

10. Will the engineering options protect the functionality of West Coast Drive?

Yes. During construction works there will be temporary measures required to West Coast Drive, however, the ability to access properties, together with walking, riding and driving, will be maintained at all times.

City of Stirling



Mettams Pool Coastal Engineering Options

11. Will the engineering options protect access to properties along West Coast Drive?

Yes. The engineering options will also consider risk management planning for West Coast Drive in the locality of Mettams Pool. If appropriate, modifications to West Coast Drive will also be considered.

12. Will the community continue to have access to Mettams Pool and beach area?

Yes. An outcome of the coastal adaptation works will be to retain access to Mettams Pool and the beach area, as most of any construction works will need to be accommodated within the road reserve . The form of both the temporary and permanent access will be informed by community feedback.

13. Are there any other potential vulnerable areas along the coastline between Scarborough and Watermans Bay?

This is briefly outlined in the Coastal Hazard Mitigation Strategy webpage available on the City's website.

14. What happens if we do nothing at Mettams Pool?

Without any coastal adaptation or mitigation works at Mettams Pool, erosion of the beach and dunes will continue. This has already led to the closure of some beach accesses with a high risk that storm erosion could lead to the loss of the northern steps, change rooms and even the coastal shared path

15. Are there any coastal risk management activities in place between Watermans Bay and Mettams Pool at the moment?

The City undertakes regular coastal risk monitoring and management along its coast. Recent activities completed between Mettams Pool and Watermans Bay include:

- » the replacement of access stairs at James and Sorrento Streets
- » dune protection at James Street
- » cliff stabilisation and protection at Hamersley Pool.

Following very significant storm erosion in 2009, the City installed a Geotextile Sand Container (GSC) seawall at Watermans Bay to manage risk at that location. This has now stood the test of time and should provide adequate protection for at least 10 more years.

16. How can I provide my feedback on the engineering options?

To stay updated on the project as well as opportunities to provide your feedback on what values are important for evaluating the engineering options, visit www.yousaystirling.com.au/MP by June 16th 2019.

Please also register your contact details at Your Say Stirling to attend a Community Forum on Saturday 6th July 2019, as seating capacity is limited.

FAQs

City of Stirling



Mettams Pool Coastal Engineering Options

The forum will provide the opportunity for the community to meet the project team, hear about the next steps in the process and understand how the community's feedback will help shape the engineering option(s) to provide long term solutions for the ongoing sustainability of Mettams Pool.

B Survey Results – Community Flyer

Managing Coastal Erosion **At Mettams Pool**



Mettams Pool has been identified as being highly vulnerable to immediate and future coastal erosion.

As a result, the City is looking at engineering options that will help to protect it into the future. To better understand what the community values about the coastal assets and infrastructure surrounding Mettams Pool and to inform the development of these options, the City asked the community to have their say.

Public consultation took place between Friday 22nd May and Sunday 16th June and a total of 491 online surveys were completed. Below is a summary of their findings.

You told us

Q1. Please let us know what best describes you?



364 (74.1%)

Property owner or resident within the City of Stirling

108 (22%)

Regular user of Mettams Pool, who lives outside the City of Stirling

19 (3.9%)

Other

Q2. If you visit mettams pool which of these activities do you usually do?



338 (25%)

Jog / walk ride along the dual use path



428

(31%)
Swimming
and
snorkelling



248

Sit / sunbathe / picnic on the beach



112

(8%) Surfing



210

(15%)
Sit and enjoy
the view from
the viewing
deck



43 (3%)

(3%) Other



24 of the other responses referred to windsurfing as a reason for visiting Mettams Pool.



"Unique and versatile part of the northern beaches. Have windsurfed there for many years." "I swim, walk (on the pathway and on the beach), enjoy the coastline, meet up with people or say hello to newcomers. A great community hub for all ages." "Social aspect of daily swimming with my friends in a safe ocean environment."

Aggregated score for each response
2362 Swimming / snorkelling in the sheltered bay
Coastal amenity (e.g access to a sandy beach, dunes and natural vegetation, views)
2077 Universal access into the water
2025 Universal access to a sandy beach
1964 Community facilities - toilets and changing rooms
1679 Upper grassed 'beach' area (for when beach sand is limited)
1669 Surfing (applies to area north of bathing beach)
Parking immediately adjacent to Mettams Pool
1372 Creation of a 'plaza' area to improve road safety and lower speeds past Mettams
1298 Increased pedestrian amenity/activity area at street level
880 Refreshments (snacks, hot drinks, ice-creams)



When we asked you to tell us about the future of Mettams Pool, this is what you told us.

Keeping the **natural amenity** of Mettams Pool was paramount. There was a strong theme of beach goers enjoying the secluded and undeveloped nature of the beach and surrounds.



"Keep it as natural and untouched as possible. Environmental safety is of upmost importance."

An overwhelming majority told us that any additional development particularly retail or cafés or structures would distract from the natural environment.



"Please do not spoil this area from its natural beauty. This is its biggest strength. We do not want another commercial development. Avoid lots of concrete......"

Many of you supported improving the access to a sandy beach and the water. This did not simply relate to disability access but more broadly to all users. In part this referred to requests to seek options to remove rock hazards.



"There are too many rocks on the main beach of Mettams Pool which are causing hazards to beach goers. Negotiating walking to the water is a problem." Equally, there was support for an **enhanced grass space**, supported primarily as a laydown area for rigging windsurfers. BBQs and additional seating were also connected to an **enhanced passive recreation space**.



".....more grassed area for windsurfers to set up on.

An improved ramp leading down to the beach. More parking, reduced traffic and traffic speed."

Many visitors to Mettams Pool would like to see an upgrade to the ablution and changing facilities and improving shelter and shade.



"Please keep it just a simple beach, as it is now, with toilet shower facilities and that is it. Please don't spoil its charm and understated vibe."

In general, feedback didn't support any additional **parking** immediately around Mettams Pool. A safe pedestrian and cycling environment was frequently mentioned, ensuring there was clear separation from **traffic**.



"More parking for cars is not appropriate. Car parking bays should prioritise access for disabled people others should be encouraged to walk or cycle or catch public transport."

C Full Survey Results - My Say Stirling

Survey Report

20 February 2018 - 16 June 2019

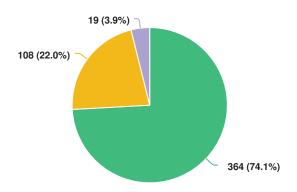
Mettams Pool -Community Values Survey

PROJECT: Managing coastal erosion at Mettams Pool

Your Say Stirling



1. Please let us know what best describes you:



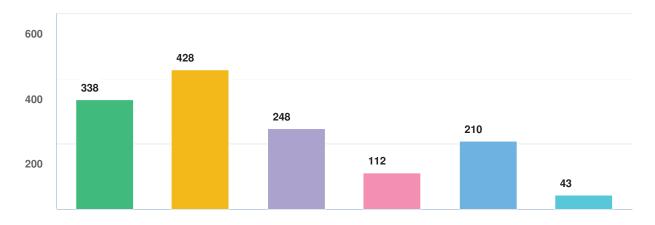
Other

Question options

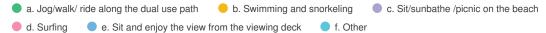
I am a property owner or resident within the City of Stirling

I am a regular user of Mettams Pool, who lives outside of the City of Stirling

Q6 2. If you visit Mettams Pool which of these activities do you usually do?



Question options



Optional question (486 responses, 7 skipped)

Q7 Please provide a brief description of why you visit Mettams Pool

Anonymous walk on the sand close to waters edge from end to end

5/25/2019 10:09 AM

Anonymous I swim, walk (on the pathway and on the beach), enjoy the coastline, meet up

5/25/2019 05:56 PM with people or say hello to newcomers. A great community hub for all ages!

Anonymous Underwater Photography

5/27/2019 02:19 PM

Anonymous Close, protected waters for snorkeling, paddle boarding, sunset picnics -

5/28/2019 09:10 AM near pizza / fish n chips shop

Anonymous Family photo spot

5/29/2019 10:00 PM

Anonymous Windsurfing

5/29/2019 10:28 PM

Anonymous windsurfing

5/30/2019 12:09 AM

Anonymous b & c as mentioned above and also beach walking, beach combing, rubbish

5/30/2019 01:08 AM picking, taking photos of the beautiful scenery and local wildlife

Anonymous Regular Windsurfing - unique reef surf break

5/30/2019 09:17 AM

Anonymous Windsurfing

5/30/2019 12:08 PM

Anonymous 4 days of the summer weeks I rig my windsurf gear on the lawn and windsurf

/30/2019 06:10 PM for 3 hours per day.i also take my kids swimming there and tide on the coast.

Anonymous Windsurfing

5/30/2019 09:21 PM

Anonymous windsurfing

5/31/2019 11:39 AM

Anonymous Windsurfing

5/31/2019 11:45 AM

Anonymous Windsurfing

5/31/2019 01:14 PM

Anonymous I am a windsurfer. Mettams pool is my local windsurfing spot in season

5/31/2019 05:06 PM

Anonymous Windsurfing

5/31/2019 08:42 PM

Anonymous

Kids swimming lessons

6/01/2019 10:13 AM

Anonymous

All of the above and also windsurfing in the waves at Mettams Pool

6/01/2019 04:55 PM

Anonymous

Windsurfing

6/01/2019 06:25 PN

Anonymous

Windsurfing

6/01/2019 08:31 PM

Anonymous Windsurfing

6/02/2019 10:43 AM

Anonymous Windsurfing

6/02/2019 01:27 PM

Anonymous Unique and versatile part of the northern beaches. Have windsurfed there for

3/2019 09:54 AM many years.

Anonymous All of the ticked answers above plus use of the open shower facilities ground

6/03/2019 10:02 AM level on the beach

Anonymous Walking the length of sections of the beach (and picking up any rubbish that

6/03/2019 11:51 AM is encountered)

Anonymous watersports: Windsurfing, surfing and SUP

6/04/2019 11:38 AM

Anonymous Windsurfing

6/04/2019 03:06 PM

Anonymous Windsurfing

6/04/2019 05:36 PM

Anonymous I have been windsurfing at mettams for the past 30 years

6/05/2019 02:49 PM

Anonymous windsurf

6/05/2019 04:27 PM

Anonymous Windsurfing

6/08/2019 12:44 AM

Anonymous Windsurf

6/09/2019 05:15 PM

Anonymous Windsurfing

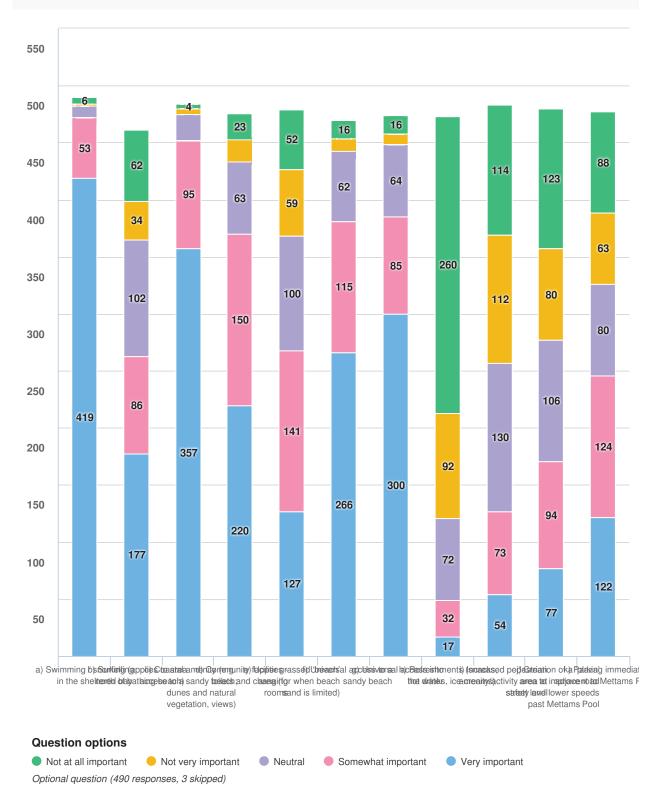
6/09/2019 06:56 PM

Mettams Pool - Community Values Survey : Survey Report for 20 February 2018 to 16 June 2019

Anonymous I don't visit the area. My values response is provided as a ratepayer who will 6/10/2019 09:40 AM contribute funding to coastal adaptation. I do not visit mettams pool Anonymous Anonymous Social aspect of daily swimming with my friends in a safe ocean environment Anonymous Use the playground above Anonymous It's beautiful Anonymous carry out volunteer work in the vicinity, take visitors there Anonymous To swim, look for crabs & other marine life, play on the sand 6/12/2019 06:47 PM Anonymous the view, coffee at nearby cafe, I am now elderly and cannot swim as before, 6/13/2019 07:04 PM I used to do so,I also need disablled access for ease of geting onto the beach swimming and snorkling every day Anonymous

Optional question (43 responses, 450 skipped)

Q8 3. When thinking about facilities and amenity at Mettams Pool, how important are the following?



Q9 4a) When thinking about the future of Mettams Pool, are there any facilities you would like to see at Mettams Pool, which are not currently provided?

Anonymous Functional "disabled" ramp to allow access to water for people with

24/2019 05:08 PM disablilties or infirmaties.

Anonymous I think the idea of a plaza!Or any other soft engineering techniques to reduce

speed of cars driving past / different colour/material of pavement etc etc.

Anonymous I prefer the 'unspoiled' nature of Mettams as it is.

5/25/2019 05:56 PM

Anonymous Hot showers. Swim area and small beach with a few less rocks.

5/25/2019 09:09 PM

David29 Increase shower stalls with more functional shower heads.

5/26/2019 03:16 PM

Anonymous Access all year round to the ocean for swimming. Currently the rocks on the

5/26/2019 06:36 PM beach are exposed which doesn't allow easy access into the water.

Anonymous No

5/27/2019 09:34 AM

Anonymous Upgraded (enlarged) changing/shower room. Coastal management to allow

27/2019 01:54 PM more sand retention on the beach. Removal of sharp edges to the shore

rocks which sooner or later will cause serious injury to beach users

particularly the elderly. This is perhaps only one of two (the other being the

very small Hamersley Pool) shark-safe swimming beaches on the

metropolitan coast.

Anonymous No - I love it as it is - as long as ability access is accounted for I don't see

/27/2019 02:19 PM any reason to change.

Anonymous I think a coffee shop directly above mettams pool would be nice, possible

somewhere to buy/rent new snorkels? I would love to be able to read some

information regarding the indigenous background of the area and have more

street art relating to this

Anonymous Lesss poles to slow cyclists down on the path

5/27/2019 07:09 PM

Anonymous Signage for visitors

5/28/2019 12:16 AM

Anonymous No

5/28/2019 12:58 AM

Anonymous A more user friendly ramp that caters for elderly and disabled that goes right out into the water so people can be wheeled out on water friendly chairs etc

to experience being in the water With railing and steps at intervals for those

who want to access deeper water to swim but find it hard to walk out through

the shallow sand

Safe and unobstructed Access into the water. At the minute the rocks are Anonymous

preventing safe access.

No unless a restaurant / bar was an option Anonymous

Anonymous A cafe

5/28/2019 05:34 AM

Anonymous I think one or more outdoor showers would be really helpful!

No. Too small to be able to support large visitor volumes Anonymous

Anonymous BBQs Playground More grass areas The beach to the south of mettams

> (where the paths goes to tthe south) is under utilised. It should have some rocks in the water removed to create a better swimming pool - as was done at mettams pool, by mr mettams. I'd also love to see more grass areas and some bbgs. Please note - although inconvenient, The beach rocks control the beach erosion, and there should be solid environmental evidence to support

removing any rocks from the beach.

Keep it low key. we don't need shops or anything like Scabs or city beach. Anonymous

Coffee cart? Anonymous

Anonymous BBQs?

Anonymous Shade structures would be great

Crosswalk or similar when crossing West Coast drive. it can be very busy Anonymous

and dangerous at times OR reduction of speed limit to 40km/h along this

stretch of road.

Anonymous Yes, barbecues and playground for kids. Cafe.

Anonymous A safe path to the Mettams pool water that is not littered with pointy rocks

Anonymous A safe means of crossing the road! At present there is nothing to stop traffic

between Marmion St/Karrinyup Rd and woop woop!

Anonymous No other facilities are needed, just an upgrade of those that are there. The erosion of the dunes, the lack if access to beach due to ramp closures and

stairs not in good condition. The lack of sand on the beach poses incredible

danger to young and old getting in and out of the water. The rocks are almost always visible and they are sharp. I've lived near Mettams pool now for 11 years and over the years have seen this slowly decline. There never used to be an issue with this.

Anonymous

5/28/2010 12:07 PM

Removal of rocks

Anonymous

5/28/2019 12:24 PM

Better separation of cars, bikes and pedestrians as it is still dangerous as people step out of cars or beach access walkways into the path of cyclists. Unless you put the existing amenities under the road it will be a challenge to do that with the limited space?? I am concerned the plaza suggested above with mean less separation than there is now and it is too dangerous to ride on the road because of its current narrowness.

Anonymous

5/28/2019 01:33 PM

NO

Anonymous

5/28/2019 01:37 PM

No - try to maintain low key facilities and natural attributes

Anonymous

5/28/2019 01:51 PM

A sandy beach without sharp rocks at the water entry point.

Anonymous

5/28/2019 02:37 PM

larger grassed sitting area. All other current facilities are adequate.

Anonymous

5/28/2019 03:21 PM

What is there is great, when accessible eg paths, ramps. It would be great to be able to take our dog on the beach in the evenings. This is not feasible with

lots of people during the day but after, say, 6pm would be nice.

Anonymous

At various times of year and I understand that this is due to currents changing etc but access in and out of the water is very hazardous due to rocks. Whilst as an able bodied person I generally suffer no more than a stubbed toe my and lots of other elderly people cannot get in and out safely and as a result miss out. I think it would be beneficial to place several large geotextile bags in and around the ramp area to assist either disabled or elderly people far greater access all year round to this amazing place. Would be well worth sloping the drainage at the shower back towards the beach so that the sand that currently clogs the drain flows back to where it belongs. No But would like to consider 40km speed between trigg and north beach rd.

Anonymous

Anonymous

5/28/2019 03:56 PM

The grassed area to be located between the existing toilet/shower block and the disabled access pathway. Held in position with a retaining wall, approx 1

metre high. and if possible shade sail provided in the summer months.

Anonymous

5/28/2019 04:40 PM

No

Anonymous

Safer access to the water.

5/28/2019 06:09 PM

I would like to see disabled access maintained for obvious reasons, it is the

Anonymous

only pool sheltered by the reef suitable for disabled and small children. The path runing from the undercover area to the ocean requires extending further into the pool area. I would like to see proper maintainance of the dune area and for it not to be allowed to degrade to the point that it currently has. These areas support wild life that delights children and adults alike. This is a poorly devised survey as it is asking questions about introducing more facilities and not about dune repair. The dune area south of the change room has been impacted over the last few years. I noticed that after the replanting of the dunes the wire fence running infront of the vegetation and separating the sandy sitting area was removed. I observered children constantly pulling at the sandy wall and playing on it, consequently that wall has very badly erroded over the last few years. I notice the dune area north leading to the ramp is covered in thick creeper and has not eroded. The solution is simple and inexpensive. Refill the lost dune area and rebuild and engineer the disabled paths going to the water and plant endemic creepers.

Anonymous

jimbo31

Anonymous

Anonymous

Anonymous

Anonymous

Carol2019

Anonymous

5/28/2019 09:47 PM

Anonymous

Anonymous

Anonymous

No

no

Safer acceptor the water via concrete ramp eg.. stainless steel handrail extended on the left side of the concrete ramp and 2 stainless steel curves bars on the right side of the concrete ramp with stainless steel steps into the water to enable a person to hold onto to get out of the water..

BBQs might be nice but not important to me.

No

Disability access

I would hope that shelter and a ramp will always be a priority. Plus regular inspections of build up of seaweed and rocks in swimming area.

No

Upon researching how metams came to be it might be worth removing some of the reef on the immediate shore (20m) from bays directly to the south leading up to Trigg point. This may free up traffic and open beaches currently

not with accessible ocean as amazing as metams.

It is perfect as it is

Parking

Anonymous No, leave it alone Anonymous A safe, sandy entrance Anonymous No Anonymous Signage to identify fish and marine creatures that swimmers and snorkelers may see. History of the area. Anonymous N/a Anonymous No Anonymous Better toilets and changing facilities Better beach This is a tough one as even with the minimal ammenities at present it is an Anonymous EXTREMELY popular beach (I think particularly as it is the only protected beach along our coastline in our local area so for families with toddlers it is really valuable Anonymous No 5/29/2019 09:14 PM Anonymous shade over upper viewing deck Signs about respecting the reef Anonymous No, there are plenty of adequate facilities nearby already Anonymous Slightly larger grassed area. Easier access for windsurfers to get down to the area to the north of the pool. Not just for Mettams Pools but for the entire coast; water drinking fountains! Anonymous But for Mettams Pools directly, can you build like a sea wall around it to help preserve the sand and erosion. Similar to that of the ocean pools over east, but more to protect the reef and help slow the erosion Anonymous More outdoor body and foot showers. Drinking fountain It's a beautiful natural area along our suburban coast. Don't change access Anonymous too much that it becomes destroyed. Anonymous Small outdoor concerts (1 or 2 person bands) food truck areas. Sunset photo Anonymous safe stairs, my daughter fell down, too steep and dangerous.

5/29/2019 10:14 PM

Anonymous Paths to water through the sand without risk of cutting feet on sharp rocks No Anonymous Anonymous A family changeroom would be practical given the amount of children/babies that access the sheltered beach. The jaggad rocks covered somehow. Those never used to be there when I was a child (30 yrs ago) it makes it difficult to find a safe sandy spot to sit amongst the many people that access the small beach. Anonymous I'd like to see a pedestrian crossing at mettams pool and other popular areas along west coast drive. Access to swimming not there at moment Anonymous Anonymous No. Although ensuring universal access is maintained is important. Anonymous no Anonymous No all good . I'm 47 and had swimming lessons at this beach when I was a kid and I'm shocked how little sand there is left there now. The erosion is bad Anonymous A cafe would be great. More outdoor showers No Anonymous Anonymous I like it as it is. Particularly have used the disabled access ramp as it's the only place on this coast where you can use crutches or wheelchair to waters edge. Covered areas Anonymous I like that the area isn't over developed. The facilities that are available are Anonymous 5/29/2019 11:31 PM sufficient. Toilets/shower facilities Anonymous 5/29/2019 11:45 PM I watched a documentary on how Mettems had been created. The gentleman Anonymous wanted an area to protect from erosion, somewhere safe for kids/elderly to swim and enjoy the views for snorkeling. Due to shallow break it can be quite tricky as a diver to get in due to surge. Sinking something further out would be fantastic as a tourist attraction but also assist with a diversion for the break. Maybe option to hire out sun umbrellas. Lots of families use it and have so

Anonymous

5/29/2019 11:52 PM much to carry anyway that it would be good to have something readily

available. And money raised from hire fees (not expensive, gold coin

donation?) could go towards coastal management and research.

Anonymous

5/29/2019 11:57 PM

Nope

None

Anonymous

5/29/2019 11:59 PM

Anonymous

No

Anonymous

Shade

5/30/2019 12:19 AM

Anonymous

I would not like an increase in facilities as this will likely increase the about of people on an already crowded beach and negatively impact the marine habitats. I would like increased signage on the importance of not littering, touching marine organisms, and encouraging people to use reef friendly sunscreens

Anonymous 5/30/2019 12:35 AM

Sink something out the back. It's got a pretty decent surge on most if not all days so limits you diving as the entry is too horrific. Having something embedded to break up the surge will also supply a break further out for those

who wish to surf

Anonymous

Sand restoration as installation of hard coastal management features would impede the views and potentially affect the easy and pristine snorkeling at

the beach

Anonymous

Keep it wild as possible, with disabled parking only

5/30/2019 01:03 AM

Anonymous

No

Anonymous

Safe entrances into the water, past the sharp reef.

5/30/2019 03:04 AM

Anonymous

E/00/0010 00:04 AM

Cycle lane for bikes only. Currently it's dangerous riding on the road and hazardous on the dual use path especially when busy. The dual use path is okay for a walking/jogging pace cycle but anything more than that it becomes dangerous for cyclists and pedestrians. This applies all along that strip of

West Coast Drive.

Anonymous

Improved picnic facilities ie. tables, sun shelters, and increased parking.

5/30/2019 08:35 AM

Anonymous

Shade on the beach, a kiosk or food truck,

5/30/2019 09:12 AM

Anonymous Wide stairs/ramp

5/30/2019 09:17 AN

Facilities are good, if anything the site should be returned to a more natural

Anonymous

5/30/2019 09:19 AM native area

Anonymous Keep it simple, and as natural as possible

5/30/2019 09:38 AM

Anonymous The focus should be on preserving the marine park and the marine life

5/30/2019 09:41 AM including the dunes in the area.

Anonymous Better change rooms. Hot showers with doors that close for privacy. Hand

0/2019 10:21 AM soap provided.

Anonymous Good parking and beach access

5/30/2019 10:50 AM

Anonymous More accessible beach space. Very hard to find access with kids.

5/30/2019 11:02 AM

Anonymous No

5/30/2019 11:45 AM

Anonymous The current area is fantastic for how I use it. The only thing I would like is

more parking on those busy summer afternoons when I go windsurfing and

there are still people enjoying the sheltered beach.

Anonymous No...I worry that you will screw it up

5/30/2019 12:14 PM

Anonymous Less rocks!!! Is it possible to remove some to allow access to the water?

5/30/2019 12:52 PM

Anonymous No.

5/30/2019 12:58 PM

Anonymous No It's a beach not a mall

5/30/2019 01:24 PM

Anonymous KISS

5/30/2019 02:56 PM

Anonymous Aaron Hunter Consider it as an opportunity to protect the existing natural

environment and blend it with some wonderful public amenity. A artificial reef to protect the shoreline and encourage a consistent surf break would be

amazing. An interesting backstory to Mettam's Pools history -

https://www.perthnow.com.au/.../the-fascinating-history...

Anonymous We took our daughter there last year to do some snorkelling, she is

5/30/2019 03:43 PM quadriplegic cerebral palsy disabled and is in a wheelchair. The ramp part of

the access to the sand was VERY slippery at the end, and is quite scary when pushing the wheelchair down there. PLEASE consider wheelchairs and the people who are holding on, we need NON SLIP surfaces. Thank you.

Anonymous More older people are using the facilities Beach patrol would be an

improvement I use the area daily and the outside shower area could be

improved with more showers of better quality

5/30/2019 04:39 PM

The current disabled ramp is useless and dangerous when wet. It has a drop off into the water and unusable by the disabled in its current state what ever strategies are being considered to mitigate erosion definitely do not simply sandbag the problem as has been done at Watermans

Anonymous

Proper facilities- currently the change facilities are inadequate and smell of sewerage constantly - more hooks in the facilities ESPECIALLY the disabled

change room MORE CONSULTATION lighting, in particular over the stairs

Anonymous

Anonymous

5/30/2019 04:48 PM

No, current facilities are fine. The shaded area is great and the toilet block

and showers are fit for purpose (could be renovated - but still OK). No need

for a kiosk or anything - plenty of cafe's nearby

5/30/2019 04:51 PM

Sink a large retired navy ship far out on the reef slightly submerged, great tourist attraction for divers/snorkelers and it would create a barrier for erosion

Anonymous 5/30/2019 05:12 PM

on the beach.

Anonymous

More parking. Remove rocks on the beach that get exposed from sand moving in summer. Keep it low key toilets showers more parking. Turn more of paving into grass. Build a retaining wall where sand dunes are and fill in flat and plant some grass.

Anonymous

IF this is a practical solution which would work, it would be nice to get in some heavy machinery and remove a lot of the rocks along the water line and on the beach from the south ramp up just north of the toilet block. Last year it was difficult to enter the water because of exposed rock. The hope would be that sand would fill in the gaps and make entry to the water less awkward. I do not think the above work would affect the natural beauty of the area. Some retaining walls with grassed areas similar to Cottesloe would also enhance the area from the south end of the pool to as far North as is practical.

Anonymous

no

Anonymous

No

5/30/2019 09:21 PM

No

Anonymous

Anonymous

5/30/2019 10:13 PM

The northern patio I believe is great if the ramp to the water can stay I think this feature very useful. The lighting under the patio, suggest some festoon lighting to warm up the space in the evening. Great spot for a evening picnic. A bbq facility would be great also. Above the toilets, it think would be great so see a some pop up bar for evening champs or spritz and create a bit of euro theme where ppl can enjoy a causal sunset drink. A few umbrellas and some soft music. One idea would be to get the local tafe to weld up a mettams stainless steel arch over the entrance. The rocks on the water line are a issue, certain times a year the rocks become very exposed which make it hard to the elderly to enter and exit the water. I'm not sure if getting a rock

breaker down there to flatten off the under laying stone. Not sure if this will then make it hard for the sand to retain there? One idea might be to actually build up the water line and have some stainless steel steps ladder into the

water. It's an amazing asset which deserves some love!

Anonymous

Near by parking. More shaded areas, perhaps even up on the road level.

Anonymous

No

Anonymous

Rocks removed or covered. As it is now the beach is covered with sharp rocks and one can't get in tot the ocean. The is no point in enhancing the

area without fixing the rock problem.

Anonymous

Shaded areas

Anonymous

More parking! More sand added to cover rocks which impact entry into the water. This is a very popular beach with lots of families with young kids and also the elderly who swim here. I'd like to see this beach patrolled with Life Guards!

Anonymous

5/31/2019 12:25 AM

Slowing the traffic down in that area, Trigg pt to Beach road should be 40Km

the same as Cottesloe & Mullaloo beach areas.

Anonymous

5/31/2019 02:25 AM

I would like it to stay very much the same as it is.

Anonymous

5/31/2019 04:37 AM

Better patking

Anonymous

BBQ Water fountain Shower and toilets

Anonymous

No, all I want is to surf there

Anonymous

The current amenities are good. The problem is the exposure of the rocks 5/31/2019 08:41 AM which make access to the water very difficult.

No access and an outdoor shower does fine

Anonymous

5/31/2019 08:46 AM

Anonymous

Easy access to water. Too many sharp dangerous rocks at present. Maybe

bring in some beach sand to cover them again

Anonymous None

More bike racks, both ends of the beach.

Anonymous

Anonymous More showers for washing cleaning after surfing/snorkeling

5/31/2019 10:11 AM

Page 68 of 107

Anonymous No 5/31/2019 10:42 AM Anonymous more grassed area for windsurfers to set up on. An improved ramp leading down to the beach. More parking reduced traffic and traffic speed. Anonymous I regularly windsurf at Mettams Pool. It is one of only a handful of spots in the 5/31/2019 11:45 AM metropolitans area of Perth that provides waves during summer sea breezes. Windsurfers currently use the small grass area next to the toilet block for rigging and de-rigging. There is a common understanding amongst windsurfers using this area to quickly vacate space so others can move in. During peak times however this can mean there simply isn't enough space. It would be great if the area North of the toilet blocks which is currently concreted could be converted into grass area or at least covered in grass alternative area such as "astroturf". Anonymous No Anonymous No N/a Keep it as natural as possible Anonymous Anonymous Better access to the beach on the right hand side with my windsurfer. The concrete ramp should be tapered off to all sides at the end towards the beach in order to facilitate the sand erosions . Rocks should be removed in the shallow water on right hand side beach . There is a high injury ocurrance with windsurfers when starting and coming in after sailing there. (abrasions on legs and feet) No. Great the way it is. Any increased infrastructure will invite more people to Anonymous an already crowded area Anonymous Lights for evening swim & surfing Please stop blocking off ramp and stairs. Simply need to concrete the voids below these to make safe. Please provide concrete path to the water - the exposed sharp rocks are a hazard, particularly to older folks, kids and disabled. Hot showers would be great (but probably pushing a bit) Anonymous larger grass area with shade south of toilets. Remove sharp rocks at pool entry- very dangerous for kids /seniors Anonymous No - keep it simple, natural and usable Anonymous none Steps should be re- enforced by concrete walls both sides like Hamasley Anonymous

pool. The light in the change room should be on longer time in the morning during Winter. It is very dark before 7 am at the moment. There should be

5/31/2019 08:42 PM

enough toilet paper in the female change room.

No - but am concerned at the description of "surfing to the north of bathing beach" This ignores windsurfing that needs to be able to occur anywhere in

Mett's bay- as it is undertaken when people don't want to swim of surf

Anonymous A real ocean pool to protect beach

5/31/2019 09:17 PM

Anonymous

Third lane on the road for bikes - keep the path for pedestrians! More bins

would be good.

Anonymous no

5/31/2019 09:33 PM

Anonymous no

5/31/2019 10:03 PM

Anonymous The pavilion and showers on the south are very useful. Need better open air 5/31/2019 10:42 PM beach showers. Need good access to the water. Older swimmers who used

to swim every day now can't or have difficulty accessing water due to sharp

rocks.

Anonymous No

6/01/2019 02:49 AM

Anonymous Nil

6/01/2019 08:08 AM

Anonymous No

6/01/2010 08:31 AM

Anonymous Better access to water - elimination of very dangerous rocks on beach edge.

6/01/2019 09:21 AM

Anonymous We have stopped swimming there due to the rocks on the beach, they should

01/2019 10:23 AM be removed

Anonymous Because of the high increase in numbers of people coming to Mettams pool I

in front of the change rooms to turn this into a grassed lawn similar the the area where the gazebo is. This area would need to have a retaining wall run along the beach to stop erosion and support the infill. At the moment this area is unused. Then older people and young children can use this grassed area which would relieve some of the crowding on the beach thus stopping erosion. I have been using Mettams pool for over 30 years swimming and surfing. In resent years crowd numbers have swelled. This in turn has

would to see the council investigate the possibility of using the area directly

loosened sand on the beach area in front of the change rooms causing serious erosion and rock exposure. It happens every summer then in winter the sand comes back because of storms and the lack of human traffic. I use

Mettams pool just about everyday so this issue is very very important to me.

Thank you.

Anonymous This past summer the water was quite difficult to access because of the rocks

6/01/2019 02:22 PM

(and I'm a reasonably fit, middle-aged person) - especially if it is a bit choppy. The most important thing for me would be to get back the sandy beach we've had in previous years and to not have to climb over / through the rocks to get into the water. Another thing which would be a nice improvement would be making it easier to cross West Coast Drive. It can get really busy. You can be stuck in the middle of the road with a pram and a dog and have to rely on people stopping to let you cross. Some kind of pedestrian crossing (e.g. with a button to press), an underpass, 'plaza' area as suggested would be really good.

Anonymous

PARKING REGULATIONS ENFORCED

6/01/2019 03:47 PM

Anonymous 6/01/2019 04:55 PM

Areas for rigging up and preparing for windsurfing at the location. Grassed areas and access open as well as suitable parking and entry and exit.

Anonymous

Restaurant and bar

6/01/2019 05:12 PM

Anonymous

Enough open space for windsurfers to set up. It is critical that windsurfing remain a fundamental activity to be carried out at the site. Windsurfing is a key tourist attraction at the beach and is world renowned in the windsurfing community. Recommend WA tourism ensure that windsurfing is promoted at the site.

Anonymous

Nature

6/01/2019 06:45 PM

Anonymous 6/01/2019 07:00 PM I WOULD LIKE TO SEE THE WHEELCHAIR FUNCTIONING AGAIN. THIS IS NOT ONLY IMPORTANT FOR WHEELCHAIR USERS AND THEIR CARERS BUT OTHER FOLK WITH MOBILITY PROBLEMS.

Anonymous

6/01/2019 08:31 PM

No

Anonymous

Improved disabled ramp. Present ramp is dangerous and a deterrent for all, particularly disabled persons. Improved access to water when access is rocky (due natural sand removal). This could possibly be in the form of a floating deck from the ramp.

Anonymous

No

6/01/2019 10:22 PM

Anonymous

Food places such as a cafe

Anonymous

Maybe better and more modern toilet and shower facilities.

6/01/2019 11:21 PM

Anonymous

6/01/2019 11:37 PM

In order to avoid any further erosion along the stretch from Trigg through to Sorrento beaches I think the City should be looking at artificial reefs they have been used extensively around the world to help for this problem. You can't just keep vegetating the beaches and expect a different result. The sand should be naturally blown back into the sea to provide banks for the

waves to break on creating a natural buffer for the coastline.

Anonymous Consideration for incorporating into improvements a pool (not overly large)

02/2019 03:28 AM like the beach pools in Sydney

Anonymous No

6/02/2019 06:57 AM

Anonymous no, I like the fact that is is virtually untouched and natural and the accessible

/02/2019 08:38 AM ramp is a very important aspect of Mettams Pool.

Anonymous Not really - the lack of commercial ventures on the beach or directly above it

6/02/2019 10:43 AM add to the attraction. It's a family beach in the morning and has plenty to do

Anonymous No added facilities. Just a nice natural sandy beach area.

6/02/2019 10:58 AM

Anonymous I think of Mettams like the little version of Bondi Beach, just not pretentious. I

6/02/2019 11:07 AM am always looking for parking in the area and it's extremely limited.

Anonymous Perhaps shaded area (sail) above change rooms

6/02/2019 11:27 AM

Anonymous Safe access to water

6/02/2019 11:33 AM

Anonymous sustainability!

6/02/2019 11:38 AM

Anonymous Ramps into the water so swimmers don't have to walk over jagged rocks in

02/2019 11:53 AM the water close to the shore. More sand built up on the beach area. A

breakwater of some sort to prevent erosion.

Anonymous More grassed areas for rigging windsurfing equipment.

6/02/2019 01:27 PM

Anonymous A beach pool like the ones they have over east

6/02/2019 01:29 PM

Anonymous None that I can think of

6/02/2019 01:30 PM

Anonymous More sand on beach to cover the rocks

6/02/2019 03:09 PM

Anonymous No

6/02/2019 04:57 PM

Anonymous Grassy lawn with playground.

6/02/2019 05:24 PM

Anonymous No, however three issues annoy me no end. One, the large number of never

used disabled bays two is all that are needed. Two, The strips of metal on the

steps. Three, the male toilet block alteration of a few years ago that

mettams i ooi - ooiiimamty value:	Sourcey . Our vey responsion 20 i ebitally 20 to to 10 daile 20 is
	decreased the air flow and means it stinks more than it did and reduced the
	usable space.
TonyK	Better access to the water - it can be very precarious at certain times
6/02/2019 05:34 PM	depending on the state of the sand and the rocks. I am sure that it would not
	be impossible to 'remove' some/all of the rocks in the area between the ramp
	and the stairs to enable easier / safer access to the water. Parking in the
	vicinity is very scarce and the restrictions in nearby roads do not help.
	Mettams Pool is one of the very few 'safe' beaches in the area and needs
	better parking availability.
Anonymous	Need to protect the dunes from erosion from the sea & people (often kids).
6/02/2019 07:15 PM	Would like to see info about the Aboriginal history in the area. I understand
	they used to catch fish in the rock pools etc. would an artificial fishing reef
	help with erosion? The reef is fantastic there - was a magic place to bring up
	a family.
Anonymous	Better public toilets and parking. Cafe close by would be nice too.
6/02/2019 09:04 PM	
Anonymous	Satisfied with current infrastructure - though it needs considerable TLC
6/02/2019 10:29 PM	
Anonymous	More shaded areas
6/02/2019 11:26 PM	
Anonymous	No it's perfect as it is. Ramp access for prams and showers are great. City of
6/02/2019 11:38 PM	Stirling should consider removing all verges adjacent to beach and making
	them Carparks both sides of west coast highway. Those wide verges are
	waste of space and ugly with dead lawns anyway. Could make into carparks
	and landscape with native plants would look so much nicer
Anonymous	Some shaded areas
6/03/2019 12:31 AM	
Anonymous	No, I'd prefer less facilities
6/03/2019 01:27 AM	
Anonymous	a small shop to provide drinks snacks
6/03/2019 09:35 AM	
Anonymous	More grassed area.
6/03/2019 09:54 AM	
Anonymous	Ideally more parking so beachgoers aren't annoying the residents from Giles
6/03/2019 10:02 AM	or Lynn St, all those in between too. Tough to do so considering the access
	itself. Mettams needs to remain more on the exclusive and secluded side, the
	area is very small and capacity for the pool is only so much.
Anonymous	Artificial reef to stop coastal erosion. Good for recreation sports use, good for
6/03/2019 11:16 AM	the coast, good for the community as building this reef creates work and
	most importantly a expanded habitat for marine species.
Anonymous	A few permanent structures to provide a little shelter from the sun for parents
6/03/2019 11:45 AM	with small children. These could be an extension of the existing structure that
	extends out onto the sand.

Anonymous	n/a
6/03/2019 11:51 AM	
Anonymous	a place to have coffee, more beach shade area, a lookout
6/03/2019 05:06 PM	
Anonymous	No. Not really. Other than a bit more parking, but generally just keep it in
6/03/2019 06:28 PM	good nick
Anonymous	None
6/03/2019 07:29 PM	
Anonymous	No
6/03/2019 07:51 PM	
Anonymous	Love it just as it is and always was before the erosion.
6/03/2019 09:03 PM	
Anonymous	No - except to fix the erosion.
6/03/2019 09:09 PM	
Anonymous	Clear access to the water
6/03/2019 10:12 PM	
Anonymous	Artificial surf reef to reduce the waves getting into the pool area
6/03/2019 10:12 PM	
Anonymous	Low-key/ low impact facilities that assist in safe access into the water, given
6/03/2019 10:44 PM	that the rocks along the foreshore can make it difficult to enter the water.
Anonymous	Half wall barrier around shower so kids can be showered naked descreetly.
6/04/2019 12:15 AM	More consideration for prams and young family access. Lots of mums use
Anonymous	the space to take toddlers to swim. More Acrod parking please
6/04/2019 06:53 AM	More Norda partning prease
Anonymous	More and better parking for cars close to the beach. Especially for
6/04/2019 11:38 AM	windsurfing parking close to the water is important as the gear is heavy and
	bulky.
Anonymous	Toilets that don't stink
6/04/2019 11:41 AM	
Anonymous	More grass and more parking would be great
6/04/2019 03:06 PM	
Anonymous	Something needs to be done about the ramp leading into the water - this was
6/04/2019 03:07 PM	supposed to be looked at a long time ago, but still no progress. Access into the water needs to be improved (especially for older people who frequent the
	pool) for when the rocks in the area are exposed (more and more often
	recently). It should be a lot easier to get in and out of the water.
Anonymous	No

6/04/2019 04:15 PM

Anonymous More grassed area. Anonymous Based on the current layout the Grass area to the south of the toilet / shower block is a perfect spot for windsurfers to rig and de-rig up there equipment. For the public it would be best to have the seating on the other side of the toilet block so that it is sheltered by the wind. More and more grass would be nice. Metts is regarded as one of the best metro areas for windsurfing in summer and has a long history in the surfing and wind surfing community. Anonymous Just maintain the facilities currently there e.g. showers under gazebo, ramp access Anonymous I think there should be a buoy placed at back of the reef, for snorkelers who may get into trouble as the tide suck back. Anonymous Mettams is well loved by locals and visitors, I'd say the priority is to prevent the damage cause by erosion, some consideration for increased foot traffic as the population increases is important but any significant alterations to beloved beach could see a backlash from the local ratepayers, it is good the city is seeking community input before making significant changes. Anonymous Keep it natural Anonymous No the toilet and shower is all people need Anonymous Toilet Anonymous less rock Artificial reef offshore northern side for surfing and to aid san retention on the Anonymous beach Anonymous The tables are great for sunset picnics, please keep this area Anonymous Would like to see the southern invalid ramp extended further into the water to enable people to easier entrance the water when beach is covered in exposed rocks and seaweed as at present. Also the area in front of change rooms could be better used with maybe retaining walls supporting a grassed area for picnicing. This would also help prevent some erosion. Easier access in to the water itself, very rocky and sometimes unsafe Anonymous Anonymous Parking is the main problem and erosion

not it is a very beautiful unspoilt location

Anonymous

6/05/2019 04:27 PM

Anonymous

More parking, but realise this will always be difficult.

6/05/2019 05:54 PM

Anonymous

6/05/2019 07:28 PM

Not really

Anonymous

6/06/2019 11:21 AM

Between stairs and the ramp a 2 or 3 teared level grassed area, Make the stairs wider and lights down stairs for the early morning swimmers

Anonymous

6/06/2019 12:27 PM

There are too many rocks on the main beach of Mettams pool which are causing hazards to beach goers. Negotiating walking to the water is a problem. people are stepping on sharp pointed rocks and hurting themselves. Perhaps it should be considered to remove most of the large rock on the beach.

Anonymous

6/06/2019 07:37 PM

The cycleway and pedestrian path should be separated. This could be achieved by closing the northbound carriageway. The road reserve would then have sufficient space for (from east to west): the current footpath; the current verge; the current southbound carriageway; a lane for parking; a dedicated cycleway; the current recreational pedestrian path. A single one-way carriageway would provide vehicle access to properties and a daily scenic drive on the way to work. Pedestrian safety would be enhanced and much more parking could be provided. If future catastrophic erosion were to encroach on the road reserve, local modifications could be made more easily than with the present two-way road.

Anonymous

6/06/2019 07:49 PN

To have the access to the water and to clear the sharp rocks on the beach sand near water and 2 m -5m wide along the Mettams Pool.

Anonymous

6/06/2019 08:52 PM

as suggested, lower traffic speeds that prioritise pedestrian and cycling traffic over motorised traffic in the area would be good also, good facilities for bike storage and lock up so that people can cycle to the area rather than drive would help alleviate the parking issues possibly also improved public transport options

Anonymous

Yes, a surf club/community club to support local community activities such as surfing, fitness classes and social activities. Having the option of food and drinks in the evening as you often see done very well on the east coast in Queensland and NSW where the local surf club acts as a centre of community well being and social interaction.

Anonymous

6/06/2019 10:53 PM

No

Anonymous

6/07/2019 12:08 AM

A shower in the carpark north of Mettams pool would be good for after a surf but apart from that I think you should leave the whole area as it is and plant more native vegetation. We dont want a tacky shop built or have any of the beach reclaimed for change rooms etc. What you should do instead is have maybe 1 or 2 dedicated food van car parks up top. This will come at no cost to the council, provide a better sense of community and support small businesses. Lets keep mettams the way it has been for decades. Less is

more.

Anonymous

BBQ Facilities.

6/07/2019 12:12 AM

Anonymous

Ocean swimming pool could be very handy for WA!

6/07/2019 01:26 AN

Anonymous

No

6/07/2019 10:36 AN

Anonymous

N/a

Anonymous

Shade on the beach and grass area.

6/08/2019 10:50 AM

Anonymous Please do not spoil this area from its natural beauty. This is its biggest strength. We do not want another commercial development. Avoid lots of

concrete, not another Scarborough.

Anonymous A bit more shaded area too seek refuge from the sun, thus enabling a longer

8/2019 12:52 PM day stay at the beach.

Anonymous I would like to see better lighting for security, an emergency phone or 6/08/2019 03:57 PM location indicator on a sign for 000 calls and better care taken of the dunes.

Anonymous Ocean filled lap pool

6/08/2019 09:00 PM

Anonymous No more!! It is a tiny LOCAL beach - not a regional destination. I would

3/2019 10:20 PM suggest a heirarchy if provision and this one needs to stay small.

Anonymous Hot showers Glass windbreak dense around grass

6/08/2019 11:49 PM

Julie116 stair access directly from beach to viewing platform so i dont have to go up

/09/2019 10:15 AM onto shared pedestian/bike path to access viewing platform

Anonymous Universal design so people with wheelchairs can easily access.

6/09/2019 11:17 AM

Anonymous Coin lockers

6/09/2019 12:11 PM

Anonymous Ocean pool

6/09/2019 12:56 PM

Anonymous No.

6/09/2019 01:13 PM

Julie116 with the regular and severe erosion of the beach i find i am unable to access

the water for large periods of the year due to the sharp and uneven reef rocks which are exposed. there must be some way to build an safe access

way at each end of the pool ie by grinding off the tops of these exposed rocks to create a smoother access (this is separate to a wheelchair access ramp). this will ensure that i can continue my daily swims which i have been doing for nearly 60 years and which are now outside my physical capacity due to rough access.

Anonymous

I think it is important to keep it simple. Easy access that doesn't impact the

environment (as best as possible). Ample parking in the area.

Anonymous

No

Anonymous

History of the area.

Anonymous

Keep it as natural and untouched as possible. Environmental safety is of

upmost importance

Anonymous

More shade. Shaded tiered seating that would act as barrier to erosion and provide beach access for older people and disabled. Allow noble stall or two. Add atmosphere character. Someone selling sun cream, beach umbrellas, ice creams etc. Do nothing though unless incorporating design. Paul Gain of shed have nothing to do with it. His intentions are right but gets things wrong e.g. red and white billiards. Shocking. Yes. Slow the pedestrian traffic but design better. Have a small bus that travel up and down from try to Hillary's stopping every kilometre. Major parking at either end. Where do I stop.

There is no character atm.

Anonymous

Larger grassed area for rigging windsurfers

Anonymous

I like the relatively rustic simplicity of how the amenities are now, but an upgrade would be appreciated.

Anonymous

No. I think Mettams Pool is fantastic due to the ability to swim all year round in a sheltered area. It is all about the natural environment, and access to it. Currently erosion is the main problem at Mettams, and I can only access the water safely about 60% of the year. This has changed massively in the past 10 years. I was born in North Beach, and have been swimming at Mettams Pool for about 50 years, so I have seen the changes. If there is a possibility

of protecting the pool from erosion, I would support it.

Anonymous

Lighting near beach and in toilets staying on later in all seasons

Anonymous

No.

Anonymous

Create Perth's only true ocean pool

Anonymous

6/10/2019 09:40 AM

No.

6/10/2019 10:01 AM

Entry to the pool is difficult at times due to rocks

Anonymous

6/10/2019 10:39 AM

No. Mettams Pool should be primarily a natural resource that people can visit. Not ruined by unnecessary amenities.

Anonymous

6/10/2019 11:56 AM

Mettams pool is the attraction. People go there to get closer to nature and enjoy the views, ocean, marine life, and beach. Creating more functions/facilities such as plazas and 'beaches' will result in more commercialisation and congestion of the area and the people who want to enjoy nature will be forced out of the area due to reduced access to parking (likely the council will create additional parking, however with the additional "attractions" there will be less access to parking than the current situation). An aritificial reef to improve surfing and snorkeling opportunities and protect the beach from further erosion. Would be great to allow dogs on the beach

Anonymous

6/10/2019 12:23 PM

I do not use this area. It would be beneficial to me to have some indication as

to how investment here will affect investment elsewhere

Anonymous

Anonymous

I don't think much needs to be added - just maintaining/upgrading current facilities. Potentially a small kiosk. Parking close by is essential to ensure access for everyone is available.

Anonymous

6/10/2019 03:10 PM

Additional privacy using the indoor showers - I would prefer the ability to have a door or similar structure in the showers, as I prefer to remove my bathers after a swim, especially in winter. I don't understand why a toilet has a door but a shower doesnt? I would presume privacy was required for both activities. Better access for elderly and disabled users who may not be able to use the slippery ramp. The ramp should have a ladder to help users get into and out of the water when it is rough or too many rocks on the beach. A Foot washing & drinking tap at the top of beach access stairs (Saunders St carpark end, north of bathing beach).

Anonymous

Anonymous 6/10/2019 03:34 PM

6/10/2019 03:17 PM

Ocean Swimming Pool (google images: Alvaro Siza's Pool On The Beach).

Get Kerry Hill Architects to design our own for Mettams. Email:

admin_perth@kerryhillarchitects.com

Anonymous

6/10/2010 07:52 DM

It's great as natural as possible

Anonymous

6/10/2019 08:44 PM

Parking is limited in summer

Anonymous

6/10/2010 10:34 PM

A fence to keep people out of the dunes as that has caused 80% of the dune erosion since last winter. People have been walking up against the base of the dunes and children have been climbing and digging in the dunes, not appropriate for Mettams Pool. An access path through and over the rocks into the safe section of the water for the times when the sand it badly eroded. I assist elderly people into this pool, everyday of the year, all year round. It is getting harder into the water passed all the council construction, with ramps and stairs continually being blocked off. This is the only place to swim in

6/10/2019 11:18 PM

Perth beaches in less than ideal weather and swell, that has close access to the water and change rooms.

There are several strong communities that meet regularly at Mettams Pool. For many people it is about going to meet people not just for an individual or family trip to the beach. I am connected with a morning and an afternoon swimming group that provides many positive benefits to my well-being and many of my friends there. It is intergenerational with ages from 30-95 developing friendships. When the paths and stairs have been blocked off this has scattered the community and it is not as strong as it used to be. To enable the elderly to more fully use this space, a rough, cement path over the rocks into the middle of the pool would be useful as they often try to walk through the rocks. Protection of the dune system is also important for the rehabilitated vegetation and local fauna. I'd love to see a lower limestone wall, cemented into the rocks beneath the sand to protect the dune. There are still rusty wire hooks coming out of the edge of the dune from holding the anti-erosion material. Last year there was still rusty star pickets and wire from the treated pine and wire fence that was washed away in the storm. Just would like the natural beauty maintained.

Anonymous

6/11/2019 02:25 PM

No it's great as it is

Anonymous 6/11/2019 05:46 PM

Anonymous

6/11/2019 06:20 PM

Parking

Anonymous

6/11/2019 10:02 PM

year round as a resident within 200-300 meters . While I can navigate these as a younger male my regular mettams pool users in the early mornings are older folks who find it dangerous.

Anonymous

6/11/2019 10:19 PM

Playground and less of a sloped area to eat for small children

Anonymous

6/11/2019 10:29 PM

Easier access to the water at different times of the year it is very rocky and dangerous to get into the water

Ocean Swimming Pool (google; Alvaro Siza beach pool), also an open air

The rocks iat the entry of the pool can be a problem . I swim at the pool all

Anonymous

6/12/2019 01:23 AM

fire pit, a steam room / onsen With ocean views. Mettams is a healing place for peoples bodies, minds, emotions and spirts. If we want to go to an ice cream plaza beach we would go to Scarborough, trigg or hillarys. Use some creative vision to make a local natural wonder even more meaningful to our community rather than thinking about venue and tenant profits the council

bays.

Anonymous

6/12/2019 01:46 AM

No it needs to retain its simpleness. It doesn't need big carparks or kiosks. It

can make. Maybe some better / more bike racks rather than car parking

should be for local residents

Anonymous

6/12/2019 09:41 AM

No

Anonymous	Yes, more grassed areas
6/12/2019 10:27 AM	
Anonymous	No
6/12/2019 11:40 AM	
Anonymous	None, this is a natural area that should remain for the enjoyment of all today
6/12/2019 11:54 AM	& tomorrow. No need to mess with nature, we've all seen, read what
	happens when you do long term.
Anonymous	Better disability access
6/12/2019 12:31 PM	
Anonymous	No
6/12/2019 03:05 PM	
Anonymous	Better parking as ling as it does not negatively effect the dune systems and
6/12/2019 03:35 PM	surrounding environs.
Anonymous	sensitive general interpretation for this coastal area - including expectations
6/12/2019 04:37 PM	
A 10 0 10 1 100 0 1 10	Unawada ta abayyay and tailat facilities. Vany ayb atandayd of facilities for a
Anonymous	Upgrade to shower and toilet facilities. Very sub standard of facilities for a
6/12/2019 05:16 PM	beach that is frequently used all year around
Anonymous	Cultural/historical/ traditional uses of mettams poll
6/12/2019 06:40 PM	Suitara/motoriou// traditional abod of mottamo poil
0/12/2019 00.40 FW	
Anonymous	No the ramp access & toilet facilities are good. Shade for babies is good.
6/12/2019 06:47 PM	Mostly having access to the beach & keeping it's natural beauty
0,12,2010 00:17 1 101	moonly having accept to the beach a hooping it o hatara beauty
Anonymous	A safe way to cross West Coast Highway when it is busy. It can be almost
6/12/2019 09:04 PM	impossible, especially for elderly people.
Anonymous	Pram/Wheelchair access
6/12/2019 09:32 PM	
Anonymous	Pedestrian crosswalk as it gets very busy traffic on weekends and not all cars
6/12/2019 10:23 PM	are pedestrian friendly
Anonymous	A playground would be amazing!
6/12/2019 10:32 PM	
Anonymous	Artificial reef to provide good waves and protect dunes
*	Artificial reef to provide good waves and protect duries
6/12/2019 10:54 PM	
Anonymous	Environmental education. Signage about not walking on the reef. Information
6/13/2019 01:24 AM	about how biodiversity is changing. Temper the community's sense of
ULIGITA OLIZA AIVI	
	entitlement to having human needs met when the area needs a long term
	protection plan first.
Anonymous	No. It's charm is partly the way that it currently is.
6/13/2019 08:55 AM	

6/13/2019 11:04 AM

Anonymous

6/13/2019 12:52 PM

Anonymous

6/13/2019 07:04 PM

Anonymous

6/13/2019 10:11 PM

Anonymous

6/13/2019 10:25 PM

Anonymous

6/14/2019 02:10 PN

Anonymous

6/14/2019 03:41 PM

Anonymous

6/14/2019 11:11 PM

Anonymous

6/15/2019 11:17 AM

Anonymous

6/15/2019 11:49 AM

Anonymous

A considered and informed and environmentally organic erosion solution that has a little as possible impact to surrounding natural structures, wildlife and tidal movements.

The pool at Mettams is under extreme pressure due to social media. No additional facilities are required. The beach now requires "pillows" to protect erosion as per Watermans beach. Pillows have been very effective there and at locations at Busselton and Albany. The pillows last, provide facility for vegetation, and are better than rocks for protection. If pillows are used the sand behind can be prevented from polluting the white sands at beach level. Low level ground cover should be used rather than bushes because they hold the sand more effectively. West Coast drive is used by buses, trucks using it as a thoroughfare, army vehicles and lately learner truck drivers. Apart from the danger to pedestrian users it causes vibration to soil along the foreshore. The foreshore should be kept natural, with minimal signs, and minimal structures. The beauty is the ocean and beach.

Perhaps a groin to prevent the erosion of the beach by the ocean currents

Improve the shape of the wave with artificial surfing reefs would protect the eroded area by dissapating the wave action further out

No, pls don't develop it with any cafe, kiosk or shop etc

With space being limited and competing interests, the City should consider whether it should invest in upgrading one of the adjacent areas that have ample space (e.g. Saunders st and North Trigg). Appreciate the history of the site and this could be acknowledged through some public artwork. Has Mettams Pool be alocated an Emergency Beach ID Number to uniquely identify its location? I had reason to call an ambulance for a near drowning some years ago, and it would make things easier if Mettams had a unique beach identifier. Apart from that, please keep Mettams as it is: I've been using it for 30 years, taught my children to swim and snorkel there; its such a safe and sheltered beach. Please don't add commercial facilities; make it easy access for families and the disabled, showers and toilets as appropriate to a beach of that size, and storm-proof for the next generation.

More car parks on street and a small facility mobile or otherwise to buy simple consumables ie food and drink.

reinforcement of the two sets of stairs leading to the beach at Mettams so the beach is accessible year round. Maintenance of stairways, bathrooms,

showers, and access to immediate parking is most important.

The community would like to see a long-term solution of providing dedicated bicycle lanes on West Coast Drive at Mettams pool, which was developed in consultation with the Department of Transport in 2016 but never adopted. The creation of a 'plaza' area to improve road safety and lower speeds past Mettams Pool.

Better crossing options for pedestrians to access Beach from the east (ie

zebra crossing or overpass) Better public transport options to allow more people access to the beach and ease need for parking in side streets Kiosk

> or council support for mobile coffee cart or similar Consideration for somehow removing or grinding smooth the sharp rocks that appear when the

sand cover is at its lowest Upgraded changerooms

Anonymous

If you are going to plan please consider the installation of an Osprey stack...I manage The Facebook site Osprey Coast and the concept is explained..it would add significant environmental value to the North Beach strip..happy to

discuss..Sean 0439090086

Anonymous

Allow dogs

Anonymous

The facilities are good. Could Just do with some parking

6/15/2019 04:10 PM Anonymous

Like it simple as it is but with facilities kept maintained and in good working order ie.., drinking fountain, showers, shade etc..

Anonymous

Bar

6/15/2019 07:40 PM

Anonymous

Anonymous

Anonymous

Anonymous

Anonymous

Anonymous

Anonymous

Anonymous

Anonymous

Food options (kiosk style, not dining), sand replacement program (like Watermans), lower car speeds for pedestrian road crossing, increase public transport options to the area, larger and better designed viewing platform Safe access to the water under most conditions. Can a sandy walkway be provided through the dangerous exposed rocks. Clearly not possible under rough conditions but on calm days the rocks are often a serious hazard. Reducing traffic speeds is a good idea, but not at the expense of the beach.

Additional parking. Additional exterior showers to rinse off equipment.

A means of safely entering the water without the rock hazards. A proper ramp to the water, for those with physical disability, would be good.

Perhaps shade to some of the beach area. Access at the North end of the beach for canoes/paddle boards. A board which has descriptions/info about some of the sea life that a snorkeler might come across and some info on sustainability/removing litter from the beach etc.

better upkeep . although shire workers do a great job. coffee truck bay or ice

cream etc - casual

Hot water Showers

no

Patricia Improve ACROD access to Mettams Pool

Page 83 of 107

Mettams Pool - Community Values Survey : Survey Report for 20 February 2018 to 16 June 2019

Fresh water shower / wash off facilities at northern end of beach. If you exit Anonymous 6/16/2019 06:09 PM

to northern carpark direct from beach there is nowhere to wash off sand.

Like it the way it is now except rocky beach parts and rather limited parking Anonymous

6/16/2019 06:24 PM

Anonymous Access to the beach and sandy, not rocky beach

6/16/2019 06:30 PM

Anonymous Safe and sandy access to the water.

6/16/2019 10:22 PM

Optional question (351 responses, 142 skipped)

Q10 4b) When thinking about the future of Mettams Pool, are there any functions and/or facilities that are not appropriate for Mettams Pool?

Anonymous retail outlets,

5/24/2019 05:08 PM

Anonymous I dont think parking adjacent to mettams pool is very important at all.

5/24/2019 05:57 PM Although, Mettams should be highly accessible to those with various levels of

mobility, i think the City should prioritise using the land for more valuable

reasons.

Anonymous I think the stairway and ramp should be constructed side on (similar to

5/25/2019 05:56 PM Hamersley Pool (just south of Nth Beach shopping centre) to avoid erosion. If

possible a small area cleared for access through the rocks when the sand

has been washed away.

David29 Declare the Mettams Pool area a Non Smoking Zone

5/26/2019 03:16 PM

Anonymous Cyclists travelling at fast speeds across the access areas to pool facilities.

7/26/2019 06:36 PM Food and drink outlets. These aren't necessary.

Anonymous No

5/27/2019 09:34 AM

Anonymous Refreshment outlets.

5/27/2019 01:54 PM

Anonymous A plaza and food trucks - the place is not suitable - this will reduce the focus

9 02:19 PM and ability as an accessible beach for wheelchairs and other mobility

equipment.

Anonymous i think a big function centre that takes away from the character of mettams

5/27/2019 06:28 PM pool would be a bad idea. Do it at the mach club instead

Anonymous Building around and destroying the natural environment

5/27/2019 07:09 PM

Anonymous Surfing and sometimes kitesurfing

5/28/2019 12:16 AM

Anonymous Shops / Retail

5/28/2019 12:58 AM

Anonymous Shops I am not sure what you mean by plaza if that means shops then I

5/28/2019 01:04 AM disagree but I agree there needs to a way to slow the traffic down if not stop

it all together through this area. We look after car traffic too much at the cost

of active transport options

Anonymous It would've be nice if an area of the limestone that gets exposed when sand

is eroded away could be removed to make a natural beach pool so people

can access the water safely I have witnessed many elderly struggling to get

Mettams Pool - Community Values Survey : Survey Report for 20 February 2018 to 16 June 2019 in and out of the water Food/ bar facilities. Anonymous Anonymous No Anonymous No Dont need food outlets. Just leads to increased littering. Anonymous 5/28/2019 07:29 AM Wheelchair access Anonymous 5/28/2019 08:00 AM All the ramps They take up too much space and are rarely used. They are Anonymous generally too slipppery / wavey to be used by the disabled. The elderly would benefit from less rocks to help with beach access - but this will increase beach erosion. As discussed, the beach directly south is under utilised. It has too many rocks in the water / no where to swim. Remove some of these rocks to create a pool will benefit both beaches immensely Anonymous any new buildings, shops, add car parks. it is beautiful as it is. no need to do any constructions. Keep what we have in good shape. Anonymous No shops required- already enough in surrounding area Don't think a kiosk is required. More freedom should Be given to the Anonymous properties along north beach drive for retail / food and beverage opportunities. Anonymous I don't believe Mettams Pool needs to be 'developed' as such. Preserving the existing amenity is most important Anonymous Anything that would bring more pedestrian and road traffic to the area would be inappropriate. It's crowded and busy enough Anonymous Nearby cafes can provide food and drinks. It is not necessary at Mettams Pool. I don't think swimming lessons work at this beach, the pool in summer is Anonymous

Anonymous

Anonymous

never big enough let alone when being taken up by many groups of children taking up the only area to swim. I feel that there are bigger beach options for this.

Jet skis and motor boats

I'd prefer not to see any kiosk/coffee vending or other takeaway food options as these have the potential to increase the amount of both plastic and food rubbish in the natural coastal area. I have observed the large skinksalready scavaging about the shelter area at Mettams as well as being fed by some

beach goers. Ravens and seagulls are also ever present looking for

increased food opportunities.

Anonymous

5/28/2019 01:37 PM

No

Anonymous

Access to refreshments and commercialisation in the immediate vicinity is not

appropriate for Mettams pool.

Anonymous

Cafes/ shops on the beach side of West Coast Drive, continued vehicle access along the road (It's lovely to drive past). No increase in parking areas

which would impact on residential areas

Anonymous

Anonymous

It's only a small beach area. Keeping it "quaint" is perfect. No parking for

large buses or coaches.

5/20/2013 05.211 10

Please do not introduce food and drink stands as there are several other options within easy reach and it would only increase traffic and rubbish into the beach. The change facilities also suffer drainage issues and more natural

flow of air through these would be useful.

Anonymous

5/28/2019 03:56 PM

Kiosk

Anonymous

5/28/2019 04:09 PM

Fishing!, To be banned from disabled access pathway to Centaur monument.

Anonymous

5/28/2019 06:09 PM

Mettams is an attraction for it's protected swimming and snorkelling. Over

commercialisation might cause crowding and ruin its appeal.

Anonymous

5/28/2019 06:35 PM

This area is small and does not support parking for more commercial interests or grassed areas that lead to high maintenance and eutrophication of the water. In summer the area is absolutely packed with locals and visitors, it would be ridiculous in the extreeme to have commercial interests that impact on wild life and swimming, It is a relatively safe beach for disabled, children and the elderly and facilities should reflect this. It is not the place for plastic playgrounds and parkland areas because people come to this beach for the unique beach experience which can not be found in land. Wild life

should be respected and supported.

Anonymous

5/28/2019 06:45 PM

Commercial kiosk type

jimbo31

,....

no

.

Anonymous No barbecues in the gazebo area.No fires... The Dunes need to be

Sandbagged like Watermans... Children are digging out the soil from the

bushes holding the dunes together also the water errosion.

Anonymous

For me the most important thing is that any engineering works undertaken do

not unduly interfere with natural, dynamic coastal processes.

Anonymous

5/28/2019 08:15 PM

Keep it natural

metallis Pool - Community values Survey . Survey Report for 20 Pebruary 2016 to 16 June 2019		
Anonymous	Ramp doesn't reach water	
5/28/2019 08:34 PM		
Anonymous	Keep it as it is. If it gets anymore parking spots that place is not going to be	
5/28/2019 09:19 PM	able to get used by the community. Think local.	
Carol2019	this pool means so much to so many people of all ages. I visit it every day	
5/28/2019 09:28 PM	either to walk or swim, it has a wonderful community spirit and it has helped	
	the lives of so many people including myself and have formed wonderful	
	friendships with likeminded people. Have even learnt about authors and	
	exchanged so many ideas and meet for meals, birthdays etc. Please save	
	our beautiful bit of paradise.	
Anonymous	I don't see the need for any changes	
5/28/2019 09:47 PM		
Anonymous	Metams is extremely restricted for access for residents that aren't within	
5/28/2019 10:12 PM	walking proximity. I believe it's at its capacity and once properties across the	
	road on Lynn are complete and that can no longer be used as a car park,	
	metams will become even more of a nightmare. It would be good to open	
	some of the other local beaches to make them swim friendly for families.	
	Reduce the pressure on metams pool specifically, it's maxed out.	
Anonymous	Keep it pristine as I dont need to see a cafe or restaurant there	
5/28/2019 10:26 PM	1.p 1p 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
0,20,20,10,10,20,1,11		
Anonymous	No	
5/28/2019 10:50 PM		
Anonymous	No need to over do facilities, or increase usage as the area is too small and	
5/28/2019 11:03 PM	sensitive for development. Trigg Beach and Scarborough is nearby for all	
	that. Please leave it as it is	
Anonymous	A kiosk	
5/29/2019 08:42 AM		
Anonymous	No weddings or fitness classes	
5/29/2019 10:02 AM		
Anonymous	Bollards on cycle paths.	
5/29/2019 02:08 PM	Boliardo on oyolo pario.	
3/23/2013 02.00 T WI		
Anonymous	Cafe	
5/29/2019 02:41 PM		
Anonymous	No	
5/29/2019 05:45 PM		
A	N	
Anonymous	No	
5/29/2019 06:41 PM		
Anonymous	Don't overdevelop it need to keep natural design that blends in and not too	
Allonymous	Bont overdevelop it need to keep natural design that biends in and hot too	

high on roadside

5/29/2019 08:26 PM

Mettams Pool - Community Values Survey : Survey Report for 20 February 2018 to 16 June 2019 The bollards on the shared path are a gross abuse of council money, the Anonymous Department of Transport warned against installing them as there is no reasonable basis for them (no evidence of cyclists creating alleged issues, and no evidence they will prevent incidents), they impede access along the path for handicapped users, they create dangerous conflict points both on and off road and are an eyesore on our beautiful coast. They should be removed. Don't commercialise the area Maintain the dunes & natural habitat Anonymous Anonymous No Anonymous Refreshment place. Anonymous Keep it simple! No alcohol, no fishing or abalone collection. Anonymous Anonymous do not destroy nature 5/29/2019 10:14 PM Priority should be maintaining the area as one of the highest quality Anonymous snorkeling spots in Perth. Anything impacting on this should be strongly reconsidered! Anonymous Nο Not that I can think of. Anonymous Anonymous No

Shops. People can go to north beach shops if they want something. It's s Anonymous beach. Just let it be a beach

Anonymous No

Anonymous Anything that commercial (selling of good and services). And anything that takes from the natural surroundings. In saying that the current showers at

both facilities are amazing and should be continued.

Don't want it too commercialized. The pool is quite small so crowds would

Anonymous damage the reef and snorkeling sites.

Anonymous This beach does NOT require a large scale paved area, pavilion or playground. It is beautiful because of the sandy beach and the protected waters, with the easy access for all. The toilet and shower facilities are sufficient - I've never seen these over crowded. The loss of the sand from the beach however is problematic - it makes for a somewhat dangerous entry to the protected bay for swimming. More public parking nearby (but directly

adjacent isn't necessary) would be helpful.

Anonymous Its a favourite family spot, particularly with young children. Keep it that way.

29/2019 11:45 PM Make it safe and accessible for them.

Anonymous It a beautiful area, please don't add buildings or amenities. As that just

5/29/2019 11:52 PM encourages reckless people to destroy this currently pristine area.

Anonymous Nope

5/20/2010 11:50 PM

Anonymous I wouldn't see food or drink being needed. There are plenty of places along

5/30/2019 12:01 AM west coast drive that offer this.

Anonymous Surfing

5/30/2019 12:19 AM

Anonymous I do not think a plaza or increased street facilities are feasible. The beach is

/30/2019 12:33 AM very small and already too crowded

Anonymous I'm concerned making this too accessible with amenities etc will just

//30/2019 12:35 AM encourage vandalism and destroy this area which is currently litter free

Anonymous Any that will encourage the creation of more waste where it can easily enter

30/2019 12:59 AM the ocean or put the natural reef at any risk should not be considered without

extreme care.

Anonymous More parking, cafe or playground - keep it wild

5/30/2019 01:03 AM

Anonymous Anything that negatively impacts the dune vegetation and wildlife or marine

9 01:08 AM life. I would like Mettams Pool to be kept as natural as possible and wouldn't want to see any increase in facilities. I believe any attempts to increase facilities and/or establish food businesses or similar would increase pollution

and disturbance of the local fauna and flora. The erosion issue should be

approached as conservatively as possible.

Anonymous .

5/30/2019 03:04 AM

Anonymous The Plaza would cause more issues for vehicles and cyclists. There are

already facilities at Scarborough and Sorrento Quay if people want that kind

of experience.

Anonymous Anything that would restrict accessibility. Part of the reason we go there is its

5/30/2019 09:12 AM accessibility

Anonymous A car park below road level

Anonymous I don't believe additional facilities should be provided, if anything the area

5/30/2019 08:04 AM

	,
5/30/2019 09:19 AM	should be returned to a more natural and native area
Anonymous	Construction and concrete down at beach level (with the exception of the
5/30/2019 09:38 AM	ramp for wheelchairs)
Ananymaus	It would be awful to see damage to the natural environment just to add a cafe
Anonymous	
5/30/2019 09:41 AM	or other amenities.
Anonymous	Fishing zone is too close. People throwing burlee in the water far to close
5/30/2019 10:21 AM	where people swim and surf. Schools also teach students to snorkel there.
Anonymous	Hazards and bollards for cyclists, things that make it difficult to pass
5/30/2019 10:50 AM	
Ananymaya	Just keep it natural, not too much transformation
Anonymous	Sust keep it natural, not too much transformation
5/30/2019 11:45 AM	
Anonymous	The addition of a shop/kiosk has the potential to overcrowd an already well
5/30/2019 12:08 PM	used area.
A 10 0 10 1 100 0 1 10	It abouted not become a commovaid area
Anonymous	It should not become a commercial area
5/30/2019 12:14 PM	
Anonymous	Food stalls, other stalls fishing(not allowed at present)
5/30/2019 12:52 PM	
Ananymaya	Excilition are sufficient for conseity at Matterna Real. An increase in facilities
Anonymous	Facilities are sufficient for capacity at Mettams Pool. An increase in facilities will see an increase in users which is not sustainable based on the current
5/30/2019 12:58 PM	
A 10 0 10 1 100 0 1 10	location and expected future erosion.
Anonymous	Shopping
5/30/2019 01:24 PM	
Anonymous	Anything high octane is not appropriate. Mettams is a gentle and safe bay for
5/30/2019 02:39 PM	families and people not necessarily confident amongst the waves prevalent
	along most of the rest of Perths coastline, and I think it is very important to
	keep it that way.
Anonymous	NO
5/30/2019 02:56 PM	
Anonymous	Aaron Hunter Consider it as an opportunity to protect the existing natural
5/30/2019 03:35 PM	environment and blend it with some wonderful public amenity. A artificial reef
0,00,12010 00.001 W	to protect the shoreline and encourage a consistent surf break would be
	amazing. An interesting backstory to Mettam's Pools history -
	https://www.perthnow.com.au//the-fascinating-history
Anonymous	Jet skis, boards.
5/30/2019 03:43 PM	oct one, boardo.
Anonymous	Its attraction is the natural state for swimming keep it simple with good
5/30/2019 04:31 PM	access to the water This not the case at the moment
Anonymous	No, leave it as much as possible in its natural/current state except for
5/30/2019 04:39 PM	improved disabled access.

Anonymous 5/30/2019 04:48 PM	Food areas
Anonymous 5/30/2019 04:51 PM	All Good - just cant get to the water. Really need the disabled ramp to reach the water safely and address the erosion so that people can get to the water safely.
Anonymous 5/30/2019 05:12 PM	Current erosion of the beach is not acceptable
Anonymous 5/30/2019 06:10 PM	No kiting which is dangerous to swimmers surfers and windsurfers when the loose control of their kites and the fall down and hit people or drag owner into the walls
Anonymous 5/30/2019 07:40 PM	Provision of refreshments might make this beach more commercialised and alter the simplicity and peace of this hitherto lovely beach (now being spoilt by the present problem of the rocks)
Anonymous 5/30/2019 08:25 PM	yes
Anonymous 5/30/2019 08:32 PM	A cafe would ruin the natural surroundings and increase rubbish to the area
Anonymous 5/30/2019 09:21 PM	No
Anonymous 5/30/2019 09:22 PM	High rise Shops
Anonymous 5/30/2019 10:33 PM	Surfing and motorised water sports are much better at other beaches and shouldn't be encouraged at mettams
Anonymous 5/30/2019 10:37 PM	No
Anonymous 5/30/2019 11:00 PM	Anything that takes away from the natural coastal vegetation and dunes
Anonymous 5/30/2019 11:07 PM	Toilets need upgrading.
Anonymous 5/30/2019 11:32 PM	Surfing
Anonymous 5/31/2019 12:25 AM	Cyclists walking pace only due to collisions with beach uses (surfboards) & cyclist.
Anonymous 5/31/2019 02:25 AM	Those which would destroy the natural beauty, environment and peacefulness of the place, as those are the reasons I visit so often.
Anonymous 5/31/2019 04:37 AM	No noise

Anonymous Refreshments are not needed, will make the place too busy, it already gets very busy No Anonymous It's too small for any big changes. Just retain current facilities but try to Anonymous address the problem of dangerous rocks Anonymous Too many disabled parking bays which are rarely utilized. Anonymous Cafe's or shops, there are plenty close to the area. Collecting abalone, even when allowed. This activity destroys the reef and Anonymous depletes our environment; should be totally banned. Anonymous No 5/31/2019 10:42 AM No extensive development because the area could not accommodate it. Anonymous Anonymous An upgrade of the change rooms to include hot water, doors on the showers for privacy and some power points would be of benefit. Anonymous No Anonymous Cafe Anonymous Mettams pool is not suitable for kitesurfing. It is one of the most popular windsurfing spots in Perth. It also is very popular with swimmers because of the rock pool . These to leisure activity coexist very well in Mettams because swimmer only use the pool while swimmers use the Rockpool . The facility's are addequate. Just the erosions should be dealt with as I have suggested Anonymous Food Beverage outlets. Potential to create litter problems in the Marine Park along with increased Silver Gull aggression Anonymous Please stop blocking off ramp and stairs. Simply need to concrete the voids below these to make safe. Please provide concrete path to the water - the exposed sharp rocks are a hazard, particularly to older folks, kids and disabled. Hot showers would be great (but probably pushing a bit) Keep up the good work Rick Anonymous nil Functions / facilities that are active - i.e. dining, parking, etc. Anonymous

Anonymous

5/31/2019 07:37 PM

none

Anonymous

5/31/2019 07:45 PM

We don't need snacks etc, but we need good drinking water facility.

Anonymous

5/31/2019 08:42 PM

Please don't make it a mini Scarborough. No plaza / mall/ with parking 500m away as its full of restaurants and suchlike. Perth is world renowned for its natural beauty and access to the natural environment. Nobody wants a Gold Coast, nor another Scarborough, especially at Metts. Perth is also world renowned for windsports in summer. This area is very important as it is one of the few metro places that has a rideable wave in summer seabreezes. It is disappointing to see no questions here about that use. Seems it is famous for metro wavesailing and ythe council has no idea that is the case? There is a lot of places to swim, cycle past or sit and stare (about 80km of it in metro area), but not many places that have the right wave and wind angle. Unfortunately this survey seems to only cover the "usual" uses that you think of. Windsurfing needs a rigging area and parking close by (and free!!!!) It is also very concerning that you ask about refreshments and a plaza area. To me, this is a sign of a token 'public consultation' that is then ignored as what you really wanted was less access, no parking, a pedestrian mall and a ton of restaurants / cafes to increase your revenue. Again - Scarborough is a case in point. For god's sake... please don't. This area is really special for WAVE riding windsports and is one of 2 or 3 in the whole of Perth. And Perth being in the top few places in the world. Don't fuck it up with paving, no parking and a bloody cafe, or a metrosexual Gucci beer sipping facility. We have enough of those already.

Anonymous

5/31/2019 09:17 PM

Anonymous

Anonymous

Anonymous

Anonymous 5/31/2019 10:42 PM

Anonymous 5/31/2019 11:39 PM

Anonymous 6/01/2019 02:49 AM

Big Grass areas and large toilet blocks not required. Small dual use toilets. No more than 2-4

Bikes using the pedestrian lane. Any shops or more carparks built closer to the beach would be a horrible idea.

anything that protects the actual beach is a priority- i dont need more infrastructure but am concerned about the obvious erosion occurring

Any commercial developments would be inappropriate - as far as possible, I would like it left the way it is, apart from interventions required to maintain it as close as possible to the way it is - in the face of potential erosion problems,

Keep the area reasonably natural. Do not add children's slides or painted/colourful play areas. Development should be tasteful and sympathetic

to environment.

Shops. Changing facilities. Extra parking.

Plaza or something similar on West Cost Hwy

Anonymous	Nil
6/01/2019 08:08 AM	
6/01/2019 06:06 AW	
A	
Anonymous	Bare concrete structures disrupting the current natural views. If concrete is
6/01/2019 08:31 AM	required for structural purposes, to do it combined with natural elements and
	sensible design taste.
	9
Anonymous	Do no need provision of food.
6/01/2019 09:21 AM	
0/01/2013 03.21 / (())	
A	This case is the alternative for the contribution of the form
Anonymous	This area is ideal for young families so things like skate bowl/park not
6/01/2019 10:13 AM	appropriate.
Anonymous	The southern ramp into the water is unsafe. The northern steps onto the
•	
6/01/2019 10:23 AM	beach are unsafe
Anonymous	I believe the biggest problem is the increase of people coming to use
,	
6/01/2019 01:47 PM	Mettams pool which in turn is causing beach erosion in front of change
	rooms. This needs to be addressed.
Anonymous	Food, ice creams etc
•	1 dod, loc dicams etc
6/01/2019 03:47 PM	
Anonymous	Please don't turn it into a Scarborough or Cottesloe
•	·
6/01/2019 04:55 PM	
Anonymous	Na
6/01/2019 05:12 PM	
0,01,2010 001121111	
Ananymaula	No electable and in a No leide against at a thorage are other areas for this along
Anonymous	No skateboarding No kids swings etc there are other areas for this along
6/01/2019 06:25 PM	the beach. Swimmers love the pool for swimming and snorkling. Kitesurfing
	is not recommended as it is a small zone to work in.
Anonymous	Keep it natural
6/01/2019 06:45 PM	
Anonymous	0
Anonymous	O
6/01/2019 08:31 PM	
Anonymous	Yes, several: Smoking. Flying drones from or over Mettams Pool. Fishing of
,	
6/01/2019 08:45 PM	any sort (in the sheltered pool area). Boating of any sort (except small
	children's small plastic boats). Access through Pool area to deeper water by
	surfers carrying surfboards or similar. Throwing tennis balls or other items
	suriers carrying suriboards or similar. Throwing terms bans or other items
	that could cause eye injuries. Playing cricket in Pool area.
Anonymous	No
•	
6/01/2019 10:22 PM	
Anonymous	No
•	
6/01/2019 10:34 PM	
Anonymous	Not really
6/01/2019 11:21 PM	
Anonymous	No
Anonymous	110

Anonymous

No more coffee okaces

Anonymous 6/02/2019 06:57 AM No

Anonymous

I use Mettams Pool very regularly and access to the beach is very important to me. I don't believe we need restaurants/amenities/cafes near Mettams Pool if that is what the Council is thinking ie like what they did down at City Beach. The only thing that I find hard at present is the rocks that are directly in front of the water. I know they are natural, but perhaps some could be removed to help access to the water. Maybe they could be re-located up where the erosion has happened to help stabilise the eroded coast.

Anonymous 6/02/2019 10:43 AM Commercial development as above. The lack of cafes etc that are directly at Mettams is an attraction. If people want cafes there are plenty of options

along the beaches

Anonymous

No restaurants, apartments, shops.

Restaurants and Cafes not appropriate. Let's look to keep the area as natural

as it can be before commercialising it.

Anonymous 6/02/2019 11:07 AM

Anonymous

Balance is about right for now. Swimmers/ Surfers/ Stand Up Paddle Boarders and Windsurfers seem to be aware of each other and maintain safety. Abalone days should be banned. Participants have no respect for sea life /reefs and adopt a "scorched earth" approach. Recent pathway changes to slow down cyclists is welcome.

Anonymous

grass areas and parking!

Anonymous

Windsurfing is popular when it is very windy so there are few other users.

None that I can think of Anonymous

Anonymous

None

Anonymous 6/02/2019 04:57 PM No

Anonymous

No, however when recent work was done on the viewing area at streetlevel a

bench was torn out and not replaced gggrr.

TonyK

Large group access

6/02/2019 05:34 PM

Do not want to see food outlets- really value a beach left as natural as

Page 96 of 107

Anonymous

possible.

Anonymous

Shops & restaurants

Anonymous Would not like to see any commercialisation of the Mettams Pool area - there

are already enough coffee & food outlets close by

Anonymous Not that I can think of

Anonymous Yes, any commercialisation is not needed

Anonymous Restrict parking as there is two car parks either end

Shops and/or infrastructure. Anonymous

Anonymous

Universal access probably isn't as important considering the dangers of Mettam's anyway. The reef and access itself already requires very careful

> consideration and respect. Hence the look out is a primary facility to maintain. The addition of food and drink isn't necessary and could end up a larger problem in the long run with rubbish ending up in the water which could see

the development receive plenty of post completion backlash.

Anonymous Good as is

Anonymous

The construction of Mettams Pool was at that time problematic ... because it reduced the extent and the height of the rock reef that in turn, protects the sand beach areas to landward and the 'sand and soil surfaced coastline scarp'. We are puzzled that the engineers report specifically excludes those options that would seek to raise the extent and the height of the offshore reef (in the Mettams Pool area - this might well be done to the seaward side of Mettams. Thereby leaving Mettams as an even-at-low-tide flooded rocky pool 'embayment', on the shoreward side of an inner reef.) Offshore reefs are not inimical to along-shore sand migration. (Whereas shore-connected groynes most certainly are.) If sections of offshore reef were to be raised in height and in extent, the greatest challenges would be: 1/ the construction cost & 2/ sourcing the considerable quantities of appropriate hard limestone rock that would be required. The major advantage of commencing a program of nearoffshore-reef building and extension, is that this would become a program that would for a long time ahead ... effectively reduce the energies of the sea that today so fast destroy and erode the soil surfaced and sand surfaced coastal scarp. It is a fact also, that even if a reef building and reef expansion program is undertaken along this section of coast, that today's continuity of sand beach will become less: Although I would expect the sandy coves to persist for a long time to come (100 years and more). And I would not look with favour on any engineering efforts to restructure the Trigg Island area

access for dogs

(except potentially – removing the present boat ramp that does unnaturally intersect and break the continuity of the landward sand beach.) (I am mentioning Trigg Island for the simple reason that the extent of the sand beaches to the south of this Island appear to be expanding, rather than contracting – perhaps because the volumes of sand that currently migrate northwards along the shoreline, are today less.)

Anonymous

6/03/2019 05:06 PM

Don't over develop it. It's charm is that it's small and simple

Anonymous 6/03/2019 06:28 PM

Anonymous Do not put a cafe there.

6/03/2019 07:29 PM

Anonymous Any facilities at beach level. Keep it as natural as possible.

6/03/2019 07:51 PM

Anonymous Food vans, shops etc

6/03/2019 09:03 PM

Anonymous Food vans shops etc

6/03/2019 09:09 PM

Anonymous No fishing in the area

6/03/2019 10:12 PM

Anonymous Kiosk

6/03/2019 10:12 PM

Anonymous It would be inappropriate to create an entry to Mettam's Pool similar to that at

03/2019 10:44 PM Hammersley Pool. Excessive use of paving is out of context with the casual

ambience of the beach and is a blight on its appearance.

Anonymous Take aways

6/04/2019 06:53 AM

Anonymous Mettams is one of the only places you can swim every morning without fear

of being attacked by sharks. It should be preserved for swimming - not restaurant goers or the coffee set. What is lacking is decent parking - if the swell is up all the spots are taken by SUP riders going to the beach slightly to

the north of the pool even at dawn - except of course for all the empty

handicapped bays.

Anonymous In a limited area I don't believe any shops or retail facilities are required

6/04/2019 03:06 PM

Anonymous I don't think barbeque areas or anything that encourages congregation of

//04/2019 03:07 PM large numbers of people at once, and therefore all their rubbish and poor

behaviour should be facilities permitted at Mettams.

Anonymous No

6/04/2019 04:15 PM

We don't need a cafe or food outlet. Anonymous Shops Anonymous Anonymous Shops Anonymous Probably keep the bars etc out, perfect place for coffee lounges. Anonymous This might seem silly but markers on the shoreline indicating distance traveled in the water, many use mettams as a natural lap pool, a simple marker on shore that indicates maybe 50M would be a small but substantial improvement for many who use mettams regularly. Anonymous kite surfing. Don't need any shops or big car parks There enough of these places close Anonymous by Anonymous If possible cut the tops off the limestone pinnacles to enable easier assess to the water Anonymous no Anonymous Food and drink stands. Shops etc. No extra cafes, keep as natural as possible the big draw is under the water Anonymous there is plenty of other coastal areas this can be done at. Anonymous Speeding cyclists are still a problem in spite of bollards being erected which are a great idea. Would like to see the speed limit shown on the signs supporting the bollards changed to 10kmp. This would differentuate this area from the rest of WCH. Anonymous Shopping ice cream cafes Anonymous no further facilities required (toilet and shower are already adequate) Please do not wreck this place. It is one of few good surfing and snorkelling Anonymous places. There are plenty of cafes and easy parking beaches elsewhere Anonymous Paid parking

The mens toilet /change area gets very congested in non peak times, 6

males at anyone time is congested.

Anonymous

6/06/2019 11:21 AM

Anonymous	Remove the rocks!!!!
6/06/2019 12:27 PM	
Anonymous 6/06/2019 07:37 PM	Bollards on the dual-use path are completely superfluous. Cyclists slow briefly to negotiate the bollards, then speed up between them. The main reason a cyclist slows down in a pedestrian area is the presence of pedestrians. Each pedestrian constitutes an unpredictable moving obstacle, and is much more effective at slowing cyclists than fixed bollards or signs
Anonymous 6/06/2019 07:49 PM	stating the obvious. The retaining walls to stop the corrosion.
Anonymous 6/06/2019 08:52 PM	more cars; more parking for cars is not appropriate car parking bays should prioritise access for disabled people others should be encouraged to walk or cycle or catch public transport
Anonymous 6/06/2019 10:53 PM	No
Anonymous 6/07/2019 12:08 AM	- Any sort of restaurant/cafe/shop is highly inappropriate Reclaiming any beach area for infrastructure is inappropriate - Those poles on the footpath need to go too. absolute eye saw. let common sense prevail.
Anonymous 6/07/2019 12:12 AM	None that I can think of b
Anonymous 6/07/2019 10:36 AM	The limited parking limits the amount of people at the beach. I think this is important to avoid massive overcrowding. It's a small beach.
Anonymous 6/07/2019 12:16 PM	N/a
Anonymous 6/08/2019 12:23 AM	Commercialised property that would spoil the natural beauty or views of Mettams Pool
Anonymous 6/08/2019 02:58 AM	More parking on the coast side of West Coast Drive is not appropriate.
Anonymous 6/08/2019 10:50 AM	It would be good if Mettams Pool could be left as close to its natural state as possible, but made safe and accessible for beach users. I would not like to see it over-developed as there are many other areas along the coast that provide that amenity e.g. Hillarys Boat Harbour, Trigg, North Beach and Waterman's Bay. Mettams Pool has only ever been a local, safe swimming area for children and elderly members of the community. I have been using and enjoying Mettams Pool for swimming and snorkelling for 59 years and look forward to continuing that practice.
Anonymous 6/08/2019 12:14 PM	Please keep it just a simple beach, as it is now, with toilet shower facilities and that is it. Please don't spoil its charm and understated vibe.
Anonymous 6/08/2019 12:52 PM	I don't think anything commercial is necessary as there are plenty of other local area options which provide a food/drink source.

Plaza and shops Anonymous All of them. The car park needs to be removed - it has gone downhill ever Anonymous since. If people want a full service beach then go to Scarb or Hilaries. Julie116 beach cafe Anonymous Paid parking Anonymous Kiosks Anonymous Kiosks. Anonymous Motorised boating, fishing Julie116 keep the beach and surroundings as natural as possible as we are well served by lovely coffee shops and restaurants along the coast. keep Mettams Pool for the babies', first swims, the family summer picnics and the elderlys morning constitutional swims and social gatherings. Anonymous I dont think bars, cafes and restaurants are necessary. We have great 6/09/2019 01:42 PM options in the area already. People come there for the natural aspects offered. Pollards on the footpath Anonymous Anonymous Shop or anything that brings more vehicle traffic Anonymous Fast cyclists. Minimalist Anonymous Anonymous Nothing commercial that is too big. Jetty Anonymous Anonymous Concrete, concrete. I don't understand why the steps to MP are closed off, I know there is no sand underneath to support them, but neither is there sand under the next set of steps to the north of MP. The concrete steps to Hamersley Pool have closed in sides - I would imagine to stop the sand

diminishing. The steps to the beach at the end of Sorrento Street & the ones

down to the jetty look to be more fitting with the coastal environment.

Anonymous

6/09/2019 08:01 PM

There does not need to be shops. There are plenty around, within walking distance. Putting more shops closer to Mettams would destroy the natural environment that's there, and the point of mettams is the swimming/surfing and snorkelling, not shops. There does not need to be further traffic slowing methods as West Coast Drive is a major road, and already has traffic slowing devices. These devices have made the area very unsafe for cyclists. So either divert all traffic apart from local traffic, or widen the road, and make only specific areas of west coast Drive slow, so that pedestrians, cyclists and cars can all use the area safely. Please note I am all 3 (pedestrian, cyclist and motorist)

Anonymous

6/09/2019 09:38 PM

Don't want even more people encouraged to go there with plaza etc as feel this will lead to more damage

Anonymous

6/10/2019 03:23 AM

No.

Anonymous

6/10/2019 09:40 AM

Insufficient information has been provided to frame a response. What facilities are available elsewhere? How accessible are those? The importance of values, and the importance of investing public funds into coastal engineering (compared to retreat which is the first option to be considered on the hierarchy of adaptation options in CHRMAP guidelines) on such a local scale needs to consider other locations to access these things. Government can't afford to maintain all coastal facilities and nodes in the long term, and that's certainly not what I'd support using my rates for. Get strategic so you can identify areas where facilities can be retreated. We cannot afford to protect it all. Also, adaptation is a long term thing. Engineering approaches only have a specified design life, after which you have top pay again, and it costs more as a result area level rise. You only pay to retreat once. I really recommend reading the Department of Planning, Lands and Heritage chrmap guidelines. And see what other local governments have done. This values survey has gaps (e.g. social and economic values), and doesn't really give you the best information for medium to long term decision making about risk. The FAQs are focused solely on engineering.. that assumes protection, which isn't consistent with policy requirements for coastal risk management.

Anonymous

6/10/2019 10:01 AM

No.

Amsterdam etc.

Anonymous

6/10/2019 10:39 AM

Anonymous

6/10/2019 11:56 AM

In general, this special little beach will benefit from being kept in its natural state as much as possible. If people are looking for functions and facilities then they can choose to visit commercialised beaches (e.g. Scarborough) with all the attractions. This survey is poorly written and misleading in that Question 3(j) is leading the responder to a specific, almost unrelated answer (surely the real reason to create a plaza is to increase revenue (rates) from the area to cover the costs of any environmental engineering?). It is very

If thinking of putting other amenities prefer moveable, like catering bikes in

obvious that there are more cost effective options available to council to improve road safety and lower speeds past Mettams pool. If road safety past Mettams Pool is a current issue, rather than building a plaza why not report to the police and ask for additional patrols? Is it possible for the council to separate the environmental engineering requirements from the commercialisation of this pristine marine environment?

Anonymous Cafes and restaurants. It needs to temain natural. Too many areas are being inudated with cafes with views and surfers cannot access parking any more e.g. Trigg Car Park. Then the rangers set time limits. Surfing should be acessible easy and priceless. The reason these places were originally hot

> spots is BECAUSE of the surfers. So let's not turn it into a spectacle and crowded areas beaches and parking.

Kiosk and shops, would prefer to just have a beach to enjoy without exessive

development

Anonymous Large scale (or even medium scale) commercial development is not appropriate for Mettams Pool, due to the limited parking available on West

> Coast Drive. Any development should be focused on maintaining access for surfers, swimmers etc. who want to enjoy the natural attractions of the area.

See previous answer but add provision of facilities should weigh up risks and

provision elsewhere

I don't think it's the place for a bar area or high intensity activation. More appropriate to activities focussed on the natural beauty and amenity

Mettams Pool is not big enough for large events to be held there. I dont think

a food/drinks stall is required as the area is already under heavy use and adding a food/drinks stall would just make it busier and worse for all beach users. I also note that many users disregard the 'no dogs' signs and regularly bring dogs onto the beach and into the water. I also think the abalone season should not include Mettams as people walk all over the reef and cause damage to it. Also as I am a daily swimmer, I see people collecting abalone the evening before the abalone open day, they collect the abalone and then

leave them in bags in the water, collecting them the next day.

The disabled ramps take up a lot of space. I think they could be better

designed for the site and that space used more wisely.

Keep as natural as possible. No kiosk etc. Anonymous

Anonymous Additional retail, concrete, disruption of natural environment. There's more

than enough of that at Scarborough and Hillarys.

No Anonymous

Anonymous Continually blocking off access to the beach rather than just fixing the problem. The main access stairs just need a guy with a shovel and a bit if

sand now and again if the council is afraid of the stairs collapsing. No one

I've spoken to that has construction experience considers it unsafe.

Anonymous

Anonymous

Anonymous

Anonymous

Anonymous

6/10/2019 08:44 PM

Mettams Pool - Community Values Survey : Survey Report for 20 February 2018 to 16 June 2019 I'd love to see the beach become a non-smoking beach as it is a family beach Anonymous but lots of people smoke there. The beach is also regularly littered with cigaret butts. Continue to have Mettams as a no-fishing zone to provide sanctuary for fish and limit fishing hooks and wire in the water around swimmers. No, I think we need more development on the coast. Anonymous Anonymous Food and or drink selling or any further overdevelopment Keep it simple Anonymous Anonymous It would be a shame to see this spot overdeveloped at the expense of the 6/11/2019 07:40 PM reef, marine life and begetstion Love the place! As I say injury to feet and limbs can be prevalent with rocks Anonymous in the sand and on entry and exit of the water . Could sharp rocks be ground down removed just as Mr Mettam did? Anonymous Over commercialisatiom Let's keep it a beautiful natural pool for people to enjoy without Anonymous Anonymous A kiosk, Cark park, restaurant, ridiculous unnatural landscaping or anything with branding. We need to have a special place to go where it feels like a natural retreat from the overwhelming anxieties people face in life. Please don't mess up the opportunity to do our natural coast the justice and respect it deserves. Big carparks and kiosks/restaurant facilities- keep it simple And no dogs! Anonymous 6/12/2019 01:46 AM Anonymous Snack stands beach side The rocks on the beach leading to the water is very restrictive. There are a lot Anonymous of young families that attend to the beach and the every time, there is a child that injures themselves on these rocks. They should be moved away from the beach area. As a result of this, we sometimes tend to other beachs to avoid the rocks Anonymous No 6/12/2019 11:40 AM

Anonymous

Anonymous 6/12/2019 11:54 AM

what exists with respect to beach, reef and water. Keep it simple and keep it clean that's it.

No cafes, bars, restaurants, or extended entertainment opportunities beyond

Bars

Anonymous I do not want to see a coastal development comprising retail and/or food/restaurants directly on the coast. Anonymous Drinks / food vendors would crowd an already busy spot and increase the 6/12/2019 03:35 PM amount of litter in the area. Difficult to comment when options are not yet provided ... Anonymous NO Anonymous Anonymous Na Anonymous Shops, kiosk or any business is NOT necessary & will ruin what we use this space for. Keep the beach a beach, but to access the water easily with kids would be good. Anonymous Please don't turn it into a 'commercial' area - it needs to stay as a meeting place for like minded folk to enjoy the nature of the beach and pool. Anonymous I don't think you need to maintain toilet facilities etc. It's a beach. Let it be natural. Most people just want the beach to be sandy again and not have to stumble over jagged rocks getting in to the water. Especially with young kids. I think the priority should be preserving and protecting the natural coastal Anonymous environment with native vegetation where possible as the natural environment is the reason I visit Mettams Pool. I would welcome safer access and cycle lane speeds as we often cycle to visit the pool as a family. Large man made structures would spoil the values of this area. Anonymous I think the biodiversity and environmental needs come absolutely and entirely before my or any other persons needs. If that means I can't access it then so be it. Protect the environment FIRST. Anonymous Overdevelopment. Anonymous Keeping the natural flora and fauna and landscape as intact as possible with adding "tourist" style solutions. The whole idea is about preserving what we have here in WA, not making a dollar out of the solution. Mettams Pool is currently over used. In summer it is absolutely at capacity. Anonymous The beach is like a European beach with no space. Parking is a nightmare with cars on verges, on roads back from the beach. Additional facilities would only attract further patrons. Why spend money on facilities when there existing facilities work sufficiently. Existing facilities are appropriate. I have had the experience of managing the erosion at City Beach and would Anonymous be interested in being on the committee to assist with formulating the outcomes for Mettams Pool, No sandbags like Watermans which have destroyed the beauty of that bay Anonymous

pls leave it as it is. pls don't put any groins or other impositions on the ocean

Page 105 of 107

Anonymous

Mettams Pool - Community Values Survey : Survey Report for 20 February 2018 to 16 June 2019 to try to stabilise the sand. It ebbs and flows each year naturally. Anonymous Anything that detracts from the pool being a safe, sheltered place to swim With space being limited and competing interests, the City should consider Anonymous whether it should instead invest in upgrading one of the adjacent areas that have ample space (e.g. Saunders st and North Trigg). With Mettams Pool "downgraded", car parking can be replaced to separate pedestrian and bike riders in this location Anonymous Commercial development east of the road No need for commercial kiosks or paid facilities, there are plenty in the area Anonymous anyway. Cut vehicle speed to maximise pedestrian safety but keep two way traffic Anonymous flow. People love being at Mettams and love walking and driving past which all creates the right ambiance. Anonymous No food stalls, it will cause more rubbish in the area Don't need refreshments or increased pedestrian access, etc. Anonymous Anonymous Further modification of bollards and signs on the Mettams Pool footpath 6/15/2019 11:49 AM which is unsafe, senseless and not inclusive for people of all ages and disability. As a minimum we would like to see one at least one additional bollard removed from each site as a minimum to allow unrestricted access for people on tricycles and pilots on trishaws carting passengers with loads > 150Kg, so pilot riders can negotiate and manage the rise of the hill, as there isn't enough momentum "They paved Paradise and put up a parking lot." Understand the need to Anonymous make the amenity accessible to all, but need to explore other options than simply creating more parking along the waterfront. That could include better public transport options, even a shuttle service to bring people from an alternate parking area (perhaps Charles Riley Oval) in the height of summer to avoid vehicle congestion along the front. Anonymous Nothing that impacts the natural environment, coral and beach! Anonymous Swimming lessons could surely be done elsewhere/more appropriate areas. Fair enough if they are snorkelling however as it is a safe and appropriate starting point for children to learn about the ocean. Anonymous no Anonymous Not really

Anonymous

Increased parking in a already congested area

6/15/2019 09·21 PM

Anonymous

Don't need commercial infrastructure

6/15/2019 10:52 PIVI

Anonymous

Any increased built infrastructure that would have a negative impact on the beach and coastal amenity of Mettam's Pool. Any food vendors/cafes are not

appropriate for this spot.

Anonymous

/15/2010 11·32 DM

Refreshments

Anonymous

040004004505

Refreshment outlets. Please retrain it's un-commercialised charm.

Anonymous

6/16/2019 03:10 PM

I think part of the attraction of Mettams pool has been that it is 'natural'. It is an ideal area for swimming and snorkelling and I would like to see the emphasis remain on these activities rather than making it 'too popular' by putting in bbqs cafes etc. There are plenty nearby anyway. I would like to see the character remain whilst still undergoing works to provided protection of the beach/coastline and preservation of the pool, beach and surrounding coastline. I would not like to see the area over developed, or bush lost to more car parking, cafes etc. I would also not think that it is an appropriate

area for jet skis and other motorised water vehicles.

Anonymous

6/16/2019 04:23 PM

advertising, especially real estate.

Anonymous

6/16/2019 04:26 PM

Leave it natural. No shops, food vendors etc. There is already enough rubbish on the beach. DOGS are not appropriate at the beach but

unfortunately despite signage a significant number of dog owners ignore the law and when confronted get aggressive. By the time city rangers arrive after

notifying them of the situation the offenders are gone.

Anonymous

6/16/2019 04:32 PM

yes , no functions should be allowed except swimming lessons.

Anonymous

Please don't overdevelop.

Anonymous

Want it to be available for snorkeling!!!

6/16/2019 06:24 PM

Anonymous

Commercial activities

Anonymous

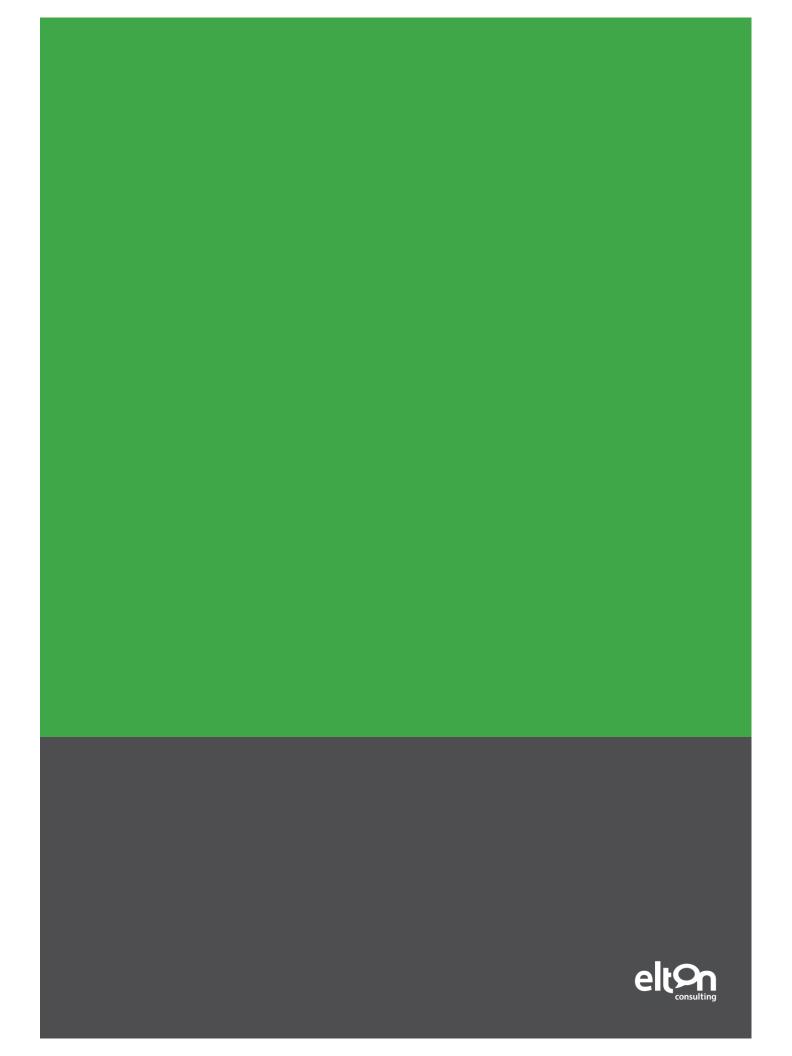
6/16/2010 10:40 DM

It seems unlikely the beach can be saved. Creating safe access to snorkel or swim there would be great, but maybe not realistic. May be better to make it

part of the marine reserve. Protecting the walkway and road is very

important.

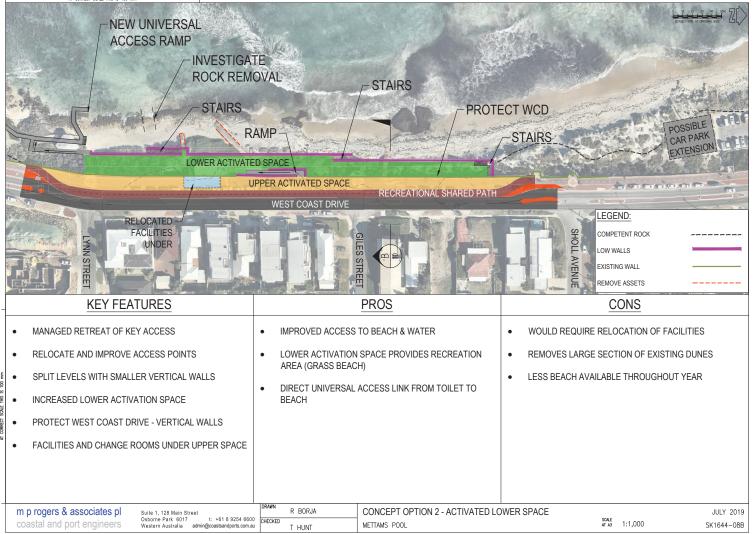
Optional question (325 responses, 168 skipped)

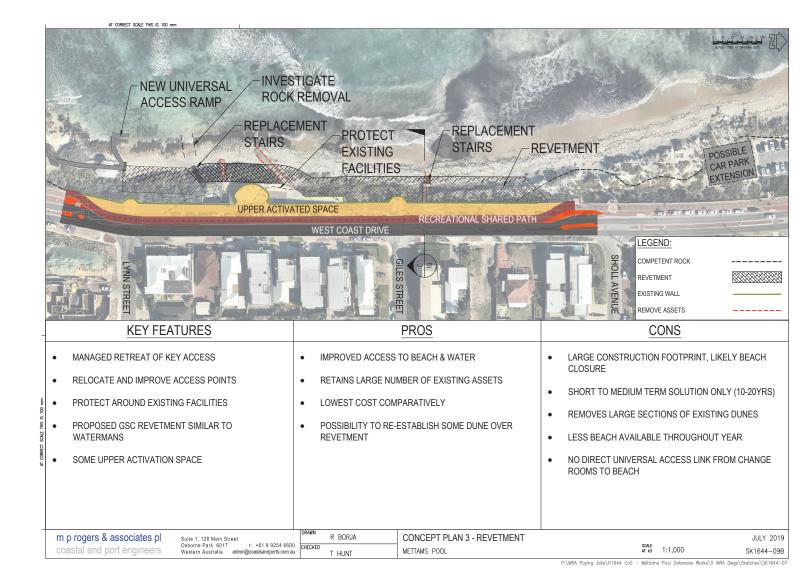


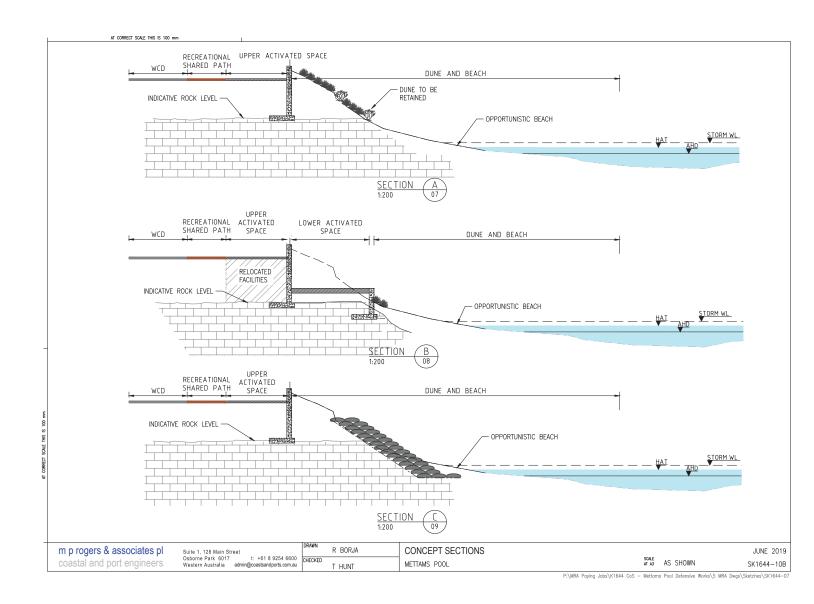
Appendix B Concept Options

As presented at Community Forum









Appendix C Community Forum Summary

m p rogers & associates pl ABN 14 062 681 252

consulting engineers specialising in coastal, port and marine projects

Form 001 10/01/14

Suite 1, 128 Main Street
Osborne Park WA 6017, Australia
e: admin@coastsandports.com.au
t: +61 8 9254 6600
f: +61 8 9254 6699

Our reference: K1644:TSH/LDD:Letter 19062 Rev 0
Enquiries: Trent Hunt, direct line: 9254 6616

17 July 2019

Mr Jon Offer City of Stirling jon.offer@stirling.wa.gov.au

Dear Jon

METTAMS POOL DEFENSIVE WORKS COMMUNITY FORUM

Forum Summary

The community forum for the Mettams Pool Defensive Works was held on 6 July 2019 at the Charles Riley Memorial Reserve, from 2:00 to 4:00 pm.

The following attendees formed the Project Team for the forum:

- Jon Offer, Murray Woods, Gemma Taavale, Kate Phillips, Thomas Cramsie & Patricia Tan (City of Stirling).
- Lucya Roncevich (Department of Transport).
- Claire Paddison (Elton Consulting).
- Trent Hunt, Liam De Lucia & Ben Turner (M P Rogers & Associates).

Claire Paddison facilitated the forum. In addition, Councillor Karen Caddy attended and introduced the forum for the City.

The purpose of the forum was to present the following:

- background information to the observed coastal erosion at Mettams Pool.
- outcomes of the recent community values survey.
- three concept options to address the coastal erosion and ask for consideration and comment from the community.

The aim of the forum was to gather feedback on each of the presented 3 options and identify a preferred concept option for design development. The three concept options are presented in Attachment 1.

A total of 72 community members attended the community forum and participated in discussions. Community participants were seated on tables of up to 10 to enable group discussions during the review of the concept options. Members of the Project Team facilitated and assisted across the tables.

The following table provides a run down and record of the presentations.

Table 1 - Community Forum

Presentations

Introduction

Claire Paddison provided an introduction, housekeeping and some ground rules.

Welcome & Acknowledgement of Country

Cr Karen Caddy presented a welcome to the forum and an acknowledgement of country.

Department of Transport

Lucya Roncevich provided an outline of the Department of Transports role in coastal adaptation works and funding in Western Australia, the City of Stirling and for this project.

Background - CHRMAP

Jon Offer provided background to the City's works on coastal processes and adaptation on a broader scale and the Coastal Hazard Risk Management & Adaptation Planning work which identified Mettams Pool as a priority site.

Background - Coastal Processes

Trent Hunt provided background on site conditions, general coastal processes and some basic principles, including assessment of the coastal hazard areas without intervention.

Coastal Values Survey

Claire Paddison provided a summary of the coastal values survey and the key outcomes.

Concept Plans

Trent Hunt presented three concept options developed to address the coastal erosion issues, including brief discussion of the key features, pros and cons of each. Jon Offer provided discussion of the required works to West Coast Drive, the Recreational Shared Path and on-street parking to accommodate the works, which could be temporary or permanent.

Workshop

Discussion of the Concept Plans

Each table was provided with an A1 copy of each of the concept plans and sections. Participants were asked to discuss each of the concepts and identify items they liked and disliked from each, along with any proposed improvements or other comments.

Following table discussion time, the top 3 pros and cons from each table were identified on the wall concepts plans with sticky notes. Additional comments from tables were also requested.

At the completion of the workshop, each of the individual participants were requested to place a green dot on their preferred concept on the wall.

Brief question and answer periods followed each of the presentations. The questions are captured in the comment sheets from the workshop.

Following completion of the forum the wall concept plans, with each table's comments and individual preferences, were collected. Individual comments and concept plans from the table were also collected. All outputs from the wall and tables were photographed for record and then comments collated. A summary of the comments, assessment and outcomes are outlined below.

Forum Comments & Outcomes

Pros, cons and general comments from each of the collected plans have been summarised and separated into a table for each of the concept plans, along with a separate table for general comments which are applicable to all (or none) of the options. We have considered each of the comments and provided general responses against each, identified into the following categories:

- Pro generally positive or supported feature or comment.
- Con generally negative or disliked feature or comment.
- Irrelevant comment which is not directly applicable to the coastal defensive works.
- Consideration comment which warrants further consideration in design.

It is important to note that some of the "irrelevant" comments may be relevant to other City works, but not for the subject coastal engineering defensive works. The tables are attached to this letter as Attachment 2.

A count of the individual "green dots" indicating participants preferences showed a clear preference for Concept Option Two (Lower Activated Space). This option was supported by 56 participants, approximately 78% of the total attendees. The next preferred was Option One (Relocate Facilities), with only very low support for Option Three (Protect Existing Facilities).

Some of the key comments and observations are highlighted below.

- There was a difference of opinion around the changes to West Coast Drive and the Recreational Shared Path, with modifications both seen as a positive and negative in a number of comments.
- There were far more comments on Option 2 than the others, this may be due to greater discussion around the Concept Option which was ultimately preferred.
- There was strong support for landscaping of the Lower Activated Space with areas of either natural planting or dunes, or sand, along with shade and shelter.
- There was a lot of comment on the appropriate locations of the access ramps and stairs, with a preference for locations closer to the existing toilet block.
- There were a number of comments on artificial reefs and in-water structures to protect the sheltered nature of the swimming area into the future, along with removal of rock from the shoreline.

The comments were all considered to develop the recommendations for the progression of the design.

Recommendations

Based on the recorded comments and preferences from the community forum, MRA make the following recommendations.

- Progress the design of Option Two (Lower Activated Space) to 15% concept design.
- Further consider the location and form of access structures in the progressed design.
- Further consider the landscaping form and function of the lower activated space. It is recommended that a landscape architect is engaged to assist with this process in future progression of the design.
- Complete further investigation and potential community consultation on any permanent changes to West Coast Drive, the Recreational Shared Path and the on-street car parking.
- Investigate the approval requirements and consider removing sections of rock from the shoreline to improve access to the water.
- Investigate the approval requirements and consider adding to the reef or alternative structure to enhance and protect the swimming area into the future (potential future stage of works).

We look forward to your feedback on progressing the design to the 15% stage and finalising the current stage of works.

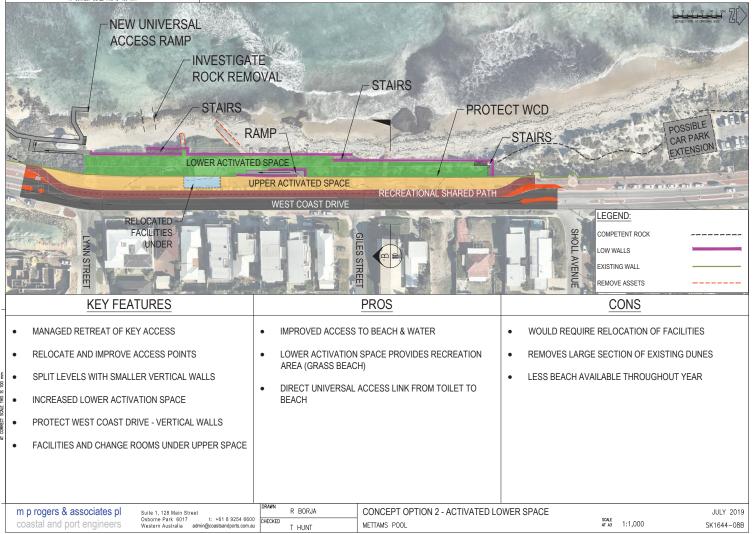
Yours sincerely

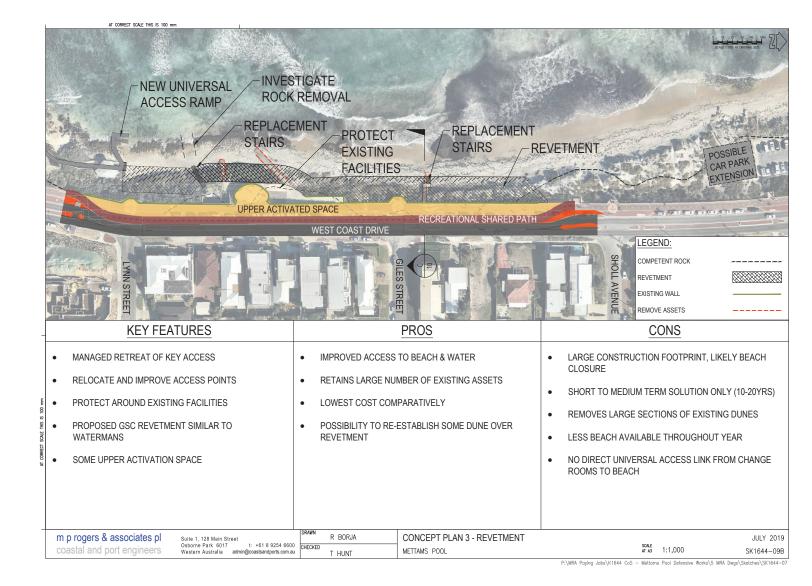
for and on behalf of m p rogers & associates pl

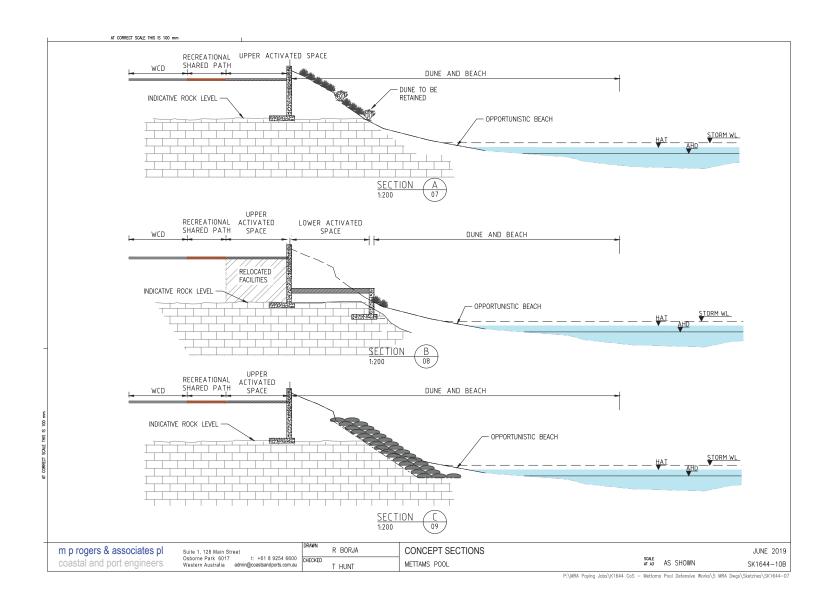
Attachment 1 – Concept Options Attachment 2 – Community Forum Comments & Responses

Attachment 1 – Concept Options









Attachment 2 – Community Forum Comments & Responses

General Comments

Total Number of Community Attendees 72

Preferred Concept Option 1 12 (16.7%)

Preferred Concept Option 2 56 (77.7%)

Preferred Concept Option 3 4 (5.6%)

- = comment not relevant to the coastal defensive works
- = to be considered further
- = pro or supported feature
- = con or disliked feature

Item	Community Forum Comment	Response
	Comments	
1	One strong rock wall keeping the sand + beach as long as possible - lets face it, they are doomed eventually	This is essentially Option 1
2	Relocated facilities make available before close other	This would be determined by staging of the works and is noted
3		Access and ramp locations, form and length will be considered further in detailed design
4		Access and ramp locations, form and length will be considered further in detailed design
5		Consistent with all options and can be considered by City, not relevant to coastal works
6	·	Consistent with all options and can be considered by City, not relevant to coastal works, but noted. Other support for extension.
7		Consistent with all options and can be considered by City, not relevant to coastal works
8		Unlikely to be incorporated. Minimal support for commercial development at this location.
9	Disabled ramp. Why has this been left off the concept plans. It's a waste of space not useable and has a viewing platform.	Was left off the plans as there is no proposed change.
10	Parking should be retained along road	Consistent with all options, but noted. Other support for removal.
11	Pedestrian pathway should be retained	West Coast Drive decision, consistent with all options

	I	
12	Fire pit. We are a civilised society.	
13	WCD should be retained as is	West Coast Drive decision, consistent with all options
14	Use curved walls to look more natural	Can be considered in detailed design
15	Separate bike path	West Coast Drive decision, consistent with all options
16	Keep RCP as is	West Coast Drive decision, consistent with all options
17	Parking along WCD a must	Consistent with all options, but noted.
18	Keep change area at southern end	Noted
19	Southern end is too rocky at times. Provide all weather, stepped access at the southern end.	Access and ramp locations, form and length will be considered further in detailed design
20	Keep all current vegetation in front of the current facilities. Low retaining wall in front of this.	This is similar to Option 2, but Option 2 would be more appropriately designed.
21	Reinstate surf access ramp/stairs in front of current facilities	Access and ramp locations, form and length will be considered further in detailed design
22	Spend money on change rooms for surfers. Shower facilities in front of the Northern carpark will encourage surfing.	Consistent with all options and can be considered by City, not relevant to coastal works
24	Extend the existing ramp from the current facilities	Access and ramp locations, form and length will be considered further in detailed design
25	Also research to consider removal of the Trigg Is boat ramp - and thereby potentially reduce south to north beach sand drift losses. (Currently at least 70% of this drift is lost to seaward in a north west direction at Trigg Is).	The influence of the Trigg Island boat ramp is minor in the overall sediment dynamics of the area. Sufficient assessment of this has been completed.
26	You can't fight the ocean but encroaching further into ocean, with grassed areas and limestone walls seems ludicrous. People who go to Mettams mainly go to swim. Could the WCD traffic be minimised to local, if not what about a crosswalk. At Mettams where shelter and grassed areas are, the trees in front, are they necessary as they do not seem to be ocean type trees. Could that area be changed back to ocean growth that will not hold the sand back?	Does not address the erosion issue, WCD still at risk. Not proposing to encroach into the ocean.
27	As someone must pay for all these fixtures, how much will this affect us the rate payers?	Costs will be estimated in the next stage of the design.
28	Takes 30yrs the gather as much heat as it will	Not relevant to coastal works
29	How would seaweed replace all fossill fuel energy?	Not relevant to coastal works
30	TerSum energy.	Not relevant to coastal works

	Rod Littlejohn	Not relevant to coastal works
32	Geraldton community energy	Not relevant to coastal works
33	geoogc.energy	Not relevant to coastal works
34	Peko energy Dunsborough energy	Not relevant to coastal works
35	Independent power association	Not relevant to coastal works
36	Cities climate partnership	Not relevant to coastal works
37	Underpass for pedestrians	Consistent with all options and can be considered by City, not relevant to coastal
		works
38	Don't like carparks	Noted
39	Don't want any more man made structures.	Noted
40	Need a crossing for pedestrian access across the road. Maybe speed	Consistent with all options and can be considered by City, not relevant to coastal
	reduction? North end of WCD, prior to Scholl Ave.	works
41	Narrow road - zebra crossings, not speed humps.	Consistent with all options and can be considered by City, not relevant to coastal
		works
42	Need to think about reducing wave impact in storms. Particularly where	Some further consideration can be given to offshore protection, although this is not
	WCD erosion hazrd is very high. Not enough consideration of potential to	seen as ultimate protection or a stand alone. Recommend further separate
	improve functionality of the inner ocean reef as an energy reducing	investigation.
	structure. Inflatable or artificial reef, boulders. Ie. Denmark's green pool to	
	keep sandy beach.	
43	Need rain shelter /shade to still change outside	Noted, landscaping and provision of facilities can be considered in detailed design,
		recommend landscape design completed for the whole concept
44	Need to replace natural vegetation	Landscaping can be considered in detailed design, recommend landscape design
		completed for the whole concept
45	Need ramp into water. Not too fancy.	Access and ramp locations, form and length will be considered further in detailed
		design
46	Need ramp parking for ACROD at Southern end.	No change proposed to current ACROD parking at southern ramp
47	Keep relocated shared path permanent	West Coast Drive decision, consistent with all options
48	Swimming lessons need to be ongoing	Consistent with all options and can be considered by City, not relevant to coastal
		works
49	Picnic tables with shade	Noted, landscaping and provision of facilities can be considered in detailed design,
		recommend landscape design completed for the whole concept

_		
50		Access and ramp locations, form and length will be considered further in detailed design
51		Consistent with all options and can be considered by City, not relevant to coastal works
52	, ,	Consistent with all options and can be considered by City, not relevant to coastal works
53	Make the WCD narrowing permanent to reduce speed	West Coast Drive decision, consistent with all options
54	Separate bike paths	West Coast Drive decision, consistent with all options
55	WCD local traffic only - imagine peak hour with reduced speed - noise/fumes.	West Coast Drive decision, consistent with all options
56	, .	Consistent with all options and can be considered by City, not relevant to coastal works
57	No extra parking	Consistent with all concepts. Note this was also requested, difference of opinion.
58	No more bollards on footpath. Remove the bollards on the footpath.	Not relevant to coastal works
59		Consistent with all concepts. Note this was also seen as a detractor, difference of opinion.
60		Consistent with all options and can be considered by City, not relevant to coastal works
61		Consistent with all options and can be considered by City, not relevant to coastal works
62	Can we have a wall that goes vertically down to cap rock at the southern end	All of the proposed structures would likely go to rock.
63	Bend in the upper activated space to create some parking.	Noted, final form would be determined in detailed design.
64	Does the City have authority over West Coast Drive as a main road?	JO: WCD is not a main road and the City has authority over changes to it.
65	this public?	JO: The first stages of the CHRMAP (Coastal Hazard & Risk Assessment) have been completed. The next stages of CHRMAP can not be completed until the City has determined actions in identified areas.

_		
	North Beach coastline?	TH: While it has caused some change to coastal processes, the majority of the erosion caused by construction of HBH is evident to the north of the Boat Harbour. It is not believed to have resulted in the net changes seen at Mettams.
	conditions. Will the new ramp provide safe access at all times?	TH: A ramp in an exposed location such as Mettams can not be made safe at all times and all conditions and needs some management. However the aim is to improve access so there is not a drop at the end, it is not as slippery and uses appropriate materials and it is functional in the appropriate conditions.
68	Handrails are important for the access ramp.	Noted

Concept Option 1 - Relocate Facilities

Item	Community Forum Comment	Response
	Pros	
1.1.1	We like narrowing of the road permanently	Consistent with all concepts. Note the narrowed road is also seen as a con,
		difference of opinion.
1.1.2	Retaining WCD and pedestrian walkway	Consistent with all concepts. Note the narrowed road is also seen as a con,
		difference of opinion.
1.1.3	Activated space provides area to stop and view off the path	Consistent with all concepts
1.1.4	New universal access ramp in to deeper water	Consistent with all concepts
1.1.5	Robust long term design	
1.1.6	This concept makes the least change and retains the natural landscape	
1.1.7	Protects as much sand and beach as possible	
1.1.8	Saves homes & road	Consistent with all concepts
	Cons	
1.2.1	Disrupts dunes	Consistent with all concepts
1.2.2	Difficult to build wall	No more difficult than others, consistent with all concepts
1.2.3	Reduced amenities and recreational area - no gazebo	
1.2.4	Reduced access	
1.2.5	Upper activated space at same level as WCD - not safe or usable for kids	
1.2.6	Lack of disabled parking near universal ramp	Consistent with all concepts
1.2.7	Lost parking	Consistent with all concepts
1.2.8	No middle grass space	
1.2.9	Difficult beach access when no beach	
1.2.10	No additional commercial use for public activation	
1.2.11	Narrow road - safety concern for pedestrians	Consistent with all concepts
1.2.12	No long term vision ie. bandaid fix	
1.2.13	Erosion face	
1.2.14	Expensive + harsh	
	Comment	
1.3.1	This is the simplest solution	

1.3.3	· · · · · · · · · · · · · · · · · · ·	Less appropriate for this option, but will be considered in the design progression This would be determined by staging of the works and is noted
1.3.4	Upper activated space should be only grass area	Landscaping can be considered in detailed design, recommend landscape design completed for the whole concept
1.3.6	Relocated features - OK This is the only option I would approve. You have tunnel visioned this community forum. Not very impressed with the concept plans or response from the survey. Not one concept plan addresses the retaining of the swimming waters/pool area and making it better, when that was the number 1 most important thing to the people. Get your sh*t together.	All options aim to protect the amenity and access to the swimming area and pool and provide improved access

Concept Option 2 - Lower Activated Space

Item	Community Forum Comment	Response
	Pros	
1.1.1	Permanent recreational space, space where people can access the water	
	and a place to sit and enjoy the beach	
1.1.2	Aesthetically more pleasing	
1.1.3	Easy access to water	
1.1.4	Access space increased for public use	
1.1.5	More grass area or natural vegetation and trees	
1.1.6	Lower activation provides buffer from the road, safer for kids	
1.1.7	New universal access ramp is good, appreciate for pool access	
1.1.8	Rock removal is good	Consistent with Option 3
1.1.9	Like the protected changerooms	
1.1.10	Like the activated space. Gives integration to sea. Does it have to be that	Width can be considered in detailed design and recommend landscape design to
	wide?	be completed for the whole concept and area.
1.1.11	Retaining walls and narrow road. Gives a two prong chance to	Note that narrow road has been identified as both a pro and con multiple times
	keeping the coastline (ie backup second tier).	
1.1.12	Tucked away facilities, looks nicer	
1.1.13	Most usable space	
	Cons	
1.2.1	No grass, want sand	Landscaping of the lower level can be considered in detailed design, recommend
		landscape design completed for the whole concept.
1.2.2	Dune area less aesthetic	Landscaping of the lower level can be considered in detailed design, recommend
		landscape design completed for the whole concept.
1.2.3	This concept changes the natural landscape too much and makes the	
	ocean front "Cottesloe" or Scarborough like	
1.2.4	Less beach than concept 1	
1.2.5	Loss of vegetation and sand quicker	
1.2.6	Wind - No wind breaks	Landscaping of the lower level can be considered in detailed design, recommend
		landscape design completed for the whole concept

1.2.7	Disturbed access to mid beach ramp	Access and ramp locations, form and length will be considered further in detailed design
1.2.8	Loss of dunes and natural vegetation	
1.2.9	Possibility of storms causing waves to break over onto grass area	Would be considered in the detailed design and appropriately designed for
1.2.10	Retaining wall would detract from sunshine in the morning	Don't believe there will be any change from current situation, to be confirmed with detailed design
1.2.11	Completely changes the nature of the beach surrounds Comment	
1.3.1	Like the lower level of activated space	
1.3.2	Keep gazebo. Swimming school access.	Noted, shelter should be considered in final design
1.3.3	Future proofing	
1.3.4	Best but needs extended ramp into the water	
1.3.5	Change rooms moved	
1.3.6	Picnic tables with shade	Noted, shelter should be considered in final design
1.3.7	Extend the access at the location of the current facilities	Access and ramp locations, form and length will be considered further in detailed design
1.3.8	Grass area - trees needed for shade	Landscaping of the lower level can be considered in detailed design, recommend landscape design completed for the whole concept
1.3.9	What is the upper activated space used for?	As noted in the workshop, this would be developed further with potential community input
1.3.10	Too much green recreation area will bring in ecological disaster in the	Landscaping of the lower level can be considered in detailed design, recommend
	form of rubbish/litter	landscape design completed for the whole concept. Not necessarily all grass and recreation area.
1.3.11	Keep the lower activated space area as natural as possible, plant native vegetation	Landscaping of the lower level can be considered in detailed design, recommend landscape design completed for the whole concept
1.3.12	Can the wall be more curvy to look more natural	Can be considered in detailed design
1.3.13	Prefer the lower activation space to be sand instead of grass	
	Need rain shelter /shade to still change outside, wind breaks in the lower	Noted, shelter should be considered in final design
	space	
1.3.15	Need to replace natural vegetation	
	Like grass when beach erodes	
1.3.17	Need ramp into water from current facilities. Not too fancy.	Access and ramp locations, form and length will be considered further in detailed design

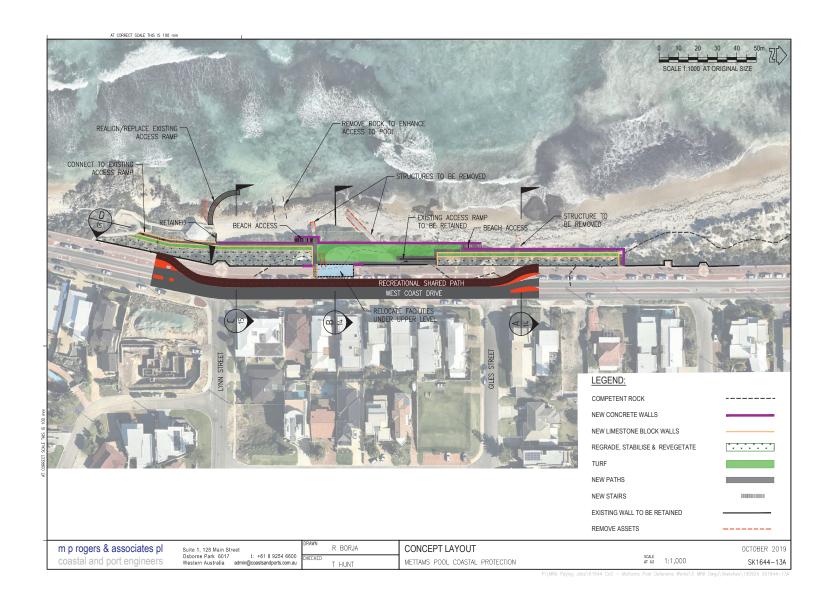
1.3.18	More dune vegetation rather than manicured grass	Landscaping of the lower level can be considered in detailed design, recommend
		landscape design completed for the whole concept
1.3.19	Need ramp parking for ACROD at southern end	No change proposed to current ACROD parking at southern ramp

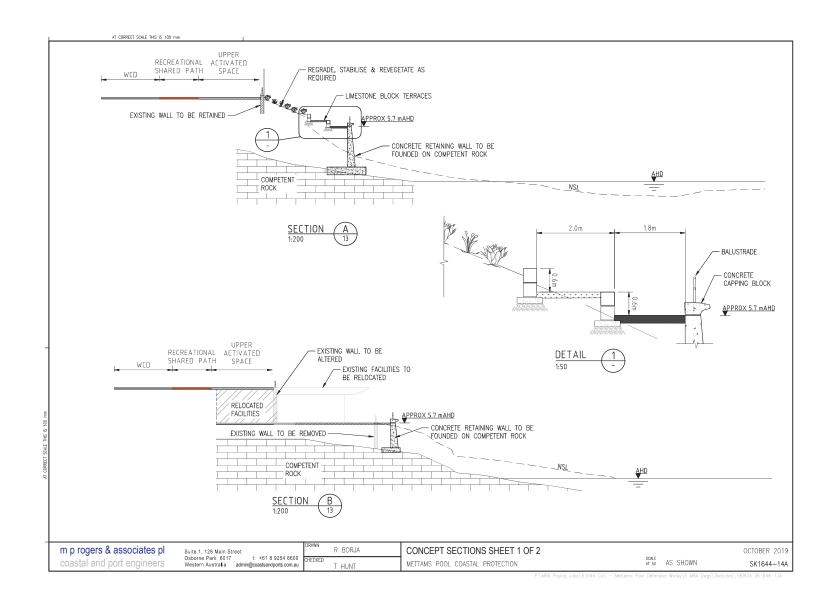
Concept Option 3 - Protect Existing Facilities

Item	Community Forum Comment	Response
	Pros	
3.1.1	New universal ramp to deeper water	Consistent with all concepts
3.1.2	Rock removal	Consistent with Option 2
3.1.3	Keeps beach after works	Consistent with all concepts
3.1.4	Cheapest	
3.1.5	Easiest to do - least disruption	
3.1.6	Narrow road. Curved walls.	Consistent with all concepts. Note the narrowed road was also seen as a con, difference of opinion.
	Cons	
3.2.1	No sandbags	
3.2.2	Lose too much useable beach	
3.2.3	Plastic going in ocean from sandbags	This may be a misunderstanding about the sandbags, but the concern is noted
3.2.4	Rock removal would create greater movement of sand hence no beach	Consistent with all options. More appropriate for this option with full protection.
3.2.5	Upper activated area at same height as WCD	Consistent with all concepts
3.2.6	Sandbags are ugly, they deteriorate	
3.2.7	This concept will require constant maintenance = costs, heartache, delays,	
	loss of amenity during repair sessions, too much impact	
3.2.8	Closed for too long	
3.2.9	Sandbags temporary fix	
	People will walk past where you get changed/picnic	
3.2.11	Narrow road, cause traffic problems	Consistent with all concepts. Note this was also seen as a pro, difference of opinion.
	Comment	
	Don't support sandbagging. Takes the beach completely	
	No dune removal	
3.3.3	Extend access across the location of the current facilities	Access and ramp locations, form and length will be considered further in detailed design
3.3.4	Extend southern treatment	Not clear exactly where or what this means

3.3.5	Lower cost not important	Would be important to some and cost will be one consideration.
3.3.6	Re-establish some dune over revetment was not done at Watermans	Could be completed where space allows
3.3.7	Least favoured	
3.3.8	Don't like revetment	
3.3.9	Least liked - don't like it	
3.3.10	What will the upper activated space be used for?	As noted in the workshop, this would be developed further with potential
		community input

Appendix D Preferred Concept 15% Design





www. coasts and ports. com. au