# Chapter Report 3: Vulnerability Assessment and Risk Evaluation

City of Stirling Coastal Hazard Risk Management and Adaptation Plan CW1195500

Prepared for City of Stirling

23 June 2023





now





### **Contact Information**

#### **Document Information**

Cardno (WA) Pty Ltd

ABN 77 009 119 000

11 Harvest Terrace West Perth WA 6005

PO Box 447

www.cardno.com

Phone +61 8 9273 3888 Fax

+61 8 9486 8664

Prepared for City of Stirling

**Project Name** City of Stirling Coastal

Hazard Risk Management

and Adaptation Plan

File Reference R003

Job Reference CW1195500

Date 23 June 2023

Version Number Rev 1

Author(s):

Leo Reith **Effective Date** 23/06/2023

Coastal Engineer

Approved By:

**Daniel Strickland** 23/06/2023 Date Approved

Principal Coastal Engineer

#### **Document History**

Version	Effective Date	Description of Revision	Prepared by	Reviewed by
Rev A	28/07/2022	Draft	LR / UWA	DRS
Rev 0	9/11/2022	Final	LR / UWA	DRS / CoS / DoPLH / DoT
Rev 1	23/06/2023	Final	LR / UWA	DRS / CoS / DoPLH / DoT / Community

<sup>©</sup> Cardno. Copyright in the whole and every part of this document belongs to Cardno and may not be used, sold, transferred, copied or reproduced in whole or in part in any manner or form or in or on any media to any person other than by agreement with Cardno.

Our report is based on information made available by the client. The validity and comprehensiveness of supplied information has not been independently verified and, for the purposes of this report, it is assumed that the information provided to Cardno is both complete and accurate. Whilst, to the best of our knowledge, the information contained in this report is accurate at the date of issue, changes may occur to the site conditions, the site context or the applicable planning framework. This report should not be used after any such changes without consulting the provider of the report or a suitably qualified person.

This document is produced by Cardno solely for the benefit and use by the client in accordance with the terms of the engagement. Cardno does not and shall not assume any responsibility or liability whatsoever to any third party arising out of any use or reliance by any third party on the content of this document.



# **Table of Contents**

1	Introd	luction	5
	1.1	Overview	5
	1.2	Background	5
	1.3	Overview of the CHRMAP Process	6
	1.4	Success Criteria	6
	1.5	Purpose of this Report	7
2	Vulne	rability Assessment Methodology	10
	2.1	Vulnerability Assessment Framework	10
	2.2	Likelihood (asset exposure)	10
	2.3	Consequence (asset sensitivity)	13
	2.4	Risk Assessment	15
	2.5	Adaptative Capacity	15
	2.6	Vulnerability	16
3	Vulne	rability Assessment Outcomes	17
	3.1	Timeframes	17
	3.2	Erosion	17
	3.3	Inundation	18
4	Risk E	Evaluation	19
	4.1	Overview	19
	4.2	Management Units	19
	4.3	Coastal Controls	28
	4.4	Priorities for Treatment	29
5	Concl	lusions and Next Steps	30
6	Refere	ences	31

# **Appendices**

Appendix A	Management Units and Key Assets
Appendix B	Assigned Erosion Likelihood Ratings
Appendix C	Assigned Inundation Likelihood Ratings
Appendix D	Asset Valuations
Appendix E	Assigned Erosion Consequence Ratings
Appendix F	Assigned Inundation Consequence Ratings
Appendix G	Assigned Adaptive Capacity Ratings
Appendix H	Erosion Risk Assessment Outcomes
Appendix I	Erosion Vulnerability Assessment Outcomes
Appendix J	Inundation Risk Assessment Outcomes
Appendix K	Inundation Vulnerability Assessment Outcomes



# **Tables**

Table 2-1	Likelihood ratings for coastal hazards	11
Table 2-2	Consequences ratings table (CoS, 2020)	14
Table 2-3	Risk matrix (based on AS5334-2013)	15
Table 2-4	CHRMAP adaptive capacity ratings	15
Table 2-5	Vulnerability analysis matrix	16
Table 2-6	Vulnerability levels and tolerances	16
Table 4-1	Key asset erosion risk ratings for MU1	20
Table 4-2	Key asset erosion vulnerability ratings for MU1	20
Table 4-3	Key asset erosion risk ratings for MU2	21
Table 4-4	Key asset erosion vulnerability ratings for MU2	22
Table 4-5	Key asset erosion risk ratings for MU3	23
Table 4-6	Key asset erosion vulnerability ratings for MU3	23
Table 4-7	Key asset erosion risk ratings for MU4	24
Table 4-8	Key asset erosion vulnerability ratings for MU4	24
Table 4-9	Key asset erosion risk ratings for MU5	25
Table 4-10	Key asset erosion vulnerability ratings for MU5	26
Table 4-11	Key asset erosion risk ratings for MU6	27
Table 4-12	Key asset erosion vulnerability ratings for MU6	28
Table 4-13	Comparison of risk ratings for assets - controlled vs uncontrolled	28
Table 4-14	Comparison of vulnerability ratings for assets - controlled vs uncontrolled	29
Figures	5	
Figure 1-1	Projected sea level rise in Western Australia (DoT, 2010 & IPCC, 2021).	5
Figure 1-2	Study Area	8
Figure 1-3	Risk management steps forming the CHRMAP process (WAPC, 2019)	9
Figure 2-1	Conceptual relationship between risk assessment elements	10
Figure 2-2	Assigned asset likelihood corresponding to planning timeframes and erosion built assets	n hazard extents for 12



# 1 Introduction

#### 1.1 Overview

The City of Stirling (herein referred to as 'the City) is located approximately 6 km north-west of Perth's Central Business District (**Figure 1-2**). The City contains approximately 7km of Indian Ocean coastline, including iconic beaches, such as Scarborough, Trigg and Mettams Pool. The adjacent foreshore reserves support a variety of recreation, conservation and commercial land uses, including substantial built infrastructure situated in close proximity to the shoreline.

The City is undertaking a Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) to provide strategic guidance for coordinated, integrated and sustainable land use planning and management along its coastline. The CHRMAP will inform the City's future decision-making with respect to areas and assets identified as being at risk from coastal hazards.

# 1.2 Background

Globally, mean sea level (MSL) has risen since the nineteenth century and is predicted to continue to rise, at an increasing rate, through the twenty first century (Intergovernmental Panel on Climate Change [IPCC], 2021), bringing changes to the Western Australian (WA) coastline over the coming decades. To prepare for sea level rise (SLR) induced coastal hazards, such as coastal erosion and inundation, all levels of government are putting processes in place to ensure that communities understand the risks to values and assets on the coast, and to plan to adapt over time.

Changes to MSL over the past century have been observed for the coastline adjacent to the Perth Metropolitan Area. Sea Level Change in Western Australia – Application to Coastal Planning (Department of Transport [DoT], 2010) reviewed information relating to SLR at a local scale and recommended an allowance for SLR be adopted for planning purposes. Recommendations were based on the upper bound of the global average SLR projections from IPCC's Fourth Assessment Report [AR4] (IPCC, 2007). In the intervening years, following release of the DoT document, advances in climate change science have been reflected in revisions to SLR projections, such as those documented in IPCC's Sixth Assessment Report [AR6] (IPCC, 2021). Current guidance on global SLR projections are derived from Shared Socioeconomic Pathways (SSP), characterising the trajectory of global society, demographics and economics over the coming century. Analogous to that used in DoT's recommendation is SSP5, which forecasts a SLR of 0.94m between 2020 and 2120 (Figure 1-1).

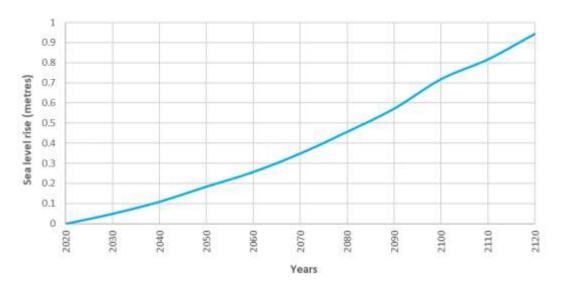


Figure 1-1 Projected sea level rise in Western Australia (DoT, 2010 & IPCC, 2021).



The City's coastline to the south of Trigg Island is sandy, featuring coastal dunes, nearshore reefs and seagrass meadows. For sandy coastlines, increases in local MSL generally result in shoreline recession, with a "rule of thumb" often applied, that a 1 cm rise in MSL will result in 1 m of landward recession of the shoreline. It should be noted that this is based on the "Bruun Rule" which is generally considered a conservative (and simplified) approach (Rosati et al, 2013; Cooper & Pilkey, 2004).

North of Trigg Island, the coastline features pocket perched beaches, with nearshore reef platforms, visible rocky cliffs and subsurface rock formations. In these areas' special consideration of the height and integrity of the rock formations is required to ascertain the level of erosion protection that the rocky features will afford adjacent areas.

#### 1.3 Overview of the CHRMAP Process

The key policy governing coastal planning in WA is the *State Planning Policy No. 2.6: State Coastal Planning Policy* (Western Australian Planning Commission [WAPC], 2013a) (SPP2.6). SPP2.6 recommends that management authorities develop a CHRMAP, using a risk mitigation approach to planning, that identifies the hazards associated with existing and future development in the coastal zone. SPP2.6 and the *State Coastal Planning Policy Guidelines* (WAPC, 2013b) contain prescriptive details, for example in relation to scales of assessment, storm event types and SLR allowances.

The WAPC (2019) has also developed the *Coastal hazard risk management and adaptation planning guidelines* (CHRMAP Guidelines) which are less prescriptive in terms of technical assessment of coastal processes, but are aimed to ensure that planning is carried out using a risk-based approach. This includes paying due regard to stakeholder engagement, community consultation and education, and requires that a full range of applicable adaptation options are considered. An overview of the typical CHRMAP process is shown in **Figure 1-3.** 

Coastal planning in accordance with SPP2.6 also needs to take into consideration the requirements of other planning policies, including *Statement of Planning Policy No. 2: Environment and Natural Resources Policy* (WAPC, 2003) (SPP2), *State Planning Policy No. 2.8: Bushland policy for the Perth Metropolitan Region* (WAPC, 2010) (SPP2.8), *Statement of Planning Policy No. 3: Urban Growth and Settlement* (WAPC, 2006a) (SPP3.0) and *State Planning Policy No. 3.4. Natural Hazards and Disasters* (WAPC, 2006b) (SPP3.4).

#### 1.4 Success Criteria

Success criteria have been defined for the project, based on the outcomes of the Coastal Values Survey and are used to guide consequence ratings in the vulnerability analysis. These are:

- > SC1: Preserve the function and opportunity for recreation activities along the coastline (such as walking/running, swimming and surfing).
- > SC2: Preserve the existing hospitality venues along the coastline and access to them.
- > SC3: Ensure the natural environment is protected and sustained in its current condition or an improved condition (concerning the dunes and flora and fauna).
- > SC4: Develop solutions to coastal processes that are sustainable (financially, socially and built form) and locally responsive.
- > SC5: Revisit regularly with community and key stakeholders their values in relation to development adjacent the coastline.
- > SC6: Maintain services that maximise community benefit for all.
- > SC7: Ensure the coastline is safe and accessible to all.
- > SC8: Achieve a balance between access needs and environmental sensitivities.



# 1.5 Purpose of this Report

The City's CHRMAP has been developed by a staged approach, with the various stages documented in dedicated chapter reports. The chapter reports have been summarised and used to underpin the overall CHRMAP document. The purpose of the chapter reporting is to capture key technical detail, while the overall CHRMAP presents a more accessible and community-friendly document. The chapter reports prepared as part of the City's CHRMAP include:

- > Chapter 1 Establish the Context (Stage 1) (Cardno, 2023a);
- > Chapter 2 Risk Identification (Stage 2) (Cardno, 2023b);
- > Chapter 3 Vulnerability Assessment and Risk Evaluation (Stages 3 and 4);
- Chapter 4 Risk Treatment (Stage 5) (Cardno, 2023c); and
- > Chapter 5 Implementation (Stage 6) (Cardno, 2023d).

This document outlines the interpretation of coastal hazard risk identification (Stage 2), to assess the risk and vulnerability of assets along the City's coastline. The Chapter Report aims to identify priority areas of risk and vulnerability for the City, allowing adaptation options to be assessed for these areas. This document has been designed to inform the community and provide direction to the City in planning for risks facing its coastal areas. The vulnerability assessment process has been guided by the Project's success criteria, defined through the City's community engagement process. Success criteria have been used to determine community values and refine consequence ratings for the potential impacts of coastal hazards. This document also outlines the impact of existing controls on risk as well as the prioritisation of vulnerable assets and areas for risk treatment (Risk Evaluation).





# **Study Area**

CITY OF STIRLING CHRMAP

FIGURE 1-2





Map Produced by Cardno (WA) Pty Ltd
Date: 2022-08-03
Coordinate System: GDA 1994 MGA Zone 50
Project: CW1195500
Map: CW1195500\_GS\_001\_StudyLocality\_ManagementUnits.mxd 02
Aerial imagery supplied by Esri et al.



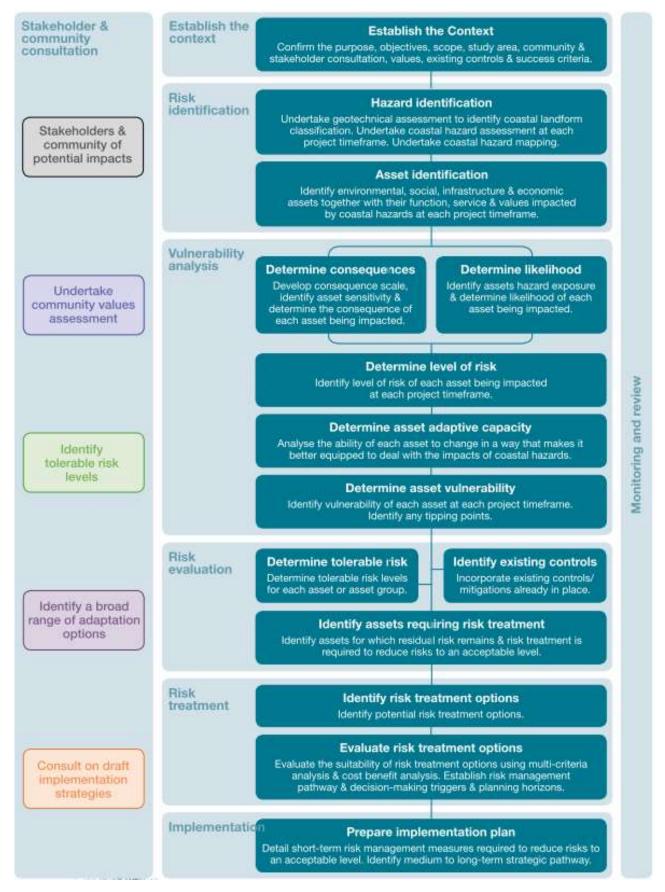


Figure 1-3 Risk management steps forming the CHRMAP process (WAPC, 2019)



# 2 Vulnerability Assessment Methodology

### 2.1 Vulnerability Assessment Framework

To provide a transparent and logical basis for determining adaptation planning priorities, a risk assessment was undertaken based on the Australian Standard Guideline *Climate change adaptation for settlements and infrastructure* – *A risk based approach* (AS5334-2013), and the *CHRMAP guidelines* (WAPC, 2019). As illustrated in **Figure 2-1**, risk was assessed in relation to likelihood and consequence. Likelihood was assigned using the results of the coastal hazard identification (Cardno, 2023b). Consequence ratings were informed by a combination of environmental, social and economic values and additional values determined through community consultation, economic assessment and experience with similar assets along the WA coastline. Combining an assets' level of risk with its adaptive capacity determines an asset's (or group of assets') overall vulnerability to coastal hazards.

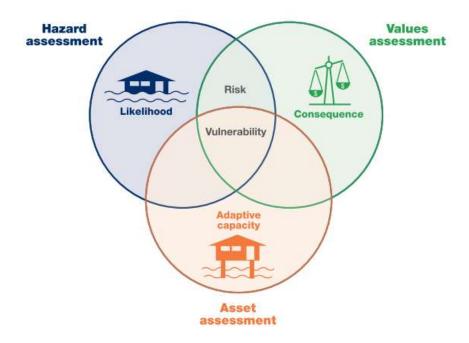


Figure 2-1 Conceptual relationship between risk assessment elements

All steps in the risk assessment process call for interpretation, and allocation of consequence in particular may be based on subjective judgement. However, the adopted framework means that specific outcomes can be clearly traced to inputs. The inputs can be updated in the future in response to new information or stakeholder input, and the risk assessment outcomes can be revised accordingly. Additional details on how the input parameters were derived, and the ratings were developed, is provided below.

## 2.2 Likelihood (asset exposure)

#### 2.2.1 Overview

According to WAPC (2019) and for the purposes of this study, likelihood (or asset exposure) is the chance of coastal erosion or storm surge inundation impacting on existing assets and their values. A description of likelihood of occurrence scales (with respect to a nominal planning timeframe) is presented in **Table 2-1**. 'Timeframe' and 'Probability' scales are assigned using the hazard extents produced in Stage 2 of the CHRMAP - *Risk Identification* (Cardno, 2023b). The 'Experience' likelihood rating is derived from the number of past occurrences of similar interactions between coastal hazards and assets along both the City's and Western Australia's coastline. It helps to 'ground-truth' modelled results against past, real-life observations. Because of this, the category has reducing applicability as you move to future timeframes, where unprecedented impacts are expected to be experienced because of climate change.

10



Table 2-1 Likelihood ratings for coastal hazards

Scale	Probability (of occurring within the planning timeframe)	Timeframe (for occurrence of individual erosion event)	Experience (for individual erosion event)
Almost Certain	80% - 99%	Once or more during the next year	Has occurred frequently at the location and in the City
Likely	60% - 80%	1-2 year timeframe	Has occurred frequently in the City
Possible	40% - 60%	5 year timeframe i.e. strategic planning timeframe	Has occurred once or twice in the City in recorded history
Unlikely	20% - 40%	10-20 year timeframe	Has occurred along WA's coastline but not in the City
Rare	1% - 20%	100 year time frame	Almost unheard of along WA's coastline
Near Impossible	< 1 %	500 year timeframe	Not recorded along WA's coastline

Erosion and inundation hazard extents are made up of several inputs and/or components. Each of these is based on a suite of assumptions and each has a degree of uncertainty which may influence the likelihood of a certain extent of erosion or inundation occurring, within each planning timeframe. For example, the extent of the coastal erosion hazard lines assumes a 100-year ARI storm event occurs exactly at the end of the planning timeframe, or that it occurs during the timeframe with no subsequent recovery of the shoreline. In reality this is unlikely to occur. To assign clear, consistent likelihood ratings dependant on asset location, the schematic shown in **Figure 2-2** has been developed and applied for built infrastructure assets. The assignments have been arrived at in consultation with the project's Steering Committee and considering the following:

- > The planning timeframes are not of equivalent length. I.e., the likelihood of the modelled 100-year ARI erosion event occurring increase with the length of the planning timeframe (e.g., less likely for 2022-2030 vs 2070-2122);
- Erosion has been considered as the predominant coastal hazard to assess and manage, given its much higher (i.e. more permanent) consequences compared to coastal inundation for the City. Coastal inundation has also been assessed, however, for completeness and to identify areas where management of this hazard may be required;
- > The uncertainty of hazard extents as you move into the future has been considered by taking a more conservative approach to likelihood assignments for later planning timeframes; and
- > Assets are assigned the rating as soon as they intersect the relevant hazard line for erosion. I.e., once any portion of the asset lies seaward of the hazard line.

There is considerable scope for confusion in defining and allocating likelihood in terms of recurrence frequency/probability (as per AS 5334) for the purposes of vulnerability assessment, particularly given that this terminology has specific meaning in the coastal context. The approach that the CHRMAP has adopted, in terms of translating hazard extents to likelihood ratings for built assets, are clearly presented in **Figure 2-2**. These are generally consistent with guidance in WAPC (2019) and are considered to represent the quantification of the likelihood of occurrence as best possible, based on the outputs derived from *Risk Identification*.



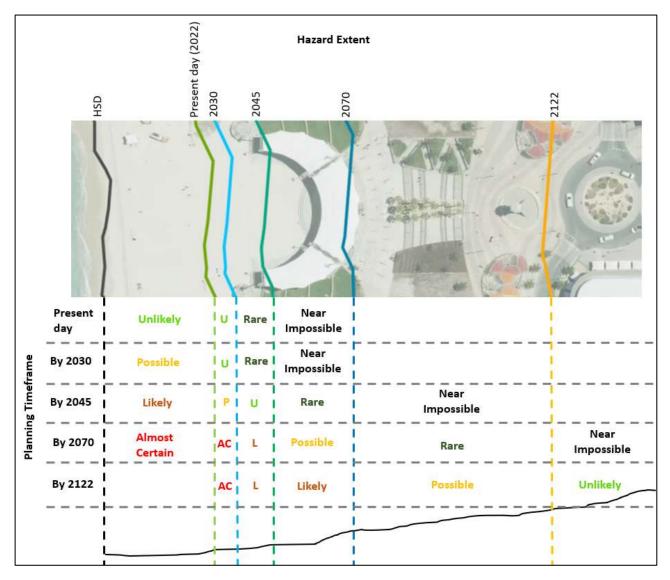


Figure 2-2 Assigned asset likelihood corresponding to planning timeframes and erosion hazard extents for built assets

#### 2.2.2 Maritime and Coastal Infrastructure

Maritime/coastal structures such as jetties and seawalls are designed to interact with and withstand coastal hazards. Therefore, ratings for likelihood have not been assigned using their location relative to hazard lines (as this would compromise the assessment outcome, even with low consequence ratings). Likelihood is instead linked to the probability of failure of the structure, or their ability to withstand design storm events that become more frequent over time. Probability of failure has generally been assumed to be unlikely for such structures during the asset's remaining design life, with an increasing likelihood thereafter.

#### 2.2.3 Natural Assets

Natural assets, such as beaches and dunes, are highly exposed to coastal hazards because of their proximity to the ocean. Therefore, ratings for likelihood have not been assigned using their location relative to hazard lines (as this would compromise the assessment outcome, even with low consequence ratings). The hazard lines have generally been interpreted to assess the likelihood of significant, permanent change to these natural assets from coastal hazards, which increases in likelihood over time. Such change would require a rare coastal hazard storm event (such as the 100-year ARI event considered) and/or substantial ongoing erosion such as that expected due to SLR.



#### 2.2.4 Coastal Controls

Coastal controls, such as seawalls, affect the hazard line extents and, therefore, they affect the likelihood ratings when being incorporated in the risk assessment process. Likelihood ratings have been derived assuming the coastal controls are in place for their remaining lifespan (i.e., the controlled erosion hazard extents - see Cardno, 2023b) as they are expected to remain in place for this period. The controls can also influence adaptive capacity (see **Section 2.5**), for example, by restricting a beaches ability to migrate. The specific effect of these controls on risk and vulnerability to assets is discussed further in **Section 3.4** and captured in risk and vulnerability assessment inputs.

Assigned likelihood ratings for identified 'major' assets and grouped 'minor' assets are provided in **Appendix B** (erosion) and **Appendix C** (inundation). These assets are mapped in conjunction with coastal erosion hazard extents in **Appendix A**.

# 2.3 Consequence (asset sensitivity)

Consequence is the result of a hazard impacting an area, asset or group of assets. For this analysis, consequence has been divided into five ratings ranging from catastrophic to insignificant (**Table 2-2**), derived from the City's Risk Assessment Framework.

Consequence ratings are constant across planning horizons, as they are generally tied to asset values, function or importance. The City's Risk Assessment Framework includes consequence ratings for eight categories. Some of these are not considered applicable to the CHRMAP as they relate to specific project outcomes. Those that are considered applicable, and that have been assigned ratings, are:

- > Environmental;
- > Financial;
- > Occupational Safety and Health;
- > Reputation; and
- > Service Delivery.

The financial value of an asset is generally a good indicator of the consequence of it being impacted (i.e., the cost to replace or loss of value). Assessment of the financial consequence of impact for built assets has been based on estimating the total cost for replacement of impacted assets, with costs taken from the Australian Construction Handbook (Rawlinsons, 2021). This is based on erosion impacts being the predominant coastal hazard and the expectation that assets will need to be removed/replaced once impacted (or prior to impact). Valuation of natural assets has incorporated the results of the coastal values survey, as well as formal valuations of similar natural coastal assets such as beaches and dunes. Environmental Economists from the University of Western Australia (UWA) have provided expert input to these valuations. Inputs to inform asset values are provided in **Appendix D**.

The other consequence categories require subjective judgement and ratings have been assigned in consultation with the CHRMAP's Steering Committee, including officers from various services within the City. To assign an overall consequence rating, the highest rating has been selected from across the categories, for each asset, at each timeframe. Assigned consequence ratings for identified 'major' assets and grouped 'minor' assets are provided in **Appendix E** (erosion) and **Appendix F** (inundation).



Table 2-2 Consequences ratings table (CoS, 2020)

	Environmental	Financial	Legislative / Regulatory	Occupational Safety and Health	Performance (objectives)	Project	Reputation	Service Delivery / Business Disruption
Catastrophic	Extensive and irreversible environmental damage to flora/fauna/ soil/water/air.	Loss of assets > 15% of asset value. Adverse impact on annual revenues. Over \$5 million loss.	Sustained non- compliance to legislation that could have funding impacts on the City or dismissal of Council.	Injury resulting in fatality or near miss with potential of fatality, member of the public injured	Non-achievement of major key objectives.	Project objectives not achieved, requiring the project to be fully re-scoped or discontinued.	Significant long-term damage to public confidence in the City, compromising the achievement of strategic objectives, extensive media coverage (local and national).	Major loss of service, including several important areas of service and/or an extended period. Ongoing loss of business systems.
High	Significant long-term environmental harm. Limited damage to flora/fauna/soil/ water/air.	Loss of assets, 5% - 15% of asset value. Adverse impact on revenue and costs 5% - 15% deviation from budget. Between \$1 million and \$5 million loss.	Major regulatory breaches/non-compliance resulting in material fines, penalties and restrictions on Council operations.	Serious injury or potential resulting in lost time injury, notifiable incident or a member of the public put at risk of injury	Non-achievement of major deliverables	Significant variation to scope causing significant delays in project delivery.	Adverse local publicity affecting the perception/standing of the City within the community, local media coverage.	Complete loss of an important service area for a short period.  Major disruption in business processes
Moderate	Short term environmental harm/effects on flora/fauna/soil/water/air.	Loss of assets 2%-5% of asset value.  Adverse impact on revenue and costs 2% -5% deviation from budget.  Between \$250 000 and \$1million loss.	Moderate regulatory breaches/non- compliance resulting inspections/reports	Incident resulting in medical treatment injury or complaint from member of the public regarding safety	Significant delays to major deliverables.	Moderate variation to scope, slight delay in project delivery.	Negative publicity or damage to reputation to a specific audience, local media coverage.	Major effect to an important service area for a short period.  Moderate disruption in business processes.
Low	Minor environmental harm, contained and reversible.	Loss of assets <2% of asset value. Adverse impact on revenues and costs <2% deviation from budget. Between \$5000 and \$250 000.	Minor regulatory breaches/non- compliance	Incident resulting in first aid injury	Minimal delays to major deliverables.	Minor disruption in the delivery of the project.	Minor negative publicity or damage to reputation to an insignificant audience, complaint from a large group of people, minimal media coverage.	Brief disruption of important service area. Minor disruption in business processes.
Insignificant	Little impact, non- contaminating.	Insignificant loss of assets or insignificant adverse impact on annual revenue or costs.  Less than \$5 000 loss.	No regulatory impact	Incident without the requirement for first aid treatment	Little impact on major deliverables.	Limited impact on project delivery	Minor unsubstantiated negative publicity. No media coverage.	Brief disruption of non-crucial service area.



#### 2.4 Risk Assessment

The CHRMAP applies the City's (2020) risk assessment matrix (**Table 2-3**), which is based on that provided in AS5334-2013. Risk ratings represent the acceptability/tolerance of coastal hazard impact and the urgency of required action. This will help to prioritise multiple identified risks within the study area. It can also provide a mechanism to compare the level of risk after a preferred adaptation option is implemented (residual risk). For example, at present, a risk may be "Extreme" in the short term, after the implementation of adaption option 'X' the risk level is re-evaluated and reduces to "Medium". The risk evaluation process (**Section 4**) utilises the outcomes of the risk analysis to prioritise treatment. Likelihood and consequence allocated for assets, under each scenario, are combined to derive a risk rating for each asset or group of assets within each of the vulnerable areas.

Table 2-3 Risk matrix (based on AS5334-2013)

	<u>Consequence</u>							
Likelihood	Likelihood Insignificant		Moderate	High	Catastrophic			
Almost Certain	Medium	m High High		Extreme	Extreme			
Likely	Medium Medium High		High	High	Extreme			
Possible	Low	Medium	Medium	High	High			
Unlikely	Low	Low	Medium	Medium	High			
Rare	Very Low	Low	Low	Medium	Medium			
Near Impossible	Very Low	Very Low	Very Low	Very Low	Very Low			

# 2.5 Adaptative Capacity

Adaptive capacity (**Table 2-4**) is based upon the potential for an asset to be modified or acclimatise to cope with the impacts of coastal hazards. The system of existing controls, such as a coastal protection structures, dune systems or reefs, all have an influence on the ability of hazards to affect a study site. The aim of the CHRMAP is to develop options that realise the potential adaptive capacity through techniques such as managed retreat, accommodation, and protection. An asset or group of assets with a high adaptive capacity is one that can easily (i.e., at low cost) be adapted or one that has some capacity to self-adapt with changing conditions (e.g., unimpeded beaches and dune systems can migrate across shore as the mean sea level (MSL) changes). Assets with a high risk level and low adaptive capacity are deemed highly vulnerable and management options should be investigated.

Assigned adaptive capacity ratings for all identified assets are provided in Appendix G.

Table 2-4 CHRMAP adaptive capacity ratings

Rating	Adaptive Capacity
Low	Little or no adaptive capacity. Potential impact would destroy all functionality.
Moderate	Small amount of adaptive capacity. Difficult but possible to restore functionality through repair and redesign.
High	Decent adaptive capacity. Functionality can be restored, although additional adaptive measures should still be considered. Natural adaptive capacity restored slowly over time under average conditions.
Very High	Good adaptive capacity. Functionality restored easily. Adaptive systems restored at a relatively low cost or naturally over time.



# 2.6 Vulnerability

Vulnerability is the potential for a system to suffer damage or ill effects as a result of coastal hazards or climate change. Vulnerability is a function of the likelihood of an event occurring, the consequences of the event and the capacity to adapt and change. In a similar fashion to the risk methodology, potential impact and adaptive capacity can be combined using a customised matrix (**Table 2-5**) with the significance of the vulnerability rating listed in relation to acceptability and tolerances provided in **Table 2-6**.

Table 2-5 Vulnerability analysis matrix

	Adaptive Capacity							
Risk Rating	Very High	Moderate	Low					
Extreme	High	High	Very high	Very high				
High	Medium	High	High	Very high				
Medium	Low	Medium Medium		High				
Low	Very low	Low	Low	Medium				
Very Low	Very low	Very low	Very low	Low				

Table 2-6 Vulnerability levels and tolerances

Vulnerability Level	Action Required	Acceptance/Tolerance
Very High	Significant further adaption required to ensure asset is not lost. Reconsideration of design if vulnerability cannot be reduced.	Unacceptable
High	Further adaption required. All stakeholders should be fully aware of risks if vulnerability cannot be reduced.	Tolerable / Unacceptable
Medium	Further adaption should be investigated, acceptable in certain circumstances. Monitoring programs recommended.	Tolerable
Low	Acceptable; adaption and monitoring may be required over the asset's lifetime.	Tolerable / Acceptable
Very Low	Acceptable; adaption and monitoring is unlikely to be required over the asset's lifetime.	Acceptable



# 3 Vulnerability Assessment Outcomes

#### 3.1 Timeframes

It is important to use consistent terminology when discussing planning timeframes for the CHRMAP. The timeframes applied in this CHRMAP and risk/vulnerability assessment are reiterated, as follows:

- > 2022 Present day;
- > 2030 timeframe Immediate term (up to 2030);
- > 2045 timeframe Short term (up to 2045);
- > 2070 timeframe Medium term (up to 2070); and
- > 2122 timeframe Long term (up to 2122).

#### 3.2 Erosion

#### 3.2.1 Erosion Risk

Outcomes of the erosion risk assessment for each asset are provided in **Appendix H**. The outcomes of the risk assessment for coastal erosion demonstrates that:

- > The most immediate risk relates to the City's beaches and vegetated dunes, which are highly valued and are naturally susceptible to coastal erosion due to their proximity to the ocean. The beaches to the north of Trigg Island, such as Watermans Bay and Mettams Pool, are at highest risk in the immediate term.
- > All beaches are at high risk by 2030;
- > Vegetated dunes are relatively extensive along the City's coastline, giving them a high overall value. These dunes systems are at high risk in most areas within the short term;
- Various amenity and access infrastructure is at medium to high risk in the short term, given its close proximity to coastal erosion hazards and relatively high combined economic value, as well as high consequences tied to the loss of beach access;
- Sections of West Coast Highway and significant built infrastructure at Scarborough and Trigg have high consequence ratings, due to their high economic value and service importance, but are not at high risk until later timeframes when coastal erosion hazard extents intersect them; and
- > All assets are at high to extreme risk by the end of the 100-year planning timeframe, demonstrating the high value of the City's coastal assets and high exposure of its coastline to climate change related coastal hazards.

Further assessment of combined coastal erosion risk for specific areas of coastline (management units) is undertaken as part of the risk evaluation (**Section 4**).

#### 3.2.2 Erosion Vulnerability

Outcomes of the erosion vulnerability assessment for each asset are provided in **Appendix I**. Vulnerability ratings are comparable to risk ratings for the majority of assets at equivalent timeframes. Higher vulnerability is demonstrated for natural assets that have lesser adaptive capacity, such as the beaches and vegetated dunes to the north of Trigg Point. The ability of these assets to adapt naturally is impeded by natural geology and built infrastructure. The low adaptive capacity of major built infrastructure, such as sections of West Coast Highway and infrastructure at Trigg and Scarborough, leads to elevated vulnerability levels. But, again, these do not occur until later timeframes when these assets might potentially be impacted.

Further assessment of combined coastal erosion vulnerability for specific areas of coastline (management units) is undertaken as part of the risk evaluation (**Section 4**).



#### 3.3 Inundation

#### 3.3.1 Inundation Risk

Outcomes of the inundation risk assessment are provided in **Appendix J**. The risk to assets from inundation is very low to low for all assets in the immediate term. Medium risk levels are derived for infrastructure in close proximity to coastal hazards, such as North Beach Jetty, Watermans GSC Revetment and the carpark and lookout opposite Margaret Street, though impacts to these would be temporary. Beaches also reach medium risk by 2045, primarily associated with the short-term safety risk associated with inundation. The risk assessment demonstrates that, for all assets, erosion is the predominant coastal hazard risk.

#### 3.3.2 Inundation Vulnerability

Outcomes of the inundation vulnerability assessment are provided in **Appendix K**. Vulnerability levels are comparable to risk levels for inundation for most assets. Lower vulnerability levels are demonstrated for some built assets, once their relatively good adaptive capacity is incorporated. Such adaptation to coastal inundation could take the form of improved drainage or inundation barriers (e.g., for carparks).



# 4 Risk Evaluation

#### 4.1 Overview

Generally coastal inundation and coastal erosion will occur at the same time during a storm event. In the majority of circumstances and locations for the City's coastline, the impacts of coastal erosion on infrastructure will be more severe and long-lasting than the impacts of coastal inundation. For coastal infrastructure located in close proximity to coastal hazards, such as jetties, coastal protection infrastructure and access stairs, the nature of these assets was considered in defining the consequence (and likelihood) of impact. Such infrastructure is generally designed to withstand the ongoing impacts of the coastal environment (though not necessarily changes associated with SLR) and cannot be treated in the same way as other built assets. The risk to these assets is, therefore, relatively low, despite their close proximity to the ocean.

It is important to evaluate and compare risk levels, to prioritise the treatment of risk for assets and coastal areas. For the City, it is more important to understand aggregated risk in certain areas, as adaptation options are likely to be wholistic to counter erosion over a broad coastal zone. There is also the potential for a risk treatment to lower risk for one area or asset, while increasing risk for other areas or assets (common examples being downdrift erosion of groynes). Most assets are grouped at several distinct locations/beaches along the City's coastline. Given the density and high value of assets in some of these areas, both natural and built, they will be prioritised over the undeveloped and/or lower risk sections of the coastline for management. Areas with assets moving to elevated risk ratings in earlier timeframes will also be prioritised for planning and management.

To assist with risk evaluation and subsequent adaptation risk treatment, the coastline has been organised into several management units. As erosion is the predominant risk for the City, this coastal hazard will be the focus of prioritisation and treatment. Potential risk from inundation, however, is also considered and discussed where risk from this hazard is present.

### 4.2 Management Units

Six management Units (MU) have been established, based on the focused concentration of coastal assets and associated risk, as well as similar coastal features and shared sediment compartments. The MUs have been summarised below and are mapped in **Figure 1-2** and **Appendix A** in conjunction with individual assets and coastal erosion hazard lines. Individual risk and vulnerability tables (including aggregated risk and vulnerability) have been extracted and presented in the sub-sections below.

### 4.2.1 MU1 - Watermans Bay

MU1 extends from the City's northern boundary (aligned with Beach Road) to the southern end of Watermans Dog Beach (aligned with Hale Street). Within the 2122 erosion hazard extent, MU1 contains the following important natural assets:

- > Watermans Bay Beach;
- > Watermans Bay Dog Beach; and
- > Vegetated dunes.

And the important built assets:

- > Watermans GSC Revetment;
- > West Coast Drive, associated services and adjacent footpath (between Beach Road and Mary Street); and
- > Various parking, amenity and access infrastructure.

Risk ratings across timeframes for major assets and grouped minor assets, as well as the aggregated risk rating for MU1, are presented in **Table 4-1**. Aggregate risk for the MU is rated as high in the immediate to short term, associated with risk to beaches, in particular Watermans Bay Beach. The beaches are highly valued natural assets and naturally susceptible to coastal erosion. Risk to Watermans Bay beach is extreme by 2045,

19



when the risk to the nearby dog beach and vegetated dunes along the MU is high. Risk to the GSC revetment, which has the function of protecting valuable built assets, is high by 2045. Predictions of the longevity and performance of this structure are, however, uncertain.

Table 4-1 Key asset erosion risk ratings for MU1

Erosion Risk	Erosion Risk						
Timeframes	2022	2030	2045	2070	2122		
<u>Asset</u>		<u>!</u>	Risk Ratings				
Watermans Bay Beach	High	High	Extreme	Extreme	Extreme		
Watermans Bay Dog Beach	Medium	High	High	Extreme	Extreme		
Watermans vegetated dunes	Medium	Medium	High	Extreme	Extreme		
Watermans GSC revetment	Medium	Medium	High	High	High		
West Coast Drive, footpath and services (Beach Rd to Mary St)	Very Low	Very Low	Medium	High	Extreme		
Lookout and amenities, Watermans Bay	Low	Low	Medium	High	High		
Car park and lookout, Margaret St	Medium	Medium	Medium	High	High		
Watermans access, amenity and minor infrastructure	Medium	Medium	Medium	High	High		
MU1 Aggregate Erosion Risk	High	High	Extreme	Extreme	Extreme		

Vulnerability ratings across timeframes for major assets and grouped minor assets in MU1 are presented in **Table 4-2**. Most assets in the MU have comparable vulnerability ratings to their risk ratings, given that most built and natural assets are considered to have moderate adaptive capacity up to 2045. West Coast Drive is considered to have low adaptive capacity, which elevates its vulnerability ratings compared to risk ratings across timeframes, though its vulnerability is low until 2045.

Table 4-2 Key asset erosion vulnerability ratings for MU1

Erosion Vulnerability						
Timeframes	2022	2030	2045	2070	2122	
<u>Asset</u>		<u>Vul</u>	nerability Rat	<u>ings</u>		
Watermans Bay Beach	High	High	Very High	Very High	Very High	
Watermans Bay Dog Beach	Medium	High	High	Very High	Very High	
Watermans vegetated dunes	Medium	Medium	High	Very High	Very High	
Watermans GSC revetment	Medium	Medium	High	Very High	Very High	
West Coast Drive, footpath and services (Beach Rd to Mary St)	Low	Low	High	Very High	Very High	
Lookout and amenities, Watermans Bay	Low	Low	Medium	High	High	
Car park and lookout, Margaret St	Medium	Medium	Medium	High	High	
Watermans access, amenity and minor infrastructure	Medium	Medium	Medium	High	High	



#### 4.2.2 MU2 - North Beach

MU2 extends from the northern end of North Beach Dog Beach (aligned with Hale Street) to the southern end of Hamersley Pool (aligned with Hamersley Street). Within the 2122 erosion hazard extent, MU2 contains the following important natural assets:

- > North Beach Dog Beach
- > North Beach (North)
- > North Beach (South); and
- > Vegetated dunes.

And the important built assets:

- > West Coast Drive, associated services and adjacent footpath (between Malcolm Street and James Street, and between Sorrento Street and Hamersley Street);
- > North Beach Jetty and Revetment; and
- > Various parking, access and amenity infrastructure.

Risk ratings across timeframes for major assets and grouped minor assets, as well as the aggregated risk rating for MU2, are presented in **Table 4-3**. Aggregate risk for the MU is rated as medium in the immediate term and high by 2030, associated with risk to highly valued beaches in the MU. Risk to vegetated dunes in the MU and sections of West Coast Highway become high by 2045, though further investigation (i.e., geotechnical) may lower these risk levels once the underlying geology is understood.

Table 4-3 Key asset erosion risk ratings for MU2

Erosion Risk					
Timeframes	2022	2030	2045	2070	2122
Asset		<u>R</u>	isk Ratings		
North Beach Dog Beach	Medium	High	High	Extrem e	Extrem e
North Beach (North)	Medium	High	High	Extrem e	Extrem e
North Beach (South)	Medium	High	High	Extrem e	Extrem e
North Beach access, amenity and minor infrastructure	Medium	Medium	Mediu m	High	High
North Beach Vegetated Dunes	Medium	Medium	High	Extrem e	Extrem e
West Coast Drive, footpath and services (Malcolm St to James St)	Medium	Medium	High	Extrem e	Extrem e
North Beach Revetment and Jetty	Medium	Medium	High	High	High
West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Very Low	Very Low	Mediu m	High	Extrem e
MU2 Aggregate Erosion Risk	Medium	High	High	Extrem e	Extrem e

Vulnerability ratings across timeframes for major assets and grouped minor assets in MU2 are presented in **Table 4-4**. Most assets in the MU have comparable vulnerability ratings to their risk ratings, given that most built and natural assets are considered to have moderate adaptive capacity up to 2045. West Coast Drive is considered to have low adaptive capacity, which elevates its vulnerability ratings compared to risk ratings



across timeframes. This leads to a high vulnerability rating in the immediate to short term for the section of West Coast Drive between Malcolm Street and James Street.

Table 4-4 Key asset erosion vulnerability ratings for MU2

Erosion Vulnerability						
Timeframes	2022	2030	2045	2070	2122	
<u>Asset</u>		<u>Vı</u>	ulnerability R	atings		
North Beach Dog Beach	Mediu m	High	High	Very High	Very High	
North Beach (North)	Mediu m	High	High	Very High	Very High	
North Beach (South)	Mediu m	High	High	Very High	Very High	
North Beach access, amenity and minor infrastructure	Mediu m	Mediu m	Medium	High	High	
North Beach Vegetated Dunes	Mediu m	Mediu m	High	Very High	Very High	
West Coast Drive, footpath and services (Malcolm St to James St)	High	High	Very High	Very High	Very High	
North Beach Revetment and Jetty	Mediu m	Mediu m	High	High	High	
West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Low	Low	High	Very High	Very High	

#### 4.2.3 MU3 - Mettams Pool

MU3 extends from the northern (aligned with Hamersley Street) to the southern (aligned with Bailey Street) end of Mettams Pool. Within the 2122 erosion hazard extent, MU3 contains the following important natural assets:

- > Mettams Pool Beach; and
- > Vegetated dunes.

And the important built assets:

- > West Coast Drive, associated services and adjacent footpath (between Sholl Avenue and Bailey Street); and
- > Various parking, access and amenity infrastructure.

Risk ratings across timeframes for major assets and grouped minor assets, as well as the aggregated risk rating for MU3, are presented in **Table 4-5**. Aggregate risk for the MU is rated as high in the immediate to short term, associated with risk to Mettams Pool beach. The beach is a highly valued natural asset and naturally susceptible to coastal erosion. Risk to the beach is extreme by 2045, when the risk to vegetated dunes along the MU also becomes high. Risk to the parking area adjacent Saunders Street and the Mettams Pool public toilets become high by 2030 and 2045, respectively, though further investigation (i.e., geotechnical) may lower these risk levels once the underlying geology is understood.



Table 4-5 Key asset erosion risk ratings for MU3

Erosion Risk					
Timeframes	2022	2030	2045	2070	2122
<u>Asset</u>			Risk Ratings	<u>3</u>	
Mettams Pool Beach	High	High	Extreme	Extreme	Extreme
Parking Area, Saunders St	Medium	High	High	Extreme	Extreme
Mettams Pool public toilets	Medium	Medium	High	Extreme	Extreme
West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Very Low	Very Low	Medium	High	Extreme
Mettams vegetated dunes	Medium	Medium	High	Extreme	Extreme
Mettams access, amenity and minor infrastructure	Medium	Medium	Medium	High	High
MU3 Aggregate Erosion Risk	High	High	Extreme	Extreme	Extreme

Vulnerability ratings across timeframes for major assets and grouped minor assets in MU3 are presented in **Table 4-6**. Most assets in the MU have comparable vulnerability ratings to their risk ratings, given that most built and natural assets are considered to have moderate adaptive capacity up to 2045. Built assets such as West Coast Drive and the Mettams Pool public toilets are considered to have low adaptive capacity, which elevates their vulnerability ratings compared to their risk ratings across timeframes. This leads to a high vulnerability rating in the immediate to short term for the Mettams Pool public toilets.

Table 4-6 Key asset erosion vulnerability ratings for MU3

Erosion Vulnerability					
Timeframes	2022	2030	2045	2070	2122
Asset		<u>Vul</u>	nerability Rat	ings	
Mettams Pool Beach	High	High	Very High	Very High	Very High
Parking Area, Saunders St	Medium	High	Very High	Very High	Very High
Mettams Pool public toilets	High	High	Very High	Very High	Very High
West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Low	Low	High	Very High	Very High
Mettams vegetated dunes	Medium	Medium	High	Very High	Very High
Mettams access, amenity and minor infrastructure	Medium	Medium	Medium	High	High

#### 4.2.4 MU4 - Trigg Beach North

MU4 extends from the northern end of Bennion Beach (aligned with Bailey Street) to Trigg Point/Island. Within the 2122 erosion hazard extent, MU4 contains the following important natural assets:

- > Bennion Beach;
- > Trigg Beach Dog Beach;
- > Trigg Beach North; and
- > Vegetated dunes.

And the important built assets:

- > West Coast Drive, associated services and adjacent footpath (near Kathleen Street); and
- Various parking, access and amenity infrastructure.



Risk ratings across timeframes for major assets and grouped minor assets, as well as the aggregated risk rating for MU4, are presented in **Table 4-7**. Aggregate risk for the MU is rated as medium in the immediate term and high by 2030, associated with risk to highly valued beaches in the MU. Risk to vegetated dunes in the MU also becomes high by 2045. Ongoing monitoring and observations of the beaches susceptibility to coastal hazards and SLR over the next decade are likely to improve the understanding of risk to this MU.

Table 4-7 Key asset erosion risk ratings for MU4

Erosion Risk							
Timeframes	2022	2030	2045	2070	2122		
<u>Asset</u>			Risk Rating	<u>s</u>			
Bennion Beach	Medium	High	High	Extreme	Extreme		
Trigg Beach Dog Beach	Medium	High	High	Extreme	Extreme		
Trigg Beach North	Medium	High	High	Extreme	Extreme		
Trigg North Vegetated Dunes	Medium	Medium	High	Extreme	Extreme		
West Coast Drive, footpath and services (near Kathleen St)	Very Low	Very Low	Medium	High	Extreme		
Car park between Bennion and Bailey Streets	Very Low	Very Low	Medium	High	High		
Parking area, Trigg Place	Very Low	Very Low	Medium	High	High		
Trigg North access, amenity and minor infrastructure	Medium	Medium	Medium	High	High		
MU4 Aggregate Erosion Risk	Medium	High	High	Extreme	Extreme		

Vulnerability ratings across timeframes for major assets and grouped minor assets in MU4 are presented in **Table 4-8**. Most assets in the MU have comparable vulnerability ratings to their risk ratings, given that most built and natural assets are considered to have moderate adaptive capacity up to 2045. West Coast Drive is considered to have low adaptive capacity, which elevates its vulnerability ratings compared to risk ratings across timeframes, though its vulnerability is low until 2045.

Table 4-8 Key asset erosion vulnerability ratings for MU4

Table 4 0 Rey asset crostert valificability fatings for West					
Erosion Vulnerability					
Timeframes	2022	2030	2045	2070	2122
Asset		<u>Vu</u>	Inerability Rat	<u>ings</u>	
Bennion Beach	Medium	High	High	Very High	Very High
Trigg Beach Dog Beach	Medium	High	High	Very High	Very High
Trigg Beach North	Medium	High	High	Very High	Very High
Trigg North Vegetated Dunes	Medium	Medium	High	Very High	Very High
West Coast Drive, footpath and services (near Kathleen St)	Low	Low	High	Very High	Very High
Car park between Bennion and Bailey Streets	Very Low	Very Low	High	Very High	Very High
Parking area, Trigg Place	Very Low	Very Low	Medium	High	High
Trigg North access, amenity and minor infrastructure	Medium	Medium	Medium	High	High



#### 4.2.5 MU5 - Trigg Beach South

MU5 extends from Trigg Point/Island to the southern end of Trigg Beach. Within the 2122 erosion hazard extent, MU5 contains the following important natural assets:

- > Trigg Beach;
- > Trigg Beach South; and
- > Vegetated dunes (Bush Forever Site 308).

And the important built assets:

- > Extensive parking areas;
- > Trigg Beach Café;
- > Trigg Beach Surf Lifesaving Club buildings and facilities;
- > Surfing WA Headquarters building; and
- > Various access, amenity and recreational infrastructure.

Risk ratings across timeframes for major assets and grouped minor assets, as well as the aggregated risk rating for MU5, are presented in **Table 4-9**. Aggregate risk for the MU is rated as medium in the immediate term and high by 2030, associated with risk to highly valued beaches in the MU. Risk to vegetated dunes in the MU also becomes high by 2045. Ongoing monitoring and observations of the beaches susceptibility to coastal hazards and SLR over the next decade are likely to improve the understanding of risk to this MU, which recent experience suggests may not be as high as the outputs derived from this risk assessment. Major built assets in the MU are located away from the shoreline and are not considered to by at high risk until 2070.

Table 4-9 Key asset erosion risk ratings for MU5

Erosion Risk							
Timeframes	2022	2030	2045	2070	2122		
<u>Asset</u>			Risk Rating	<u>s</u>			
Trigg Beach	Medium	High	High	Extreme	Extreme		
Trigg Beach South	Medium	High	High	Extreme	Extreme		
Trigg South Vegetated Dunes (Bush Forever Site 308)	Medium	Medium	High	Extreme	Extreme		
Trigg Surf Lookout	Low	Low	Medium	High	High		
Parking area, Trigg Beach north	Very Low	Very Low	Medium	High	High		
Trigg Beach SLSC building 1	Very Low	Very Low	Very Low	Medium	High		
Trigg Beach SLSC building 2	Very Low	Very Low	Very Low	Medium	High		
Trigg Beach Café	Very Low	Very Low	Medium	High	Extreme		
Parking area, Trigg Beach central	Very Low	Very Low	Very Low	Medium	High		
Trigg South access, amenity and minor infrastructure	Very Low	Medium	High	High	Extreme		
Surfing WA Headquarters	Very Low	Very Low	Very Low	Medium	High		
Trigg Beach Carpark	Very Low	Very Low	Very Low	Medium	High		
MU5 Aggregate Erosion Risk	Medium	High	High	Extreme	Extreme		

Vulnerability ratings across timeframes for major assets and grouped minor assets in MU5 are presented in **Table 4-10**. Most assets in the MU have comparable vulnerability ratings to their risk ratings, particularly



beaches that are considered to have high adaptive capacity up to 2045. Vegetated dunes have a very high vulnerability by 2045, as they are confined by landward infrastructure for much of the coastline and their adaptive capacity reduces to low at this timeframe. The significant built infrastructure in this MU is considered to have low adaptive capacity, elevating vulnerability levels. However, this built infrastructure is considered to have low vulnerability until 2045 or 2070.

Table 4-10 Key asset erosion vulnerability ratings for MU5

Erosion Vulnerability						
Timeframes	2022	2030	2045	2070	2122	
<u>Asset</u>		V	ulnerability Ra	<u>ıtings</u>		
Trigg Beach	Medium	High	High	Very High	Very High	
Trigg Beach South	Medium	High	High	Very High	Very High	
Trigg South Vegetated Dunes (Bush Forever Site 308)	Medium	Medium	Very High	Very High	Very High	
Trigg Surf Lookout	Low	Low	Medium	High	High	
Parking area, Trigg Beach north	Very Low	Very Low	Medium	High	High	
Trigg Beach SLSC building 1	Low	Low	Low	High	Very High	
Trigg Beach SLSC building 2	Low	Low	Low	High	Very High	
Trigg Beach Café	Low	Low	High	Very High	Very High	
Parking area, Trigg Beach central	Very Low	Very Low	Very Low	High	Very High	
Trigg South access, amenity and minor infrastructure	Very Low	Medium	High	High	Very High	
Surfing WA Headquarters	Low	Low	Low	High	Very High	
Trigg Beach Carpark	Very Low	Very Low	Very Low	Medium	High	

#### 4.2.6 MU6 - Scarborough Beach

MU6 extends from the northern end of Scarborough Beach to the southern extent of the City's boundary at Peasholm Dog Beach. Within the 2122 erosion hazard extent, MU6 contains the following important natural assets:

- > Scarborough Beach North;
- > Scarborough Beach;
- > Brighton Beach;
- > Peasholm Dog Beach; and
- > Vegetated dunes (Bush Forever Sites 308 and 310).

And the important built assets:

- > Extensive parking areas;
- > Scarborough Amphitheatre;
- Scarborough Surf Lifesaving Club buildings and facilities;
- > Scarborough Beach Pool and Restaurant; and
- > Various access, amenity and recreational infrastructure/areas.



Risk ratings across timeframes for major assets and grouped minor assets, as well as the aggregated risk rating for MU6, are presented in **Table 4-11**. Aggregate risk for the MU is rated as medium in the immediate term and high by 2030, associated with risk to highly valued beaches in the MU. Risk to vegetated dunes in the MU also becomes high by 2030. Ongoing monitoring and observations of the beaches susceptibility to coastal hazards and SLR over the next decade are likely to improve the understanding of risk to this MU. Major built assets in the MU are located away from the shoreline and are not considered to by at high risk until 2070.

Table 4-11 Key asset erosion risk ratings for MU6

Erosion Risk							
Timeframes	2022	2030	2045	2070	2122		
<u>Asset</u>			Risk Rating	<u>s</u>			
Scarborough Beach North	Medium	High	High	Extreme	Extreme		
Scarborough Beach	Medium	High	High	Extreme	Extreme		
Brighton Beach	Medium	High	High	Extreme	Extreme		
Peasholm Beach	Medium	High	High	Extreme	Extreme		
Scarborough Vegetated Dunes (Bush Forever Sites 308/310)	Medium	High	High	Extreme	Extreme		
Scarborough Beach Carpark	Very Low	Very Low	Very Low	Medium	High		
Scarborough Amphitheatre	Medium	Medium	Medium	High	High		
Scarboro SLSC	Medium	Medium	Medium	High	High		
Scarborough Beach Pool	Very Low	Very Low	Medium	High	Extreme		
Scarborough Beach Restaurant	Very Low	Very Low	Medium	High	Extreme		
Scarborough Playground and Skate Park	Very Low	Very Low	Medium	High	High		
Scarborough Beach carpark south	Very Low	Very Low	Very Low	Medium	High		
Brighton Beach carpark	Very Low	Very Low	Very Low	Medium	High		
Scarborough access, amenity and minor infrastructure	Very Low	Medium	High	High	Extreme		
MU6 Aggregate Erosion Risk	Medium	High	High	Extreme	Extreme		

Vulnerability ratings across timeframes for major assets and grouped minor assets in MU6 are presented in **Table 4-12**. Most assets in the MU have comparable vulnerability ratings to their risk ratings, particularly beaches that are considered to have moderate to high adaptive capacity up to 2045. Vegetated dunes have a very high vulnerability by 2045, as they are confined by landward infrastructure for much of the coastline and their adaptive capacity reduces to low at this timeframe. The significant built infrastructure in this MU is considered to have low adaptive capacity, elevating vulnerability levels. However, most of this built infrastructure is considered to have low vulnerability until 2045 or 2070.



Table 4-12 Key asset erosion vulnerability ratings for MU6

Erosion Vulnerability					
Timeframes	2022	2030	2045	2070	2122
<u>Asset</u>		V	ulnerability Ra	tings_	
Scarborough Beach North	Medium	High	High	Very High	Very High
Scarborough Beach	Medium	High	High	Very High	Very High
Brighton Beach	Medium	High	High	Very High	Very High
Peasholm Beach	Medium	High	High	Very High	Very High
Scarborough Vegetated Dunes (Bush Forever Sites 308/310)	Medium	High	Very High	Very High	Very High
Scarborough Beach Carpark	Very Low	Very Low	Very Low	Medium	High
Scarborough Amphitheatre	Medium	Medium	Medium	Very High	Very High
Scarboro SLSC	Medium	Medium	High	Very High	Very High
Scarborough Beach Pool	Low	Low	High	Very High	Very High
Scarborough Beach Restaurant	Low	Low	High	Very High	Very High
Scarborough Playground and Skate Park	Low	Low	High	Very High	Very High
Scarborough Beach carpark south	Very Low	Very Low	Very Low	Medium	High
Brighton Beach carpark	Very Low	Very Low	Very Low	Medium	High
Scarborough access, amenity and minor infrastructure	Very Low	Medium	High	High	Very High

#### 4.3 Coastal Controls

Coastal controls that influence risk levels are the various revetments located in the north of the study area. The only one of these that is extensive enough to influence the risk assessment is the Watermans GSC revetment. This structure has the effect of reducing the likelihood of impact to assets on its landward side, including vegetated dunes, a portion of West Coast Highway and the Watermans Bay lookout. It also reduces the adaptive capacity of the beach in front of it, which increases its vulnerability (but does not affect risk).

Nourishment that has occurred to date has not been incorporated to reduce risk, as the longevity (timeframe) of such coastal management cannot be confirmed. The option of ongoing protective nourishment will be considered, however, during the *Risk Treatment* stage of the CHRMAP.

Comparison of risk for affected assets with and without the Watermans GSC Revetment is presented in **Table 3-1**. It demonstrates how risk is generally lowered across timeframes by the revetment, for assets located landward.

Table 4-13 Comparison of risk ratings for assets - controlled vs uncontrolled

Erosion Risk					
Timeframes	2022	2030	2045	2070	2122
Asset			Risk Ratings		
Watermans Bay Beach	High	High	Extreme	Extreme	Extreme
<u>Uncontrolled</u> - Watermans Bay Beach	High	High	Extreme	Extreme	Extreme



Watermans vegetated dunes	Medium	Medium	High	Extreme	Extreme
<u>Uncontrolled</u> - Watermans vegetated dunes	Medium	High	High	Extreme	Extreme
West Coast Drive, footpath and services (Beach Rd to Mary St)	Very Low	Very Low	Medium	High	Extreme
<u>Uncontrolled</u> - West Coast Drive, footpath and services (Beach Rd to Mary St)	Medium	Medium	High	Extreme	Extreme
Lookout and amenities, Watermans Bay	Low	Low	Medium	High	High
<u>Uncontrolled</u> - Lookout and amenities, Watermans Bay	Medium	Medium	Medium	High	High

Comparison of vulnerability for affected assets with and without the Watermans GSC Revetment is presented in **Table 3-2**. The reduced adaptive capacity of the beach does not lead to changed vulnerability ratings for this natural asset, though its vulnerability remains high in the immediate to short term.

Table 4-14 Comparison of vulnerability ratings for assets - controlled vs uncontrolled

Table 4-14 Companion of varietability facilities for absolute controlled volumentation					
Erosion Risk					
Timeframes	2022	2030	2045	2070	2122
Asset	Risk Ratings				
Watermans Bay Beach	High	High	Very High	Very High	Very High
Uncontrolled - Watermans Bay Beach	High	High	Very High	Very High	Very High
Watermans vegetated dunes	Medium	Medium	High	Very High	Very High
<u>Uncontrolled</u> - Watermans vegetated dunes	Medium	High	High	Very High	Very High
West Coast Drive, footpath and services (Beach Rd to Mary St)	Low	Low	High	Very High	Very High
<u>Uncontrolled</u> - West Coast Drive, footpath and services (Beach Rd to Mary St)	High	High	Very High	Very High	Very High
Lookout and amenities, Watermans Bay	Low	Low	Medium	High	High
<u>Uncontrolled</u> - Lookout and amenities, Watermans Bay	Medium	Medium	Medium	High	High

#### 4.4 Priorities for Treatment

Based on the outcomes of the risk and vulnerability assessment, MUs have been classified as high, medium or low priority for treatment, as follows:

- > High priority (high aggregate risk level at present), requiring further investigation in the immediate term and, depending on the outcomes, active management in the short term:
  - MU1 Watermans Bay; and
  - MU3 Mettams Pool.
- > Medium priority (medium aggregate risk level at present), requiring further investigation in the immediate to short term and, depending on the outcomes, active management in the short to medium term:
  - MU2 North Beach.
  - MU4 Trigg Beach North;
  - MU5 Trigg Beach South; and
  - MU6 Scarborough Beach.



# 5 Conclusions and Next Steps

The risk and vulnerability assessments have identified assets and coastal areas (divided into MUs) that are vulnerable to coastal erosion and inundation hazards at present day (2022) and at various timeframes up to the 2122 planning horizon. In general, coastal erosion leads to higher vulnerability than inundation for assets due to the nature of the City's coastline (sandy and/or elevated throughout) and more permanent (higher consequence) nature of coastal erosion impacts. Management of coastal erosion hazards will be the focus of risk treatment.

High priority MUs are those in north of the study area, where highly valued beaches are vulnerable due to their inability to naturally adapt. Erosion in this area also creates risk for access infrastructure, with significant implications for reputation and service delivery.

The next step for the City's CHRMAP is the *Risk Treatment* stage (Stage 5), which has been documented in the fourth chapter report (Cardno, 2023c). The key activities and outcomes of this stage include:

- > Developing risk treatment options for vulnerable areas of the City's coastline following the risk management and adaption hierarchy, focusing on mitigation of the threat of coastal erosion;
- > Multi-criteria analysis and cost benefit analysis to assess the identified risk treatment options; and
- > Developing adaption pathways which contain one or more risk treatment option and triggers for their implementation.



# 6 References

- Cardno (2023a) City of Stirling Coastal Hazard Risk Management and Adaptation Plan Chapter 1: Establish the Context. Prepared for City of Stirling on 23/06/2023.
- Cardno (2023b) City of Stirling Coastal Hazard Risk Management and Adaptation Plan Chapter 2: Risk Identification. Prepared for City of Stirling on 23/06/2023.
- Cardno (2023c) City of Stirling Coastal Hazard Risk Management and Adaptation Plan Chapter 4: Risk Treatment. Prepared for City of Stirling on 23/06/2023.
- Cardno (2023d) City of Stirling Coastal Hazard Risk Management and Adaptation Plan Chapter 5: Implementation. Prepared for City of Stirling on 23/06/2023.
- City of Stirling (2020) City of Stirling Risk Management Framework. Published November 2020.
- Cooper, J. A. G & Pilkey, O. H (2004) Sea-level rise and shoreline retreat: time to abandon the Bruun Rule. Global and Planetary Change 43 (2004) 157 171
- DoT (2010) Sea Level Change in Western Australia Application to Coastal Planning. Department of Transport, Perth, Western Australia.
- IPCC (2007) Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M.Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
- IPCC (2021) Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press. In Press.
- Rawlinsons (2021) Rawlinsons Australian Construction Handbook 2021. Published by Rawlinsons (W.A.), Quantity Surveyors and Construction Cost Consultants.
- Rosati, J. D., Dean, R. G. & Walton, T. L. (2013) *The modified Bruun Rule extended for landward transport.*Marine Geology 340 (2013) 71-81.
- Standards Australia (2013) Climate change adaption for settlements and infrastructure A risk based approach (AS 5334-2013)
- Stul T, Gozzard JR, Eliot IG and Eliot MJ (2015) Coastal Sediment Cells for the Vlamingh Region between Cape Naturaliste and Moore River, Western Australia. Report prepared by Seashore Engineering Pty Ltd and Geological Survey of Western Australia for the Western Australian Department of Transport, Fremantle.
- WAPC (2003) Statement of Planning Policy No. 2: Environment and Natural Resources Policy. Published by the Western Australian Planning Commission, Perth, Western Australia.
- WAPC (2006a) Statement of Planning Policy No. 3: Urban Growth and Settlement. Published by the Western Australian Planning Commission, Perth, Western Australia.
- WAPC (2006b) State Planning Policy No. 3.4 Natural Hazards and Disasters. Published by the Western Australian Planning Commission, Perth, Western Australia.
- WAPC (2010) State Planning Policy No. 2.8 Bushland policy for the Perth Metropolitan Region. Published by the Western Australian Planning Commission, Perth, Western Australia.
- WAPC (2013) State Planning Policy No. 2.6: State Coastal Planning Policy. Published by the Western Australian Planning Commission, Perth, Western Australia.



- WAPC (2019) Coastal Hazard Risk Management and Adaptation Planning Guidelines. Published by the Western Australian Planning Commission, Perth, WA.
- WAPC (2020) State Coastal Planning Policy Guidelines. November 2020. Prepared by the Department of Planning, Lands and Heritage on behalf of the Western Australian Planning Commission. Published version February 2021.

APPENDIX



MANAGEMENT UNITS AND KEY ASSETS







1:2,430 Scale at A3



Coastal Erosion Hazard Extents & Major Assets MU1 - Watermans Bay

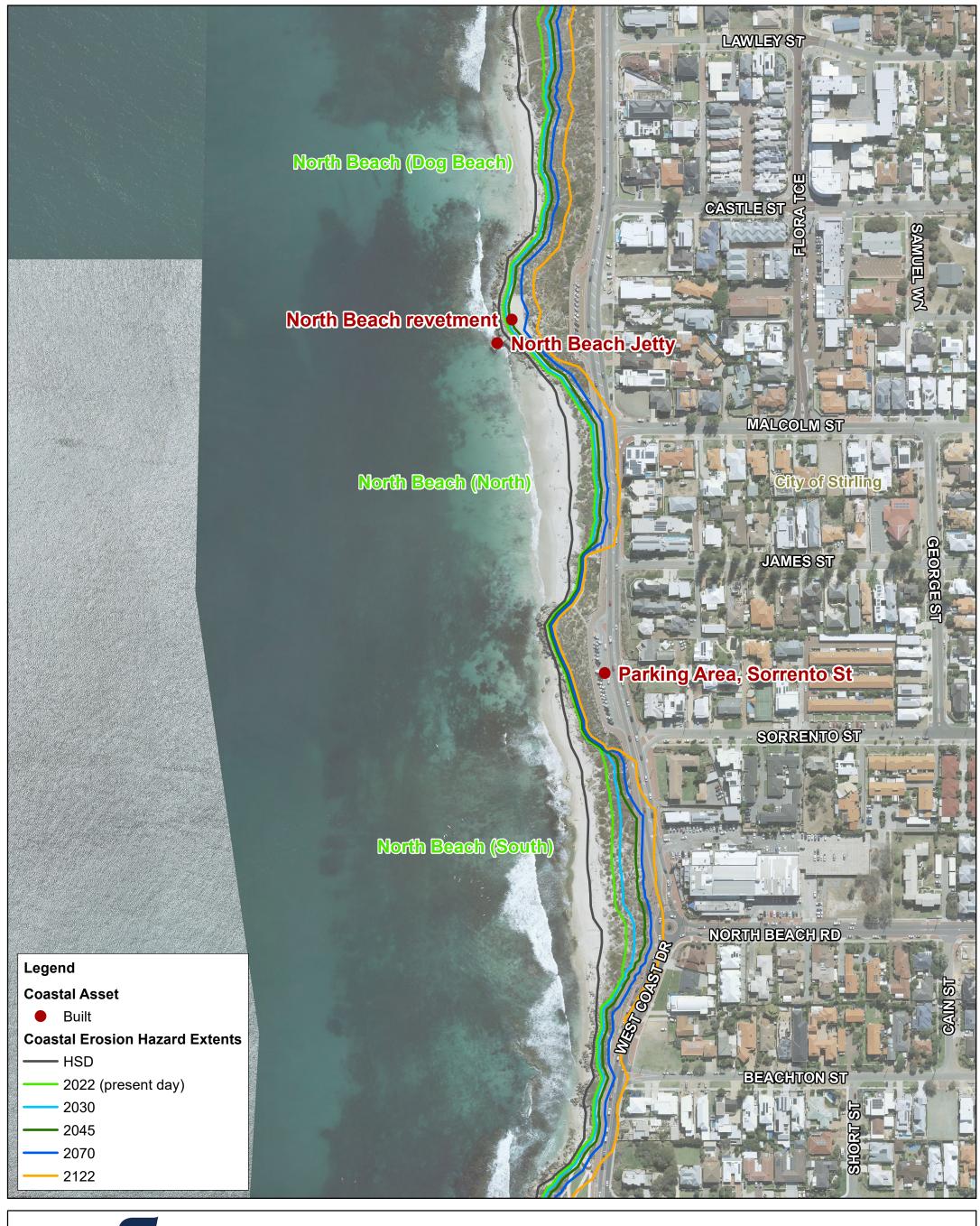
> CITY OF STIRLING CHRMAP FIGURE A-1







Map Produced by Cardno (WA) Pty Ltd
Date: 2022-07-27
Coordinate System: GDA 1994 MGA Zone 50
Project: CW1195500
Map: CW1195500\_GS\_010\_MU\_ZONES\_ManagedRetreat.mxd 01
Aerial imagery supplied by Metromap (2022)





# Coastal Erosion Hazard Extents & Major Assets MU2 - North Beach

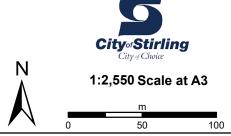
CITY OF STIRLING CHRMAP FIGURE A-2





Map Produced by Cardno (WA) Pty Ltd
Date: 2022-07-27
Coordinate System: GDA 1994 MGA Zone 50
Project: CW1195500
Map: CW1195500\_GS\_010\_MU\_ZONES\_ManagedRetreat.mxd 01
Aerial imagery supplied by Metromap (2022)





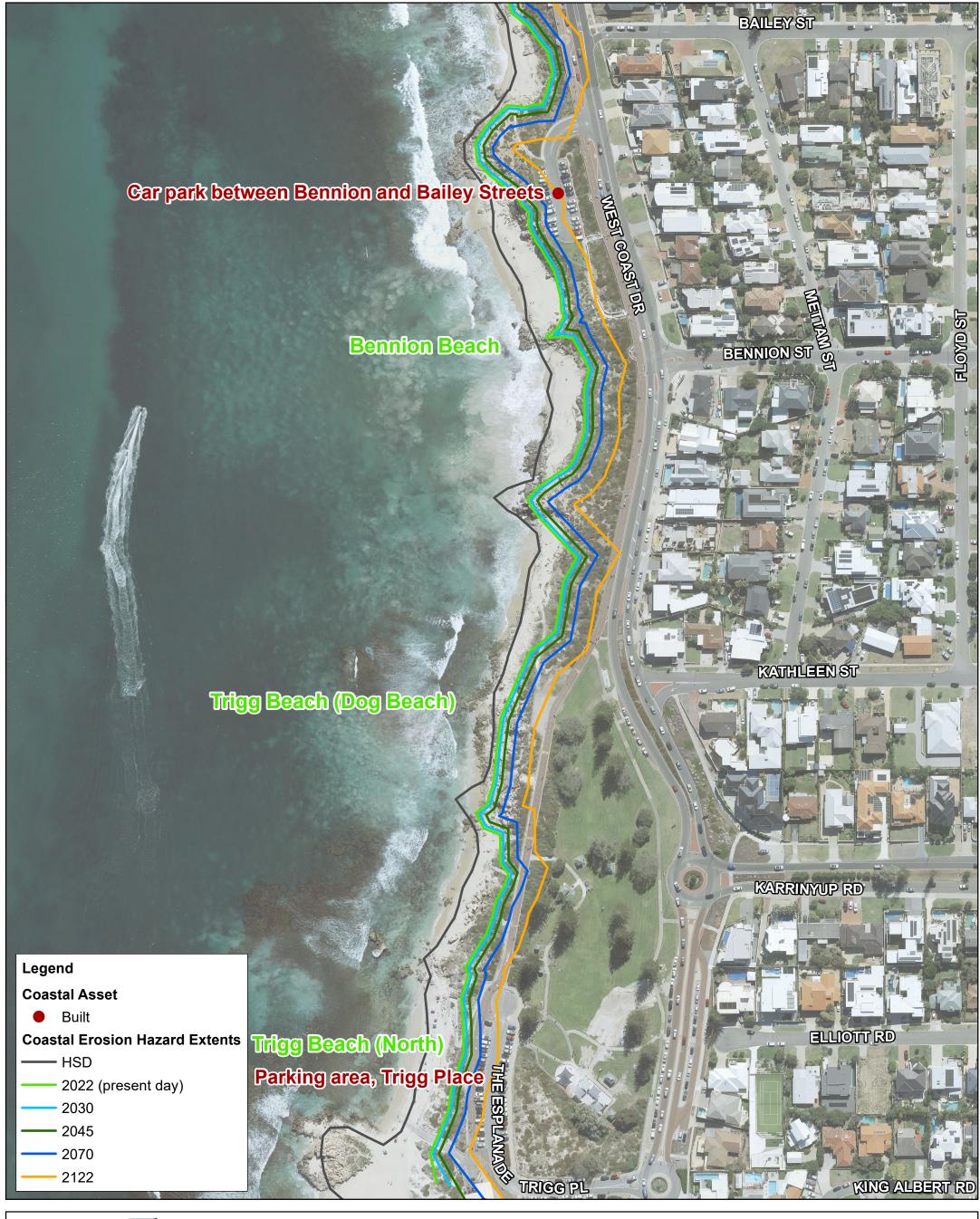
# Coastal Erosion Hazard Extents & Major Assets MU3 - Mettams Pool

CITY OF STIRLING CHRMAP FIGURE A-3



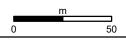


Map Produced by Cardno (WA) Pty Ltd
Date: 2022-07-27
Coordinate System: GDA 1994 MGA Zone 50
Project: CW1195500
Map: CW1195500\_GS\_010\_MU\_ZONES\_ManagedRetreat.mxd 01
Aerial imagery supplied by Metromap (2022)





1:1,930 Scale at A3



Coastal Erosion Hazard Extents & Major Assets MU4 - Trigg Beach North

> CITY OF STIRLING CHRMAP FIGURE A-4







Map Produced by Cardno (WA) Pty Ltd
Date: 2022-07-27
Coordinate System: GDA 1994 MGA Zone 50
Project: CW1195500
Map: CW1195500\_GS\_010\_MU\_ZONES\_ManagedRetreat.mxd 01
Aerial imagery supplied by Metromap (2022)





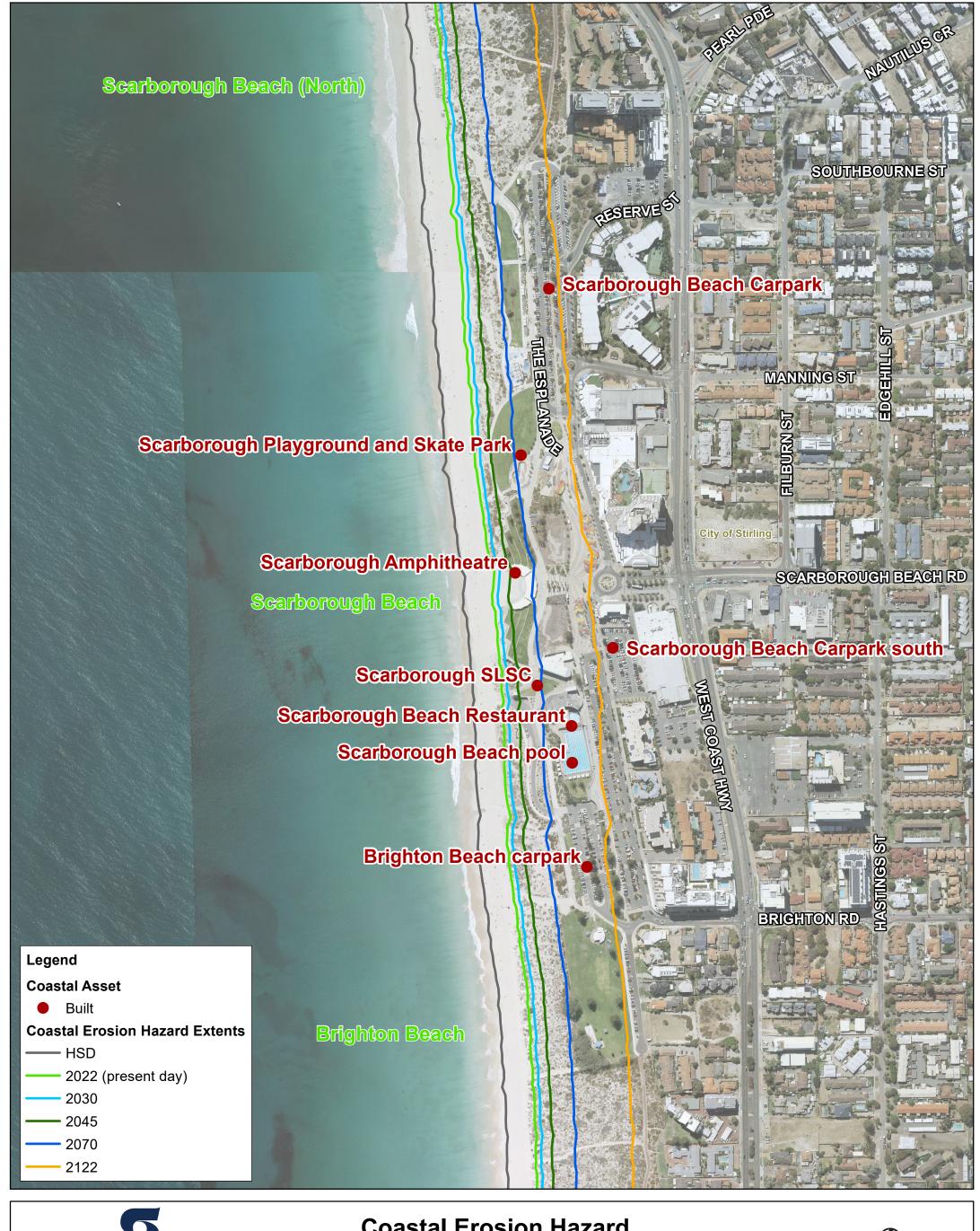
Coastal Erosion Hazard Extents & Major Assets MU5 - Trigg Beach South

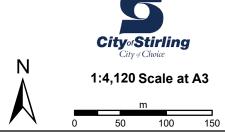
> CITY OF STIRLING CHRMAP FIGURE A-5





Map Produced by Cardno (WA) Pty Ltd
Date: 2022-07-27
Coordinate System: GDA 1994 MGA Zone 50
Project: CW1195500
Map: CW1195500\_GS\_010\_MU\_ZONES\_ManagedRetreat.mxd 01
Aerial imagery supplied by Metromap (2022)





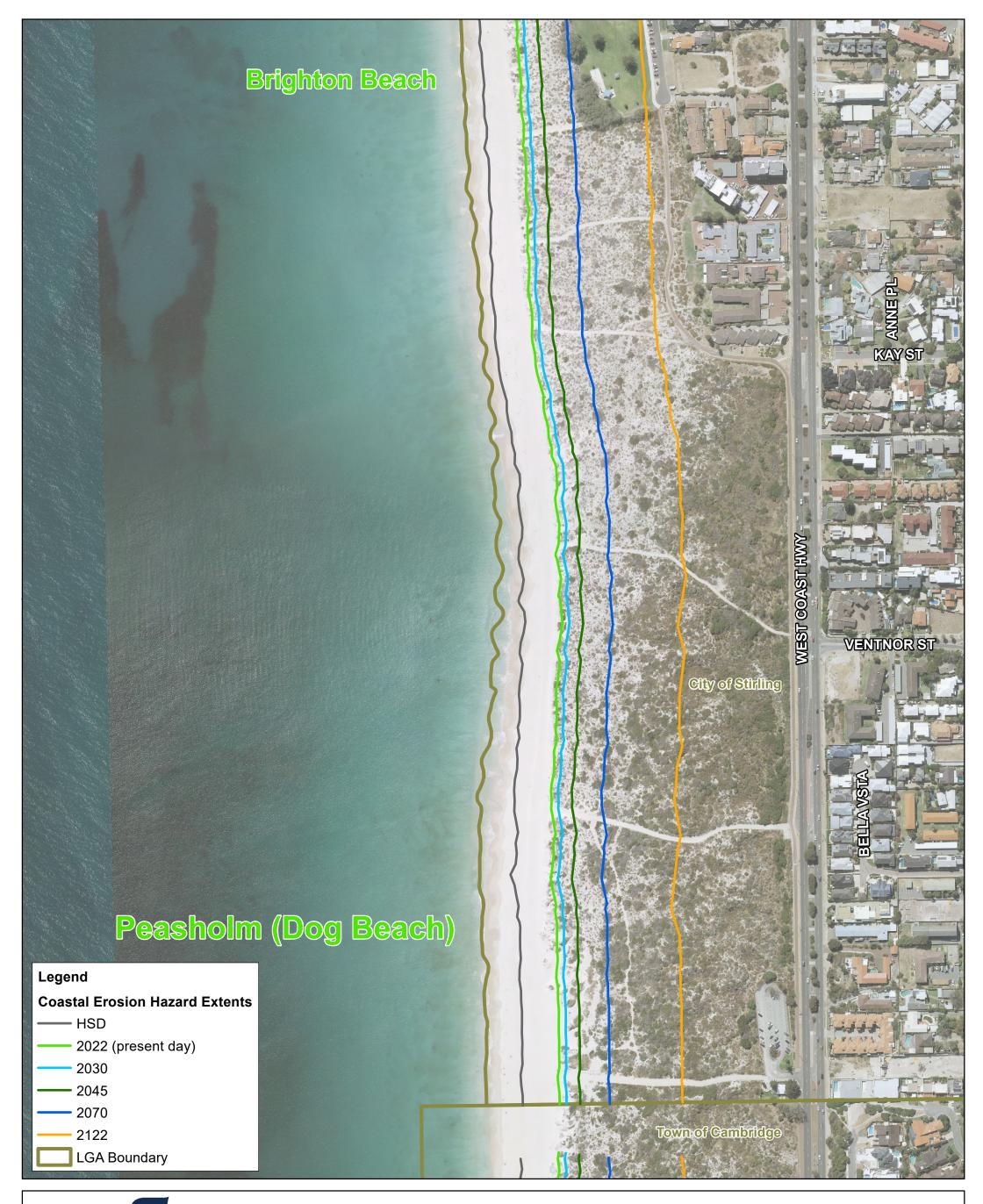
Coastal Erosion Hazard Extents & Major Assets MU6 - Scarborough Beach

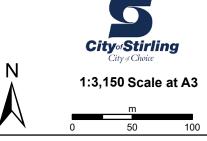
> CITY OF STIRLING CHRMAP FIGURE A-6





Map Produced by Cardno (WA) Pty Ltd
Date: 2022-07-27
Coordinate System: GDA 1994 MGA Zone 50
Project: CW1195500
Map: CW1195500\_GS\_010\_MU\_ZONES\_ManagedRetreat.mxd 01
Aerial imagery supplied by Metromap (2022)





Coastal Erosion Hazard Extents & Major Assets MU6 - Scarborough Beach

> CITY OF STIRLING CHRMAP FIGURE A-7

Map Produced by Cardno (WA) Pty Ltd
Date: 2022-10-28
Coordinate System: GDA 1994 MGA Zone 50
Project: CW1195500
Map: CW1195500\_GS\_010\_MU\_ZONES\_ManagedRetreat.mxd 01
Aerial imagery supplied by Metromap (2022)

В

ASSIGNED EROSION LIKELIHOOD RATINGS



		Erosion Likelih	ood Inputs			
		Present Day (2022)		2045		
CHRMAP Asset ID	<u>Asset</u>			Likelihood (Prevailing)		
MU1-01	Watermans Bay Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-01	Uncontrolled - Watermans Bay Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-02	Watermans Bay Dog Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU1-03	Watermans vegetated dunes	Rare	Rare	Possible	Almost Certain	Almost Certain
MU1-03	Uncontrolled - Watermans vegetated dunes	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-04	Watermans GSC revetment	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Near Impossible	Near Impossible	Rare	Unlikely	Likely
MU1-06	Lookout and amenities, Watermans Bay	Rare	Rare	Unlikely	Likely	Likely
MU1-05	Uncontrolled - West Coast Drive, footpath and services (Beach Rd to Mary St)	Rare	Rare	Unlikely	Likely	Likely
MU1-06	Uncontrolled - Lookout and amenities, Watermans Bay	Unlikely	Unlikely	Possible	Almost Certain	Almost Certain
MU1-07	Car park and lookout, Margaret St	Rare	Rare	Unlikely	Likely	Likely
MU1-08	Watermans access, amenity and minor infrastructure	Rare	Rare	Unlikely	Likely	Likely
MU2-01	North Beach Dog Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU2-02	North Beach (North)	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU2-03	North Beach (South)	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU2-04	North Beach access, amenity and minor infrastructure	Rare	Rare	Unlikely	Likely	Likely
MU2-05	North Beach Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Rare	Rare	Unlikely	Likely	Likely
MU2-07	North Beach Revetment and Jetty	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Near Impossible	Near Impossible	Rare	Possible	Likely
MU3-01	Mettams Pool Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU3-02	Parking Area, Saunders St	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU3-03	Mettams Pool public toilets	Unlikely	Unlikely	Possible	Almost Certain	Almost Certain
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Near Impossible	Near Impossible	Rare	Possible	Likely
MU3-05	Mettams vegetated dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU3-06	Mettams access, amenity and minor infrastructure	Rare	Rare	Unlikely	Likely	Likely
MU4-01	Bennion Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU4-02	Trigg Beach Dog Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU4-03	Trigg Beach North	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU4-04	Trigg North Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Near Impossible	Near Impossible	Rare	Possible	Likely
MU4-06	Car park between Bennion and Bailey Streets	Near Impossible	Near Impossible	Rare	Possible	Likely
MU4-07	Parking area, Trigg Place	Near Impossible	Near Impossible	Rare	Possible	Likely
MU4-08	Trigg North access, amenity and minor infrastructure	Rare	Rare	Unlikely	Likely	Likely
MU5-01	Trigg Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU5-02	Trigg Beach South	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU5-03	Trigg South Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU5-04	Trigg Surf Lookout	Rare	Rare	Unlikely	Likely	Likely
MU5-05	Parking area, Trigg Beach north	Near Impossible	Near Impossible	Rare	Possible	
MU5-06	Trigg Beach SLSC building 1	ivear impossible	ivear impossible	naie		Ultralia
			Near Impersible	Noor Impossible		Likely
		Near Impossible	Near Impossible	Near Impossible	Rare	Possible
MU5-07	Trigg Beach SLSC building 2	Near Impossible	Near Impossible	Near Impossible		Possible Possible
MU5-07 MU5-08	Trigg Beach SLSC building 2 Trigg Beach Café	Near Impossible Near Impossible	Near Impossible Near Impossible	Near Impossible Rare	Rare Rare Possible	Possible Possible Likely
MU5-07 MU5-08 MU5-09	Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central	Near Impossible Near Impossible Near Impossible	Near Impossible Near Impossible Near Impossible	Near Impossible	Rare Possible Rare	Possible Possible Likely Possible
MU5-07 MU5-08 MU5-09 MU5-10	Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure	Near Impossible Near Impossible Near Impossible Near Impossible	Near Impossible Near Impossible Near Impossible Rare	Near Impossible Rare Near Impossible Possible	Rare Possible Rare Likely	Possible Possible Likely Possible Almost Certain
MU5-07 MU5-08 MU5-09 MU5-10 MU5-11	Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters	Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible	Near Impossible Near Impossible Near Impossible Rare Near Impossible	Near Impossible Rare Near Impossible Possible Near Impossible	Rare Rare Possible Rare Likely Rare	Possible Possible Likely Possible Almost Certain Possible
MU5-07 MU5-08 MU5-09 MU5-10 MU5-11 MU5-12	Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark	Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible	Near Impossible Near Impossible Near Impossible Rare Near Impossible Near Impossible	Near Impossible Rare Near Impossible Possible Near Impossible Near Impossible	Rare Rare Possible Rare Likely Rare Rare	Possible Possible Likely Possible Almost Certain Possible Possible
MU5-07 MU5-08 MU5-09 MU5-10 MU5-11 MU5-12 MU6-01	Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North	Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Rare	Near Impossible Near Impossible Near Impossible Rare Near Impossible Near Impossible Unlikely	Near Impossible Rare Near Impossible Possible Near Impossible Near Impossible Possible	Rare Rare Possible Rare Likely Rare Rare Rare Rare Almost Certain	Possible Possible Likely Possible Almost Certain Possible Almost Certain
MUS-07 MUS-08 MUS-09 MUS-10 MUS-11 MUS-12 MU6-01 MU6-02	Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach	Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Rare Rare	Near Impossible Near Impossible Near Impossible Rare Near Impossible Near Impossible Unlikely Unlikely	Near Impossible Rare Near Impossible Possible Near Impossible Near Impossible Possible Possible	Rare Rare Possible Rare Likely Rare Rare Rare Almost Certain Almost Certain	Possible Possible Likely Possible Almost Certain Possible Almost Certain Almost Certain Almost Certain
MU5-07 MU5-08 MU5-09 MU5-10 MU5-11 MU5-12 MU6-01 MU6-02 MU6-03	Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach Brighton Beach	Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Rare Rare	Near Impossible Near Impossible Near Impossible Rare Near Impossible Near Impossible Unlikely Unlikely Unlikely	Near Impossible Rare Near Impossible Possible Near Impossible Near Impossible Possible Possible Possible Possible	Rare Rare Possible Rare Likely Rare Almost Certain Almost Certain	Possible  Possible  Likely  Possible  Almost Certain  Possible  Possible  Almost Certain  Almost Certain  Almost Certain
MU5-07 MU5-08 MU5-09 MU5-10 MU5-11 MU5-12 MU6-01 MU6-02 MU6-03 MU6-04	Trigg Beach SLSC building 2 Trigg Beach Cafe  Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach Brighton Beach Peasholm Beach	Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Rare Rare Rare Rare	Near Impossible Near Impossible Near Impossible Near Impossible Rare Near Impossible Unlikely Unlikely Unlikely Unlikely	Near Impossible Rare Near Impossible Possible Near Impossible Near Impossible Possible Possible Possible Possible Possible	Rare Possible Rare Likely Rare Almost Certain Almost Certain Almost Certain Almost Certain	Possible Possible Likely Possible Almost Certain Possible Almost Certain Almost Certain Almost Certain Almost Certain
MU5-07 MU5-08 MU5-09 MU5-10 MU5-11 MU5-12 MU6-01 MU6-02 MU6-03 MU6-04 MU6-04	Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach Brighton Beach Brighton Beach Scarborough Vegetated Dunes	Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Rare Rare Rare Rare Rare Rare	Near Impossible Near Impossible Near Impossible Rare Rare Near Impossible Near Impossible Unlikely Unlikely Unlikely Unlikely Unlikely Unlikely	Near Impossible Rare Near Impossible Possible Near Impossible Near Impossible Near Impossible Possible Possible Possible Possible Possible	Rare Possible Rare Likely Rare Likely Rare Almost Certain Almost Certain Almost Certain Almost Certain Almost Certain	Possible Possible Likely Possible Almost Certain Possible Almost Certain
MUS-07 MUS-08 MUS-09 MUS-10 MUS-11 MUS-12 MU6-01 MU6-02 MU6-03 MU6-04 MU6-05 MU6-06	Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach North Peasholm Beach Peasholm Beach Scarborough Beach Scarborough Beach Scarborough Beach Scarborough Beach Scarborough Beach Scarborough Beach	Near Impossible Rare Rare Rare Rare Rare Near Impossible Near Impossible	Near Impossible Near Impossible Near Impossible Rare Rare Near Impossible Near Impossible Unilkely Unilkely Unilkely Unilkely Unilkely Near Impossible	Near Impossible Rare Near Impossible Possible Near Impossible Near Impossible Possible Possible Possible Possible Possible Near Impossible Near Impossible Near Impossible	Rare Rare Possible Rare Likely Rare Almost Certain Almost Certain Almost Certain Almost Certain Almost Certain Almost Certain Rare	Possible Possible Likely Possible Almost Certain Possible Almost Certain Possible
MUS-07 MUS-08 MUS-09 MUS-10 MUS-11 MUS-12 MU6-01 MU6-03 MU6-03 MU6-04 MU6-05 MU6-05 MU6-06 MU6-07	Trigg Beach SLSC building 2 Trigg Beach Café  Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach Pessholm Beach Pessholm Beach Scarborough Vegetated Dunes Scarborough Beach Carpark Scarborough Beach	Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Rare Rare Rare Rare Rare Rare Rare Rar	Near Impossible Near Impossible Near Impossible Rare Near Impossible Near Impossible Unilikely Unilikely Unilikely Unilikely Unilikely Unilikely Unilikely Rare Rare	Near Impossible Rare Near Impossible Possible Near Impossible Near Impossible Possible Possible Possible Possible Possible Unitlely Unitlely Unitlely	Rare Possible Rare Likely Rare Almost Certain	Possible Possible Likely Possible Almost Certain Possible Almost Certain Likely Likely
MUS-07 MUS-08 MUS-09 MUS-10 MUS-11 MUS-11 MUS-12 MUG-01 MUG-02 MUG-03 MUG-04 MUG-05 MUG-06 MUG-07 MUG-07	Trigg Beach SLSC building 2 Trigg Beach Café  Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach North Scarborough Beach Brighton Beach Brighton Beach Scarborough Wegetated Dunes Scarborough Amphitheatre Scarborough Amphitheatre	Near Impossible Rare Rare Rare Rare Rare Rare Rare Rar	Near Impossible Near Impossible Near Impossible Rare Rare Near Impossible Unilkely Unilkely Unilkely Unilkely Unilkely Unilkely Unilkely Rar Impossible Rare Rare	Near Impossible Rare Rare Possible Unlikely Unlikely	Rare Possible Rare Likely Rare Likely Rare Almost Certain Likely Likely	Possible Possible Likely Possible Almost Certain Possible Almost Certain Likely Likely
MUS-07 MUS-08 MUS-10 MUS-11 MUS-11 MUS-12 MU6-01 MU6-02 MU6-03 MU6-04 MU6-05 MU6-06 MU6-07 MU6-08 MU6-09	Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach North Scarborough Beach Brighton Beach Brighton Beach Scarborough Wegetated Dunes Scarborough Amphitheatre Scarborough Amphitheatre Scarborough Beach Pool	Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Rare Rare Rare Rare Rare Rare Rare Rar	Near Impossible Near Impossible Near Impossible Rare Near Impossible Near Impossible Unlikely Unlikely Unlikely Unlikely Unlikely Unlikely Near Impossible Rare Rare Near Impossible	Near Impossible Rare Near Impossible Possible Near Impossible Possible Possible Possible Possible Possible Possible United Possible Possible Possible Possible Possible Possible Possible Possible Possible Rare	Rare Possible Rare Likely Rare Likely Rare Almost Certain Almost Certain Almost Certain Almost Certain Almost Certain Almost Certain Likely Likely Likely Possible	Possible Possible Likely Possible Almost Certain Possible Almost Certain Almost Certain Almost Certain Almost Certain Almost Certain Almost Certain Likely Likely Likely
MUS-07 MUS-08 MUS-09 MUS-10 MUS-11 MUS-12 MU6-01 MU6-02 MU6-03 MU6-04 MU6-05 MU6-06 MU6-07 MU6-08 MU6-08 MU6-09 MU6-10	Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach North Scarborough Beach Brighton Beach Peasholm Beach Peasholm Beach Scarborough Vegetated Dunes Scarborough Amphitheatre Scarborough Amphitheatre Scarborough Beach Pool Scarborough Beach Pool Scarborough Beach Pool	Near Impossible Rare Rare Rare Rare Near Impossible Rare Rare Near Impossible Rare Near Impossible Rare Near Impossible	Near Impossible Near Impossible Near Impossible Near Impossible Rare Near Impossible Unlikely Unlikely Unlikely Unlikely Near Impossible Rare Rare Rare Near Impossible	Near Impossible Rare Near Impossible Possible Near Impossible Near Impossible Possible Possible Possible Possible Possible Unlikely Unlikely Rare Rare	Rare Rare Possible Rare Likely Rare Almost Certain Almost Certain Almost Certain Almost Certain Almost Certain Likely Likely Likely Likely Possible	Possible Possible Likely Possible Almost Certain Possible Almost Certain Almost Certain Almost Certain Almost Certain Almost Certain Almost Certain Likely Likely Likely Likely Likely
MUS-07 MUS-08 MUS-10 MUS-11 MUS-11 MUS-12 MUG-01 MUG-02 MUG-03 MUG-04 MUG-05 MUG-06 MUG-07 MUG-08 MUG-09 MUG-09 MUG-10 MUG-10	Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach North Scarborough Beach Brighton Beach Brighton Beach Scarborough Beach Carpark Scarborough Beach Carpark Scarborough Seach Carpark Scarborough Seach Carpark Scarborough Seach Carpark Scarborough Beach Restaurant Scarborough Beach Pool	Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Rare Rare Rare Rare Rare Rare Rare Rar	Near Impossible Near Impossible Near Impossible Rare Near Impossible Near Impossible Unilkely Unilkely Unilkely Unilkely Unilkely Unilkely Near Impossible Rare Rare Rare Rare Near Impossible	Near Impossible Rare Near Impossible Possible Near Impossible Possible Possible Possible Possible Possible Possible Unlikely Unlikely Rare Rare Rare	Rare Rare Possible Rare Likely Rare Likely Rare Almost Certain Almost Certain Almost Certain Almost Certain Almost Certain Almost Certain Likely Likely Possible Possible	Possible Possible Likely Possible Likely Possible Almost Certain Likely Likely Likely Likely Likely Likely Likely
MUS-07 MUS-08 MUS-09 MUS-10 MUS-11 MUS-11 MUS-12 MU6-01 MU6-02 MU6-03 MU6-04 MU6-05 MU6-06 MU6-07 MU6-08 MU6-09 MU6-10 MU6-11	Trigg Beach SLSC building 2 Trigg Beach Café  Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach North Scarborough Beach North Scarborough Beach Brighton Beach Scarborough Beach Carpark Scarborough Wegetated Dunes Scarborough Wegetated Dunes Scarborough Amphitheatre Scarborough Amphitheatre Scarborough Beach Cool Scarborough Beach Pool Scarborough Beach Restaurant Scarborough Beach Carpark South	Near Impossible Rare Rare Rare Rare Rare Rare Rare Rar	Near Impossible Near Impossible Near Impossible Rare Near Impossible Near Impossible Unlikely Near Impossible Rare Rare Rare Near Impossible Near Impossible Near Impossible	Near Impossible Rare Near Impossible Possible Near Impossible Near Impossible Near Impossible Possible Possible Possible Possible Unlikely Unlikely Rare Rare Rare Near Impossible	Rare Rare Possible Rare Likely Rare Likely Rare Almost Certain Likely Likely Likely Possible Possible Rare Rare	Possible Possible Likely Possible Likely Possible Almost Certain Possible Almost Certain Almost Certain Almost Certain Almost Certain Almost Certain Likely Likely Likely Likely Likely Likely Possible
MUS-07 MUS-08 MUS-10 MUS-11 MUS-11 MUS-11 MUS-12 MU6-01 MU6-03 MU6-03 MU6-04 MU6-05 MU6-06 MU6-07 MU6-08 MU6-09 MU6-10 MU6-11	Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach North Scarborough Beach Brighton Beach Brighton Beach Scarborough Beach Carpark Scarborough Beach Carpark Scarborough Seach Carpark Scarborough Seach Carpark Scarborough Seach Carpark Scarborough Beach Restaurant Scarborough Beach Pool	Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Rare Rare Rare Rare Rare Rare Rare Rar	Near Impossible Near Impossible Near Impossible Rare Near Impossible Near Impossible Unilkely Unilkely Unilkely Unilkely Unilkely Unilkely Near Impossible Rare Rare Rare Rare Near Impossible	Near Impossible Rare Near Impossible Possible Near Impossible Possible Possible Possible Possible Possible Possible Unlikely Unlikely Rare Rare Rare	Rare Rare Possible Rare Likely Rare Likely Rare Almost Certain Almost Certain Almost Certain Almost Certain Almost Certain Almost Certain Likely Likely Possible Possible	Possible Possible Ukely Possible Almost Certain Possible Almost Certain Ukely Ukely Ukely Ukely Ukely Ukely

			Erosion Likelih	ood Inputs			
Marcian   Marc			Present Day (2022)		2045		
Motion   M	CHRMAP Asset ID	<u>Asset</u>			Likelihood (Probability)		
Month   Wintermone Rep Beach	MU1-01	Watermans Bay Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
March Michael Matermans registrate diseases   Base   Ame   Propuble   Americ Certain   Amorat Certain   Michael   Matermans (SC revenment   Onlikely   Propuble   Americ Certain   Amorat Certain   Michael   Matermans (SC revenment   Onlikely   Onlikely   Onlikely   Americ Certain   Amorat Certain   Amorat Certain   Michael   March March   Michael	MU1-01	Uncontrolled - Watermans Bay Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
Mode	MU1-02	Watermans Bay Dog Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MULGO   Watermans OCC rest often, footpath and envires (Beach Mit or Many St)   Near Impossible   Mare   Water   Wat	MU1-03	Watermans vegetated dunes	Rare	Rare	Possible	Almost Certain	Almost Certain
MAIL-05   Work Coast Drive, Forepath and services (Beach fild to Mary SI)   Rate   Asse   Unitalely   Usaley	MU1-03	Uncontrolled - Watermans vegetated dunes	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MALS B. Bookout and ammonities, Watermans by Marc	MU1-04	Watermans GSC revetment	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MALS B. Bookout and ammonities, Watermans by Marc	MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Near Impossible	Near Impossible	Rare	Unlikely	Likely
MULGO   Uncontrolled - Lookout and amenites, Watermans Bay   Unlikely   Cape   Are   Care   Unlikely   Uskey	MU1-06	Lookout and amenities, Watermans Bay	Rare	Rare	Unlikely	Likely	
Mul. 20	MU1-05	Uncontrolled - West Coast Drive, footpath and services (Beach Rd to Mary St)	Rare	Rare	Unlikely	Likely	Likely
MURC 261   More Reach Operation   More   M	MU1-06	Uncontrolled - Lookout and amenities, Watermans Bay	Unlikely	Unlikely	Possible	Almost Certain	Almost Certain
MU2-24 North Beach (Desirb) MU2-29 North Beach (Desirb) MU2-20 North Beach (Desirb) MU	MU1-07	Car park and lookout, Margaret St	Rare	Rare	Unlikely	Likely	Likely
MU2-22   North Reach (Dorth)	MU1-08	Watermans access, amenity and minor infrastructure	Rare	Rare	Unlikely	Likely	Likely
MU2-24 North Reach (South) MU2-24 North Reach (South) MU2-25 North Reach (South) MU2-25 North Reach (West samely) and minor infrastructure MU2-26 North Reach (West samely) and minor infrastructure MU2-26 North Reach (West samely) MU2-27 North Reach (West samely) MU2-27 North Reach (West samely) MU2-27 North Reach (West samely) MU2-28 North Reach (West samely) MU2-29 North Reach (West samely) M	MU2-01	North Beach Dog Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MUZ-05 Morth Beach access, amenity and milore infrastructure MUZ-05 Morth Beach Accessed Dunes MUZ-05 Morth Beach Accessed Dunes MUZ-05 Morth Beach Accessed Dunes MUZ-05 Morth Beach Reverteened and Jetty MUZ-07 Morth Beach Reverteened and Jetty MUZ-08 Mort Cortain Moz-07 Morth Beach Reverteened and Jetty MUZ-08 Mort Coast Dune, Conjourh and services (Sorrento St to Namensky St) MUZ-09 Mort Coast Dune, Conjourh and services (Sorrento St to Namensky St) MUZ-09 Mort Coast Dune, Conjourh and services (Sorrento St to Namensky St) MUZ-09 Mort Coast Dune, Conjourh and services (Sorrento St to Namensky St) MUZ-09 Mortune Pool Beach MUZ-09 Mor	MU2-02	North Beach (North)	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU2-04 North Beach Acess, amenity and minor infrastructure  MU2-05 (North Beach Acess, amenity and minor infrastructure  MU2-06 (West Coast Dive, footpath and services (Marcine St to Namers St)  MU2-07 (Mu2-07 (Mu2-07 )  MU2-07 (Mu2-07 (Mu2-07 )  MU2-07 (Mu2-07 )	MU2-03	North Beach (South)	Rare		Possible	Almost Certain	Almost Certain
MU2-05   North Beach Vegetated Dunes   Rare   Unikely   Rare   Unikely   Rare   Unikely   Rare   Unikely   Rare   Rare   Unikely   Rare   Rare   Unikely   Rare   Rare   Unikely   Rare   Rare   Unikely   Unikely   Rare   Rare   Unikely   Rare   Rare   Unikely   Unikely   Unikely   Rare   Rare   Unikely   Unikely   Rare   Rare   Unikely   Rare   Rare   Unikely   Unikely   Unikely   Rare   Rare   Unikely   Rare   Rare   Unikely   Unikely   Rare   Rare   Unikely   Rare   Rare   Unikely   Rare   Rare   Unikely   Rare   Rare   Unikely   Unikely   Unikely   Rare   Rare   Rare   Unikely   Rare   Rare   Rare   Unikely   Unikely   Rare   Rare   Rare   Unikely   Rare   Rare   Rare   Unikely   Rare   Rare   Rare	MU2-04	1 1	Rare	· ·	Unlikely		Likely
MU2-02 West Coast Drive, flootpath and services (Storento St to Names St) MU2-02 West Coast Drive, flootpath and services (Storento St to Namerskey St) MU3-04 West Coast Drive, flootpath and services (Storento St to Namerskey St) MU3-05 West Coast Drive, flootpath and services (Storento St to Namerskey St) MU3-05 West Coast Drive, flootpath and services (Storento St to Namerskey St) MU3-05 West Coast Drive, flootpath and services (Storento St to Namerskey St) MU3-05 West Coast Drive, flootpath and services (Sthol Ave to Bailey St) MU3-05 West Coast Drive, flootpath and services (Sthol Ave to Bailey St) MU3-05 West Coast Drive, flootpath and services (Sthol Ave to Bailey St) MU3-05 West Coast Drive, flootpath and services (Sthol Ave to Bailey St) MU3-05 West Coast Drive, flootpath and services (Sthol Ave to Bailey St) MU3-05 West Coast Drive, flootpath and services (Sthol Ave to Bailey St) MU3-05 West Coast Drive, flootpath and services (Sthol Ave to Bailey St) MU3-05 West Coast Drive, flootpath and services (Sthol Ave to Bailey St) MU4-06 Stare (Stare Mark) MU4-07 West Coast Drive, flootpath and services (Stare Mark) MU4-08 West Coast Drive, flootpath and services (Stare Mark) MU4-09 West Coast Drive, flootpath and services (Stare Ave Mu3-04 West Coast Drive, flootpath and services (Stare Ave Mu3-04 West Coast Drive, flootpath and services (Stare Ave Mu3-04 West Coast Drive, flootpath and services (Stare Ave Mu3-04 West Coast Drive, flootpath and services (Stare Ave Mu3-04 West Coast Drive, flootpath and services (Stare Ave Mu3-04 West Coast Drive, flootpath and services (Stare Ave Mu3-04 West Coast Drive, flootpath and services (Stare Ave Mu3-04 West Coast Drive, flootpath and services (Stare Ave Mu3-04 West Coast Drive, flootpath and services (Stare Ave Mu3-04 West Coast Drive, flootpath and services (Stare Ave Mu3-04 West Coast Drive, flootpath and Stare Ave Mu3-0							
MU2-07 Worth Beach Reverment and letty Unlikely Possible Are Creatin Almost Certain MU2-08 West Coast Drive, Organia and services (Sorrento St to Hamerley St) Nex Impossible Nex Impossible Area (Possible Almost Certain Almost Certain MU3-01 Averting Areas, Saunders St Unlikely Possible Almost Certain Almost Certain MU3-03 Mettams repol public toilets Unlikely Dullikely Dullikely Possible Almost Certain Almost Certain MU3-03 Mettams repol public toilets Mu3-03 Mettams repol public toilets Mu3-04 Mest Certain Almost Certain Mu3-04 Mest Coast Drive, footpath and services (Sholl Ave to Bailey St) Near Impossible Navar Impossible Almost Certain Almost Certain Mu3-05 Mettams regetated dumes Rare Unlikely Possible Almost Certain Almost Certain Mu3-05 Mettams sceep, amenity and minor infrastructure Rare Unlikely Possible Almost Certain Almost Certain Mu3-04 Mestams access, amenity and minor infrastructure Rare Unlikely Possible Almost Certain Almost Certain Mu3-04 Trigg Beach Double Deach Rare Unlikely Possible Almost Certain Almost Certain Mu3-04 Trigg Deach Deach Rare Unlikely Possible Almost Certain Almost Certain Mu3-04 Trigg North Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain Mu3-04 Trigg North Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain Mu3-04 Trigg North Vegetated Dunes North Rare Unlikely Possible Almost Certain Almost Certain Mu3-04 Trigg North Vegetated Dunes North Rare Unlikely Possible Almost Certain Almost Certain Mu3-04 Trigg North Almost Certain North Rare Unlikely Possible Almost Certain Almost Certain Mu3-04 Trigg Beach North Rare North Rare Unlikely Possible Almost Certain Almost Certain Mu3-05 Trigg Beach State Dunies North Rare North Rare Unlikely Possible Almost Certain Almost Certain Mu3-05 Trigg Beach State Dunies North Rare Unlikely Possible Almost Certain Almost Certain Mu3-05 Trigg Beach State Dunies North Rare Unlikely Possible North Rare Possible		-		· ·	Unlikely		
MU3-90 West Coast Drive, flootpath and evices (Sorrento St to Hamensley S1) Rear Impossible Mu3-91 Unitiedly Desible Almost Certain Almost Ce							
MU3-01 Mettams Pool Beach MU3-02 Arming Areas, Suunders S1  MU3-03 Mettams roop aguite foolers MU3-03 Mettams roop aguite foolers MU3-04 Mettams roop aguite foolers MU3-05 Mettams roop aguite foolers MU3-06 Mettams roop aguite foolers MU3-06 Mettams roop aguite foolers MU3-07 Mettams roop aguite foolers MU3-07 Mettams roop aguite foolers MU3-08 Mettams roop aguite foolers MU3-09 Mettams roop aguite foolers MU4-01 Mettams roop aguite foolers MU4-01 Mettams roop aguite foolers MU4-02 Trigg Beach Doub Beach MU4-02 Trigg Beach Doub Mettams Rare MU4-03 Trigg Beach Doub Mettams roop aguite foolers MU4-04 Trigg Reach North Rare MU4-04 Trigg North Vegetated Dunes MU4-05 Cor park Setween Bennion and Balley Streets MU4-06 Cor park Setween Bennion and Balley Streets MU4-06 Cor park Setween Bennion and Balley Streets MU4-07 Metrig Roop aguite foolers MU4-08 Trigg North Roop aguite foolers MU4-09 Trigg Roop agui					-		
MU3-92 Parking Area, Saunders St MU3-93 Mettens Pool public tolets MU3-94 West Cost Drive, footpath and services (Sholl Ave to Bailey St) Mear impossible Mu3-95 Mettens segerated dunes MU3-96 Mettens segerated dunes MU4-91 Bennion Beach MU4-91 Bennion Beach MU4-91 Bennion Beach MU4-92 Mettens segerated dunes MU4-93 Frigg Beach One Beach MU4-93 Frigg Beach North MU4-93 Frigg Beach North MU4-94 Mettens segerated dunes MU4-95 Mettens segerated dunes MU4-95 Mettens segerated dunes MU4-96 Mettens segerated dunes MU4-96 Mettens segerated dunes MU4-96 Mettens segerated dunes MU4-97 Parking area, Frigg Place MU4-98 Frigg Beach Mettens MU4-97 Parking area, Frigg Place MU4-98 Frigg Beach MU4-99 Frigg Beach MU4-99 Frigg Beach MU4-99 Frigg Beach MU4-99 Frigg Beach MU4-90 Mettens segerated dunes MU4-90 Frigg Beach Mettens segerated dunes MU4-90 Frigg Beach Mettens segerated dunes MU4-90 Frigg Beach Storburd MU4-90 Frigg Beach Carlor MU4-90 Frigg Beach Storburd MU4-90 Frigg Beach Carlor MU4-90 Fri			-			Almost Certain	
MU3-03 Mettams Pool public tollets Unilkely Unilkely Poolsbile Rare Possible Ukely Ukely Mu3-05 Mettams access, amenity and minor infrastructure Rare Rare Unilkely Unilkely Ukely U							
MU3-04 West Coast Drive, footpath and services (Sholl Ave to Balley St)  MU3-05 Mettams vegetated dunes  Rare  Unlikely  West Coast Drive, footpath and services (Sholl Ave to Balley St)  MU3-06 Mettams access, amenity and minor infrastructure  Rare  Unlikely  MU4-01 Bennion Beach  MU4-02 Frigg Beach Dog Beach  Rare  Unlikely  Possible  Almost Certain  MU4-03 Trigg Beach North  MU4-03 Trigg Beach North  MU4-04 Trigg Worth Vegetated Dunes  Rare  Unlikely  Possible  Almost Certain  MU4-05 West Coast Drive, footpath and services (near Kathleen St)  MU4-06 Carp ank between Bennion and Balley Streets  Rear Impossible  MU4-06 Carp ank between Bennion and Balley Streets  Rear Impossible  MU4-08 Trigg Beach  MU4-09 Trigg Beach South  MU5-01 Trigg Beach South  MU5-02 Trigg Beach South  MU5-02 Trigg Beach South  MU5-04 Trigg South Vegetated Dunes  Rare  Unlikely  MU5-04 Trigg Beach South  MU5-05 Trigg Beach South  Rare  Unlikely  Ukely  MU5-04 Trigg South Vegetated Dunes  Rare  Unlikely  Ukely  MU5-05 Trigg Beach South  MU5-06 Trigg Beach South  Rare  Unlikely  Nos-07 Trigg Beach Suc Unlikely  Ukely  MU5-06 Trigg Beach Suc Unlikely  MU5-06 Trigg Beach Suc Unlikely  MU5-06 Trigg Beach Suc Unlikely  West Trigg Beach Suc Unlikely  MU5-07 Trigg Beach Suc Unlikely  MU5-08 Trigg Beach Suc Unlikely  MU5-09 Parking araz, Trigg Beach north  Rare  Nos-10 Parking araz, Trigg Beach north  Rare  Nos-10 Parking araz, Trigg Beach Certain  MU5-05 Parking araz, Trigg Beach Certain  Rare  MU5-06 Trigg Beach Suc Unlikely  MU5-07 Trigg Beach Suc Unlikely  MU5-08 Trigg Beach Carpant  Rare  Unlikely  Mu6-09 Parking araz, Trigg Beach Certain  Rare  Unlikely  Mu5-09 Parking araz, Trigg Beach Certain  Rare  Unlikely  West Impossible  Rare  Possible  Rare  Possible  Rare  Possible  Rare  Poss							
MU3-05 Mettams vegetated dunes  MU3-06 Mettams vegetated dunes  MU3-06 Mettams vegetated dunes  Rare Rare Rare  Rare Rare Rare  Rare Rare  Rare Rare  Rare Rare  Rare Rare  Rare Rare  Rare Rare  Rare Rare  Rare Rare  Rare Rare  Unilisely  Possible  Almost Certain  Almost Certain  Almost Certain  Almost Certain  Almost Certain  Rare  Unilisely  Possible  Almost Certain  Almost Certain  MU4-04 Trigg Beach Doug Beach  Rare  Unilisely  Next Coast Dive, Googbath and services (near Kathleen St)  Rare  Unilisely  Next Coast Dive, Googbath and services (near Kathleen St)  Rare  Unilisely  MU4-06 Car park between Bennion and Balley Streets  Rare  Unilisely  MU4-07 Parking area, Trigg Place  Rare Rare  Rare  Rare  Rare  Unilisely  Rare  Possible  Rare  Rare  Unilisely  Rare  Possible  Rare  Rare  Unilisely  Rare  Possible  Rare  Rare  Unilisely  Rare  Rare  Unilisely  Rare  Rare  Unilisely  Rare  Unilisely  Rare  Rare  Unilisely  Rare  Possible  Rare  Rare  Unilise		-			Rare		
MU3-06 Metama acces, amenity and minor infrastructure are Unilkely Possible Amost Certain Amost Certain Mu4-01 Bennion Beach Rare Unilkely Possible Amost Certain Amost Certain Mu4-03 Trigg Beach Dosta Muse Muse Muse Muse Muse Muse Muse Muse							
MU4-01 Prigg Beach Dog Beach MU4-02 Trigg Beach Dog Beach MU4-03 Trigg Beach North MU4-04 Trigg Beach North MU4-04 Trigg Beach North MU4-04 Trigg Routh Vegetated Dunes MU4-05 Rare MU4-05 Trigg Beach North MU4-05 Mex Costain MU4-06 Car park between Bennion and Balley Streets MU4-06 Car park between Bennion and Balley Streets MU4-07 Parking area, Trigg Place MU4-08 Trigg Routh Scass, amenly and minor infrastructure MU4-08 Trigg Routh Scass, amenly and minor infrastructure MU4-09 Trigg Routh Scass, amenly and minor infrastructure MU4-09 Trigg Beach Subth MU4-09 Trigg Beach Subth MU4-09 Trigg Beach Subth MU5-01 Trigg Beach Subth MU5-02 Trigg Beach Subth MU5-02 Trigg Beach Subth MU5-03 Trigg Surft Lookout MU5-03 Trigg Surft Lookout MU5-03 Trigg Surft Lookout MU5-04 Trigg Beach Six Sc building 1 MU5-06 Trigg Beach Six Sc building 1 MU5-06 Trigg Beach Six Sc building 1 Mu5-08 Trigg Beach Six Sc building 1 Mu5-08 Mu5-09 Parking area, Trigg Beach Carle MU5-09 Parking area, Trigg Beach Six Sc building 1 Near impossible Mu5-06 Trigg Beach Six Sc building 1 Near impossible Mu5-06 Trigg Beach Six Sc building 1 Near impossible Mu5-09 Parking area, Trigg Beach Carle MU5-09 Parking are							
MU4-02 Trigg Beach Dog Beach MU4-03 Trigg Beach Dog Beach MU4-04 Trigg Beach North MU4-04 Rare MU4-05 Trigg Beach North MU4-05 Mest Coast Drive, footpath and services (near Kathleen St) MU4-05 Mest Coast Drive, footpath and services (near Kathleen St) MU4-06 Car park between Bennion and Bally Streets MU4-07 Parking area, Trigg Place MU4-07 Parking area, Trigg Place MU4-08 Trigg Beach Sust Muser Muse							
MU4-03 Trigg Boach North MU4-04 Trigg North Vegetated Dunes MU4-05 West Coast Drive, footpath and services (near Kathleen St) MU4-05 West Coast Drive, footpath and services (near Kathleen St) MU4-06 Car park between Bennion and Balley Streets Near Impossible Mear Imposs							
MU4-04 Trigs North Vegetated Dunes Rare Unlikely Possible Rare Possible Utkely Mu4-05 West Coast Drive, footpath and services (near Kathleen St) Near Impossible Near Impossible Rare Possible Utkely Mu4-06 Car park between Bennion and Baley Streets Near Impossible Near Impossible Rare Possible Utkely Mu4-07 Parking area, Trigg Place Near Impossible Near Impossible Rare Possible Utkely Mu4-08 Trigg North access, amenity and minor infrastructure Rare Rare Unlikely Possible Almost Certain Almost Certain Mu5-02 Trigg Beach South Rare Unlikely Possible Almost Certain Almost Certain Mu5-02 Trigg Beach South Rare Unlikely Possible Almost Certain Almost Certain Mu5-04 Trigg Surf Lookout Rare Unlikely Possible Almost Certain Almost Certain Mu5-05 Parking area, Trigg Beach north Near Impossible Near Impossible Rare Possible Rare Possible Utkely Utk							
MU4-05 West Coast Drive, footpath and services (near Kathleen St)  MU4-06 Car park between Bennion and Bailey Streets  Near Impossible  Near I							
MU4-06 Car park between Bennion and Bailey Streets Near Impossible Near Impossible Rare Possible Ukely MU4-07 Parking area, Trigg Place Near Impossible Near Impossible Rare Possible Ukely MU4-08 Trigg Roach Access, amenity and minor infrastructure Rare Unlikely Ukely Ukely MU5-01 Trigg Beach South Rare Unlikely Possible Almost Certain Almost Certain MU5-02 Trigg Beach South Rare Unlikely Possible Almost Certain Almost Certain MU5-03 Trigg South Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU5-04 Trigg South Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU5-05 Trigg Beach north Near Impossible Rare Possible Rare Possible Ukely MU5-06 Trigg Beach SISC building 1 Near Impossible Near Impossible Near Impossible Rare Possible Ukely MU5-07 Trigg Beach SISC building 2 Near Impossible Near Impossible Rare Possible Rare Possible MU5-09 Parking area, Trigg Beach central Near Impossible Near Impossible Rare Possible Ukely MU5-09 Parking area, Trigg Beach central Near Impossible Near Impossible Rare Possible Rare Possible MU5-10 Trigg South access, amenity and minor infrastructure Near Impossible Near Impossible Near Impossible Rare Possible MU5-11 Surfing WA Neadquarters Near Impossible Near Impossible Near Impossible Rare Possible MU5-12 Trigg Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MU5-12 Trigg Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MU6-01 Scarborough Beach North Rare Unlikely Possible Almost Certain Almost Certain MU6-03 Brighton Beach Rare Unlikely Possible Almost Certain Almost Certain MU6-04 Scarborough Beach Near Impossible Near Impossible Rare Possible Almost Certain Almost Certain MU6-05 Scarborough Beach Rare Near Impossible Near Impossible Rare Possible Almost Certain Almost Certain MU6-06 Scarborough Beach Near Impossible Near Impossible Rare Possible Almost Certain Almost Certain MU6-09 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Ukely Ukely Ukely Ukely Ukely U							
MU4-07 Parking area, Trigg Place MU4-08 Trigg North access, amenity and minor infrastructure Rare Rare Rare Rare Unlikely Possible Almost Certain Almost Certain MU5-02 Trigg Beach South MU5-03 Trigg South Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU5-04 Trigg Such Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain Almost Certain Almost Certain MU5-05 Parking area, Trigg Beach north Near Impossible Mu5-06 Trigg Beach SLSC building 2 Near Impossible Near Impossible Near Impossible Near Impossible Rare MU5-08 Trigg Beach Carde MU5-09 Parking area, Trigg Beach central MU5-09 Parking area, Trigg Beach central MU5-10 Trigg South Vegetated Dunes MU5-11 Surfing WA Headquarters MU5-11 Surfing WA Headquarters MU5-12 Trigg Beach Carde MU5-12 Trigg Beach Carde Near Impossible Near Impossible Near Impossible Rare Near Impossible Rare Near Impossible Rare Near Impossible Rare Possible Ruser MU5-10 Trigg Beach Carde Near Impossible Near Impossible Near Impossible Rare Possible MU5-11 Surfing WA Headquarters Near Impossible Near Impossible Near Impossible Rare MU5-10 Trigg Beach Carde Near Impossible Near Impossible Near Impossible Rare MU5-11 Surfing WA Headquarters Near Impossible Near Impossible Near Impossible Rare MU5-12 Trigg Beach Carde Near Impossible Near Impossible Near Impossible Near Impossible Rare MU5-13 Surfing WA Headquarters Near Impossible Near Impossible Near Impossible Rare Possible MU5-11 Surfing WA Headquarters Near Impossible Near Impossible Near Impossible Rare Possible MU5-12 Trigg Beach Carde MU5-03 Brighton Beach Nu5-04 Peasholm Beach Nu5-05 Scarborough Beach North Rare Unlikely Possible Almost Certain Almost Certain MU5-05 Scarborough Beach North Rare Unlikely Possible Almost Certain Almost Certain MU6-06 Scarborough Beach North Rare Unlikely Possible Almost Certain Almost Certain Almost Certain MU6-07 Scarborough Reach Carpark Near Impossible Near Impossible Near Impossible Rare Possible Ukely U							
MU4-08 Trigg Boarth access, amenity and minor infrastructure Rare Unlikely Possible Almost Certain Almost Certain MU5-01 Trigg Beach South Rare Unlikely Possible Almost Certain Almost Certain MU5-03 Trigg South Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU5-03 Trigg South Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU5-04 Trigg Surf Lookout Rare Rare Unlikely Ukely U							
MUS-0.1 Trigg Beach MUS-0.2 Trigg Beach South Rare Unlikely Possible Almost Certain Almost Certa			-				
MU5-02 Trigg Beach South Rare Unlikely Possible Almost Certain Almost Certain MU5-03 Trigg South Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU5-03 Trigg South Vegetated Dunes Rare Unlikely Ulkely Ulkely Ulkely MU5-05 Parking area, Trigg Beach north Near Impossible Near Impossible Rare Possible Ulkely Ulkely MU5-06 Trigg Beach SLSC building 1 Near Impossible Near Impossible Rare Possible Rare Possible MU5-07 Trigg Beach SLSC building 2 Near Impossible Near Impossible Near Impossible Rare Possible MU5-08 Trigg Beach Café Near Impossible Near Impossible Near Impossible Rare Possible Welve MU5-09 Parking area, Trigg Beach Café Near Impossible Near Impossible Near Impossible Rare Possible Welve MU5-09 Parking area, Trigg Beach Carpar Near Impossible Near Impossible Near Impossible Rare Possible Welve MU5-10 Trigg South access, amenity and minor infrastructure Near Impossible Rare Possible Rare Possible WU5-10 Trigg Beach Carpar Near Impossible Near Impossible Near Impossible Rare Possible Wu5-12 Trigg Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MU5-12 Trigg Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MU6-01 Scarborough Beach North Rare Unlikely Possible Almost Certain Almost Certain MU6-03 Brighton Beach Rare Unlikely Possible Almost Certain Almost Certain MU6-04 Peasholm Beach Rare Unlikely Possible Almost Certain Almost Certain MU6-05 Scarborough Vegetated Dunes Rare Unlikely Possible Near Impossible Rare Possible Welvely Ulkely Ulkely Ulkely Ulkely Ulkely Scarborough Rapach Carpark Near Impossible Near Impossible Rare Possible Ulkely							
MUS-03 Trigg South Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MUS-04 Trigg Surf Lookout Rare Rare Unlikely Likely Likely Usely Usely Usely Usely Usely Outside Parking area, Trigg Beach north Near Impossible Near Impossible Rare Possible Usely Usely Wilson Trigg Beach SISC building 1 Near Impossible Near Impossible Rare Possible Rare Possible Rare Possible Rare Possible Wilson Trigg Beach SISC building 2 Near Impossible Near Impossible Near Impossible Rare Possible Wilson Wilson Trigg Beach Carfé Near Impossible Near Impossible Rare Possible Usely Wilson Parking area, Trigg Beach Central Near Impossible Near Impossible Near Impossible Rare Possible Usely Wilson Wilson Parking area, Trigg Beach Central Near Impossible Near Impossible Rare Possible Usely Almost Certain Surfing Wilson Milson Wilson Wil		00 ***					
MUS-04 Trigg Surf Lookout Rare Rare Unlikely Likely Likely MUS-05 Parking area, Trigg Beach north Near Impossible Near Impossible Rare Possible Likely MUS-06 Trigg Beach SLSC building 1 Near Impossible Near Impossible Near Impossible Rare Possible MUS-07 Trigg Beach SLSC building 2 Near Impossible Near Impossible Near Impossible Rare Possible MUS-08 Trigg Beach Café Near Impossible Near Impossible Rare Possible MUS-09 Parking area, Trigg Beach central Near Impossible Near Impossible Rare Possible Ukely MUS-09 Parking area, Trigg Beach central Near Impossible Near Impossible Rare Possible Rare Possible MUS-10 Trigg Subtraces, amenity and minor infrastructure Near Impossible Near Impossible Near Impossible Rare Possible MUS-11 Surfing WA Headquarters Near Impossible Near Impossible Near Impossible Rare Possible MUS-12 Trigg Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MUS-12 Trigg Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MUG-01 Scarborough Beach North Rare Unlikely Possible Almost Certain Almost Certain MUG-03 Brighton Beach Rare Unlikely Possible Almost Certain Almost Certain MUG-04 Peasholm Beach Rare Unlikely Possible Almost Certain Almost Certain MUG-04 Peasholm Beach Rare Unlikely Possible Almost Certain Almost Certain MUG-05 Scarborough Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MUG-07 Scarborough Beach Carpark Near Impossible Near Impossible Rare Possible Likely Ukely				· ·			
MUS-05 Parking area, Trigg Beach north  MUS-06 Trigg Beach SLSC building 1  MUS-06 Trigg Beach SLSC building 2  Near Impossible  MUS-07 Trigg Beach SLSC building 2  Near Impossible  MUS-08 Trigg Beach Café  Near Impossible  Mus-10 Trigg Beach Café  Near Impossible  Mus-10 Trigg Beach Café  MUS-09 Parking area, Trigg Beach central  MUS-09 Parking area, Trigg Beach central  MUS-10 Trigg South access, amenity and minor infrastructure  Near Impossible  MUS-11 Surfing WA Headquarters  Near Impossible  MUS-12 Trigg South access, amenity and minor infrastructure  Near Impossible  MUS-12 Trigg Beach Carpark  Near Impossible  MUS-13 Trigg Beach Carpark  Near Impossible							
MUS-06 Trigg Beach SLSC building 1 Near Impossible Near Impossible Near Impossible Rare Possible MUS-07 Trigg Beach SLSC building 2 Near Impossible Near Impossible Near Impossible Rare Possible MUS-08 Trigg Beach SLSC building 2 Near Impossible Near Impossible Near Impossible Rare Possible MUS-09 Parking area, Trigg Beach Central Near Impossible Near Impossible Near Impossible Rare Possible MUS-10 Trigg South access, amenity and minor infrastructure Near Impossible Rare Possible Rare Possible MUS-12 Trigg Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MUS-12 Trigg Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MUS-13 Trigg Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MUS-14 Trigg Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MUS-15 Scarborough Beach North Rare Unlikely Possible Almost Certain Almost Certain MUS-01 Scarborough Beach Rare Unlikely Possible Almost Certain Almost Certain MUS-03 Brighton Beach Rare Unlikely Possible Almost Certain Almost Certain MUS-04 Peasholm Beach Rare Unlikely Possible Almost Certain Almost Certain MUS-05 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MUS-05 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MUS-07 Scarborough Rach Carpark Near Impossible Near Impossible Rare Possible MUS-08 Scarborough Amphitheatre Rare Rare Unlikely Utkely Utkely MUS-09 Scarborough Beach Pool Near Impossible Near Impossible Rare Possible Utkely MUS-09 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Utkely MUS-01 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Utkely MUS-01 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Utkely MUS-01 Scarborough Beach Carpark Near Impossible Near Impossible Rare Possible Utkely MUS-01 Scarborough Beach Carpark Near Impossible Near Impossible Rare Possible Utkely							
MUS-07 Trigg Beach SLSC building 2 Near Impossible Near Impossible Rare Possible Ukely MUS-08 Trigg Beach Café Near Impossible Near Impossible Near Impossible Rare Possible Ukely MUS-09 Parking area, Trigg Beach central Near Impossible Near Impossible Near Impossible Rare Possible Ukely MUS-10 Trigg South access, amenity and minor infrastructure Near Impossible Rare Possible Ukely Almost Certain MUS-11 Surfing WA Headquarters Near Impossible Near Impossible Near Impossible Rare Possible MUS-12 Trigg Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MUS-13 Scarborough Beach North Rare Unlikely Possible Almost Certain Almost Certain MU6-02 Scarborough Beach North Rare Unlikely Possible Almost Certain Almost Certain MU6-03 Brighton Beach Rare Unlikely Possible Almost Certain Almost Certain MU6-04 Peasholm Beach Rare Unlikely Possible Almost Certain Almost Certain MU6-05 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU6-06 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU6-07 Scarborough Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MU6-09 Scarborough Amphitheatre Rare Rare Unlikely Utleely Ukely MU6-09 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Ukely MU6-09 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Ukely MU6-10 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Ukely MU6-13 Brighton Beach carpark Near Impossible Near Impossible Rare Possible Ukely MU6-13 Brighton Beach carpark Near Impossible Near Impossible Rare Possible Ukely MU6-13 Brighton Beach carpark Near Impossible Near Impossible Rare Possible Ukely MU6-13 Brighton Beach carpark Near Impossible Near Impossible Rare Possible Ukely			· ·	· ·			
MUS-08 Trigg Beach Carfé  MUS-09 Parking area, Trigg Beach central  MUS-10 Trigg South access, amenity and minor infrastructure  MUS-11 Surfing WA Headquarters  MUS-12 Trigg Beach Carpark  MUS-12 Trigg Beach Carpark  MUS-13 Surfing WA Headquarters  MUS-14 Trigg Beach Carpark  MUS-15 Trigg Beach Carpark  MUS-16 Trigg Beach Carpark  MUS-17 Trigg Beach Carpark  MUS-18 Trigg Beach Carpark  MUS-19 Trigg Beach Carpark  MUS-19 Trigg Beach Carpark  MUS-10 Scarborough Beach North  Rare  MUS-10 Scarborough Beach North  Rare  MUS-11 Surfing WA Headquarters  MUS-12 Trigg Beach Carpark  MUS-13 Scarborough Beach  MUS-14 Rare  MUS-15 Scarborough Beach  MUS-16 Scarborough Beach  Rare  MUS-17 MUS-18 MUS							
MUS-09 Parking area, Trigg Beach central Near Impossible Near Impossible Rare Possible MUS-10 Trigg South access, amenity and minor infrastructure Near Impossible Rare Possible Mustral Surfing WA Headquarters Near Impossible Near Impossible Near Impossible Rare Possible MUS-12 Trigg Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MUS-12 Trigg Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MUS-12 Scarborough Beach North Rare Unlikely Possible Almost Certain Almost Certain MUS-03 Brighton Beach Rare Unlikely Possible Almost Certain Almost Certain MUS-04 Peasholm Beach Rare Unlikely Possible Almost Certain Almost Certain MUS-04 Peasholm Beach Rare Unlikely Possible Almost Certain Almost Certain MUS-05 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MUS-05 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MUS-05 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MUS-05 Scarborough Scarborough Scarborough Rare Near Impossible Near Impossible Rare Possible MUS-07 Scarborough Amphitheatre Rare Rare Unlikely Uikely Uikely MUS-08 Scarborough Beach Carpark Near Impossible Near Impossible Rare Possible Uikely MUS-09 Scarborough Beach Pool Near Impossible Near Impossible Rare Possible Uikely MUS-01 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Uikely MUS-01 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Uikely MUS-01 Scarborough Beach Carpark Near Impossible Near Impossible Rare Possible Uikely MUS-01 Scarborough Beach Carpark Near Impossible Near Impossible Rare Possible Uikely MUS-01 Scarborough Beach Carpark Near Impossible Near Impossible Rare Possible Uikely MUS-01 Scarborough Beach Carpark Nush Near Impossible Near Impossible Rare Possible Uikely MUS-01 Scarborough Beach Carpark Nush Near Impossible Near Impossible Rare Possible Uikely Nush Impossible Rare Possible Uikely Nush Impossible Near Impossible Rare Poss							
MU5-10 Trigg South access, amenity and minor infrastructure Near Impossible Rare Possible Likely Almost Certain MU5-11 Surfing WA Headquarters Near Impossible Near Impossible Near Impossible Rare Possible Rare Possible MU5-12 Trigg Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MU6-01 Scarborough Beach North Rare Unlikely Possible Almost Certain Almost Certain MU6-02 Scarborough Beach Rare Unlikely Possible Almost Certain Almost Certain MU6-03 Brighton Beach Possible Rare Unlikely Possible Almost Certain Almost Certain MU6-03 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU6-05 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU6-05 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU6-05 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU6-05 Scarborough Vegetated Dunes Rare Unlikely Possible Near Impossible Rare Possible MU6-07 Scarborough Amphitheatre Rare Rare Unlikely Ukely Ukely Ukely Ukely Ukely Ukely Ukely Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Ukely Ukely Ukely Ukely Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Ukely Ukely MU6-10 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Ukely MU6-11 Scarborough Beach Carpark Near Impossible Near Impossible Rare Possible Ukely MU6-13 Brighton Beach carpark Near Impossible Near Impossible Rare Possible Ukely Nu6-13 Brighton Beach carpark Near Impossible Near Impossible Rare Possible Rare Possible Ukely Nu6-13 Brighton Beach carpark Near Impossible Near Impossible Rare Possible Ukely Nu6-13 Brighton Beach carpark Near Impossible Near Impossible Near Impossible Rare Possible Ukely Nu6-13 Brighton Beach carpark Nu6-14 Near Impossible Near Impossible Near Impossible Rare Possible Ukely Nu6-13 Brighton Beach carpark Nu6-14 Near Impossible Near Impossible Near Impossible Rare Possible Ukely Nu6-13 Brighton Beach carpark Nu				· ·		POSSIDIE	-
MU5-11 Surfing WA Headquarters Near Impossible Near Impossible Near Impossible Rare Possible MU5-12 Trigg Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MU6-02 Scarborough Beach North Rare Unlikely Possible Almost Certain Almost Certain MU6-03 Brighton Beach Rare Unlikely Possible Almost Certain Almost Certain MU6-04 Peashom Beach Rare Unlikely Possible Almost Certain Almost Certain MU6-05 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU6-06 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU6-07 Scarborough Beach Carpark Near Impossible Near Impossible Rare Possible MU6-08 Scarborough Amphitheatre Rare Rare Unlikely Utkely Utkely MU6-09 Scarborough Beach Pool Near Impossible Near Impossible Rare Possible Utkely MU6-09 Scarborough Beach Pool Near Impossible Near Impossible Rare Possible Utkely MU6-10 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Utkely MU6-11 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Utkely MU6-13 Brighton Beach carpark Near Impossible Near Impossible Rare Possible Utkely MU6-13 Brighton Beach carpark Near Impossible Near Impossible Rare Possible Utkely Near Impossible Near Impossible Rare Possible Rare Possible Utkely Near Impossible Near Impossible Rare Possible Rare Possible Utkely Near Impossible Near Impossible Rare Possible Rare Possible Utkely					near Impossible		
MU5-12 Trigg Beach Carpark Near Impossible Near Impossible Rare Possible Almost Certain Almost Certain MU6-01 Scarborough Beach North Rare Unlikely Possible Almost Certain Almost Certain MU6-03 Brighton Beach Rare Unlikely Possible Almost Certain Almost Certain MU6-03 Brighton Beach Rare Unlikely Possible Almost Certain Almost Certain MU6-04 Peasholm Beach Rare Unlikely Possible Almost Certain Almost Certain MU6-05 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU6-05 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU6-06 Scarborough Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MU6-07 Scarborough Amphitheatre Rare Rare Unlikely Uikely Uikely MU6-08 Scarborough Beach Carpark Rare Rare Unlikely Uikely Uikely MU6-08 Scarborough Beach Pool Near Impossible Near Impossible Rare Possible Uikely MU6-09 Scarborough Beach Pool Near Impossible Rare Possible Uikely MU6-10 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Uikely MU6-11 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Uikely MU6-13 Seriborough Beach Carpark Near Impossible Near Impossible Rare Possible Uikely Near Impossible Rare Possible Near Impossible Rare Possible Uikely Near Impossible Rare Possible Near Impossible Rare Possible Uikely Near Impossible Rare Possible Rare Possible Uikely Near Impossible Rare Possible Rare Possible Near Impossible Rare Possible Near Impossible Rare Possible Near Impossible Rare Possible Uikely Near Impossible Rare Possible Rare Possible Uikely Near Impossible Rare Possible Near Impossible Rare Po					POSSIDIE		
MU6-01 Scarborough Beach North Rare Unlikely Possible Almost Certain Almost Certain MU6-02 Scarborough Beach Rare Unlikely Possible Almost Certain Almost Certain MU6-03 Brighton Beach Rare Unlikely Possible Almost Certain Almost Certain MU6-04 Peasholm Beach Rare Unlikely Possible Almost Certain Almost Certain MU6-05 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU6-05 Scarborough Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MU6-07 Scarborough Amphitheatre Rare Rare Unlikely Ulkely Ulkely Ulkely MU6-08 Scarborough Beach Carpark Rare Rare Unlikely Ulkely Ulkely Ulkely MU6-09 Scarborough Beach Pool Near Impossible Near Impossible Rare Possible MU6-09 Scarborough Beach Rare Near Rare Unlikely Ulkely Ulkely MU6-09 Scarborough Beach Rare Near Rare Unlikely Ulkely Ulkely MU6-09 Scarborough Beach Rare Near Rare Unlikely Ulkely Ulkely MU6-10 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Ulkely MU6-11 Scarborough Playground and Skate Park Near Impossible Near Impossible Rare Possible Ulkely MU6-12 Scarborough Beach carpark Near Near Impossible Near Impossible Rare Possible Ulkely MU6-13 Brighton Beach carpark Near Impossible Near Impossible Near Impossible Rare Possible Ulkely Near Impossible Near Impossible Rare Possible Ulkely Near Impossible Near Impossible Near Impossible Rare Possible Ulkely Near Impossible Near Impossible Near Impossible Rare Possible Ulkely Near Impossible Near Impossible Near Impossible Rare Possible Ulkely Near Impossible Near Impossible Near Impossible Near Impossible Rare Possible Near Impossible Near Impossible Near Impossible Near Impossible Near Impossible Rare Possible Near Impossible Near Impossible Near Impossible Near Impossible Rare Possible Near Impossible Near Impossibl							Costolic
MUG-02 Scarborough Beach Rare Unlikely Possible Almost Certain Almost Certain MUG-03 Brighton Beach Rare Unlikely Possible Almost Certain Almost Certain MUG-03 Rare Unlikely Possible Almost Certain Almost Certain MUG-04 Peasholm Beach Rare Unlikely Possible Almost Certain Almost Certain MUG-05 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MUG-06 Scarborough Beach Carpark Near Impossible Near Impossible Rare Possible MUG-07 Scarborough Amphitheatre Rare Rare Unlikely Ukely Ukely Ukely WIG-09 Scarborough Beach Pool Near Impossible Near Impossible Rare Possible Ukely Ukely MUG-09 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Ukely MUG-10 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Ukely MUG-11 Scarborough Beach Rarek Near Impossible Near Impossible Rare Possible Ukely MUG-11 Scarborough Beach Carpark Near Impossible Near Impossible Rare Possible Ukely MUG-13 Brighton Beach carpark Near Impossible Near Impossible Rare Possible Rare Possible Ukely Near Impossible Rare Possible Rare Possible Near Impossible Rare Possible Rare Possible Near Impossible Rare Possible Near I		00		-			
MU6-03 Brighton Beach Rare Unlikely Posible Almost Certain Almost Certain MU6-04 Peasholm Beach Rare Unlikely Posible Almost Certain Almost Certain MU6-05 Scarborough Vegetated Dunes Rare Unlikely Posible Almost Certain Almost Certain MU6-05 Scarborough Vegetated Dunes Rare Unlikely Posible Almost Certain Almost Certain MU6-06 Scarborough Beach Carpark Near Impossible Near Impossible Rare Posible Near Impossible Rare Posible Nu6-07 Scarborough Amphitheatre Rare Rare Unlikely Ukely Ukely WM06-08 Scarborough Beach Carpark Rare Rare Unlikely Ukely Ukely WM06-08 Scarborough Beach Pool Near Impossible Rare Posible Well Near Impossible Rare Posible Ukely WM06-10 Scarborough Beach Pool Near Impossible Rare Posible Ukely WM06-10 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Ukely WM06-11 Scarborough Playground and Skate Park Near Impossible Near Impossible Rare Possible Ukely WM06-12 Scarborough Beach Carpark Near Impossible Near Impossible Rare Possible Ukely MM06-13 Brighton Beach carpark Near Impossible Near Impossible Rare Possible Rare Possible				· ·	1		
MU6-04 Peasholm Beach MU6-05 Scarborough Vegetated Dunes MU6-05 Scarborough Vegetated Dunes MU6-06 Scarborough Beach Carpark MU6-06 Scarborough Beach Carpark MU6-07 Scarborough Reach Carpark MU6-08 Scarborough Amphitheatre Rare MU6-09 Scarborough Amphitheatre MU6-09 Scarborough Beach Pool MU6-09 Scarborough Beach Pool MU6-09 Scarborough Beach Restaurant MU6-10 Scarborough Beach Restaurant MU6-10 Scarborough Beach Restaurant MU6-11 Scarborough Beach Restaurant MU6-12 Scarborough Beach Restaurant MU6-13 Searborough Beach carpark south Near Impossible Nea					- Coolbic		
MU6-05 Scarborough Vegetated Dunes Rare Unlikely Possible Almost Certain Almost Certain MU6-06 Scarborough Beach Carpark Near Impossible Near Impossible Near Impossible Rare Possible MU6-07 Scarborough Amphitheatre Rare Rare Unlikely Uklely Uklely MU6-08 Scarborough Scarborough Scarborough Amphitheatre Rare Rare Unlikely Uklely Uklely MU6-09 Scarborough Beach Pool Near Impossible Rare Possible Uklely MU6-10 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Uklely MU6-11 Scarborough Playround and Skate Park Near Impossible Near Impossible Rare Possible Uklely MU6-12 Scarborough Beach carpark south Near Impossible Near Impossible Rare Possible Uklely MU6-13 Brighton Beach carpark Near Near Impossible Near Impossible Rare Possible Rare Possible		0 11			1		
MUG-65 Scarborough Beach Carpark Near Impossible Near Impossible Rare Possible MUG-67 Scarborough Amphitheatre Rare Rare Unlikely Likely Likely MUG-08 Scarborough					1		
MUG-07 Scarborough Amphitheatre Rare Rare Unlikely Likely Likely MUG-08 Scarboro SLSC Rare Unlikely Likely Likely MUG-08 Scarborough Beach Pool Near Impossible Rare Possible Likely MUG-10 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Likely MUG-11 Scarborough Playground and Skate Park Near Impossible Near Impossible Rare Possible Likely MUG-12 Scarborough Beach carpark south Near Impossible Near Impossible Rare Possible Likely MUG-13 Searborough Beach carpark Near Near Impossible Near Impossible Rare Possible MUG-13 Brighton Beach carpark Near Near Impossible Near Impossible Rare Possible					- OSSIBIC		
MUG-08 Scarboros SLSC Rare Rare Unlikely Likely Likely MUG-09 Scarborough Beach Pool Near Impossible Near Impossible Rare Possible Likely MUG-10 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Likely MUG-11 Scarborough Playground and Skate Park Near Impossible Near Impossible Rare Possible Likely MUG-12 Scarborough Beach carpark south Near Impossible Near Impossible Rare Possible Likely MUG-13 Brighton Beach carpark south Near Impossible Near Impossible Near Impossible Rare Possible					1		
MU6-09 Scarborough Beach Pool Near Impossible Near Impossible Rare Possible Likely MU6-10 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Likely MU6-11 Scarborough Playground and Skate Park Near Impossible Near Impossible Rare Possible Likely MU6-12 Scarborough Beach carpark south Near Impossible Near Impossible Rare Possible MU6-13 Brighton Beach carpark Near Impossible Near Impossible Rare Possible							
MUG-10 Scarborough Beach Restaurant Near Impossible Near Impossible Rare Possible Likely  MUG-11 Scarborough Playground and Skate Park Near Impossible Near Impossible Rare Possible Likely  MUG-12 Scarborough Beach carpark south Near Impossible Near Impossible Near Impossible Rare Possible  MUG-13 Brighton Beach carpark  Near Impossible Near Impossible Near Impossible Rare Possible							
MUG-11 Scarborough Playground and Skate Park Near Impossible Near Impossible Rare Possible Likely  MUG-12 Scarborough Beach carpark south Near Impossible Near Impossible Near Impossible Rare Possible  MUG-13 Brighton Beach carpark Near Impossible Near Impossible Near Impossible Rare Possible							
MU6-12 Scarborough Beach carpark south Near Impossible Near Impossible Near Impossible Rare Possible MU6-13 Brighton Beach carpark Near Impossible Near Impossible Near Impossible Rare Possible							
MU6-13 Brighton Beach carpark Near Impossible Near Impossible Rare Possible							
MU6-14   Scarborough access, amenity and minor infrastructure   Near Impossible   Rare   Possible   Likely   Almost Certain				-			
	MU6-14	Scarborough access, amenity and minor infrastructure	Near Impossible	Rare	Possible	Likely	Almost Certain

		Erosion Likelih	ood Inputs			
		Present Day (2022)	2030	2045	2070	
CHRMAP Asset ID	<u>Asset</u>			Likelihood (Timeframe)		
MU1-01	Watermans Bay Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU1-01	Uncontrolled - Watermans Bay Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU1-02	Watermans Bay Dog Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU1-03	Watermans vegetated dunes	Rare	Rare	Possible	Almost Certain	Almost Certain
MU1-03	Uncontrolled - Watermans vegetated dunes	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-04	Watermans GSC revetment	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Near Impossible	Near Impossible	Rare	Unlikely	Likely
MU1-06	Lookout and amenities, Watermans Bay	Rare	Rare	Unlikely	Likely	Likely
MU1-05	Uncontrolled - West Coast Drive, footpath and services (Beach Rd to Mary St)	Rare	Rare	Unlikely	Likely	Likely
MU1-06	Uncontrolled - Lookout and amenities, Watermans Bay	Unlikely	Unlikely	Possible	Almost Certain	Almost Certain
MU1-07	Car park and lookout, Margaret St	Rare	Rare	Unlikely	Likely	Likely
MU1-08	Watermans access, amenity and minor infrastructure	Rare	Rare	Unlikely	Likely	Likely
MU2-01	North Beach Dog Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU2-02	North Beach (North)	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU2-03	North Beach (South)	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU2-04	North Beach access, amenity and minor infrastructure	Rare	Rare	Unlikely	Likely	Likely
MU2-05	North Beach Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Rare	Rare	Unlikely	Likely	Likely
MU2-07	North Beach Revetment and Jetty	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Near Impossible	Near Impossible	Rare	Possible	Likely
MU3-01	Mettams Pool Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU3-02	Parking Area, Saunders St	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU3-03	Mettams Pool public toilets	Unlikely	Unlikely	Possible	Almost Certain	Almost Certain
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Near Impossible	Near Impossible	Rare	Possible	Likely
MU3-05	Mettams vegetated dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU3-06	Mettams access, amenity and minor infrastructure	Rare	Rare	Unlikely	Likely	Likely
MU4-01	Bennion Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU4-02	Trigg Beach Dog Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU4-03	Trigg Beach North	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU4-04	Trigg North Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Near Impossible	Near Impossible	Rare	Possible	Likely
MU4-05	Car park between Bennion and Bailey Streets	Near Impossible	Near Impossible	Rare	Possible	Likely
MU4-07	Parking area, Trigg Place	Near Impossible	Near Impossible	Rare	Possible	Likely
MU4-08	Trigg North access, amenity and minor infrastructure	Rare	Rare	Unlikely	Likely	Likely
MU5-01	Trigg Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU5-02	Trigg Beach South	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU5-03	Trigg South Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU5-04	Trigg Surf Lookout	Rare	Rare	Unlikely	Likely	Likely
MU5-05	Parking area, Trigg Beach north	Near Impossible	Near Impossible	Rare	Possible	Likely
MU5-06	Trigg Beach SLSC building 1	Near Impossible	Near Impossible	Near Impossible	Rare	Possible
MU5-07		Near Impossible	Near Impossible	Near Impossible	Rare	Possible
MU5-08	Trigg Beach SLSC building 2 Trigg Beach Café	Near Impossible	Near Impossible	Rare	Possible	Likely
MU5-08			· ·		Rare	Possible
MU5-09	Parking area, Trigg Beach central  Trigg South access, amenity and minor infrastructure	Near Impossible Near Impossible	Near Impossible Rare	Near Impossible	Likely	Almost Certain
MU5-10 MU5-11	Surfing WA Headquarters	Near Impossible	Near Impossible	Near Impossible	Rare	Possible
MU5-12	Trigg Beach Carpark	Near Impossible			Rare	Possible
MU5-12 MU6-01	00	Rare	Near Impossible Unlikely	Near Impossible Possible	Almost Certain	Almost Certain
MU6-01 MU6-02	Scarborough Beach North	Rare	· ·	Possible	Almost Certain	Almost Certain
MU6-02 MU6-03	Scarborough Beach		Unlikely	Possible		Almost Certain
	Brighton Beach	Rare	Unlikely		Almost Certain	
MU6-04	Peasholm Beach	Rare	Unlikely	Possible Possible	Almost Certain	Almost Certain
MU6-05	Scarborough Vegetated Dunes	Rare	Unlikely	- Coordic	Almost Certain	Almost Certain
MU6-06	Scarborough Beach Carpark	Near Impossible	Near Impossible	Near Impossible	Rare	Possible
MU6-07	Scarborough Amphitheatre	Rare	Rare	Unlikely	Likely	Likely
MU6-08	Scarboro SLSC	Rare	Rare	Unlikely	Likely	Likely
MU6-09	Scarborough Beach Pool	Near Impossible	Near Impossible	Rare	Possible	Likely
MU6-10	Scarborough Beach Restaurant	Near Impossible	Near Impossible	Rare	Possible	Likely
MU6-11	Scarborough Playground and Skate Park	Near Impossible	Near Impossible	Rare	Possible	Likely
MU6-12	Scarborough Beach carpark south	Near Impossible	Near Impossible	Near Impossible	Rare	Possible
	Deleter Breek severali	Manual Community Co.	Manual 1	Management 1991	D	
MU6-13 MU6-14	Brighton Beach carpark Scarborough access, amenity and minor infrastructure	Near Impossible Near Impossible	Near Impossible	Near Impossible	Rare Likely	Possible Almost Certain

		Erosion Likelih	and Innuts			
		Present Day (2022)	2030	2045	2070	
CHRMAP Asset ID	Asset				(Experience)	
MU1-01	Watermans Bay Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-01	Uncontrolled - Watermans Bay Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-02	Watermans Bay Dog Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU1-03	Watermans vegetated dunes	Rare	Rare	Possible	Almost Certain	Almost Certain
MU1-03	Uncontrolled - Watermans vegetated dunes	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-04	Watermans GSC revetment	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Near Impossible	Near Impossible	Rare	Unlikely	Likely
MU1-06	Lookout and amenities, Watermans Bay	Rare	Rare	Unlikely	Likely	Likely
MU1-05	Uncontrolled - West Coast Drive, footpath and services (Beach Rd to Mary St)	Rare	Rare	Unlikely	Likely	Likely
MU1-06	Uncontrolled - Lookout and amenities, Watermans Bay	Unlikely	Unlikely	Possible	Almost Certain	Almost Certain
MU1-07	Car park and lookout. Margaret St	Rare	Rare	Unlikely	Likely	Likely
MU1-08		Rare	Rare	Unlikely	Likely	Likely
MU2-01	Watermans access, amenity and minor infrastructure  North Beach Dog Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
	-					
MU2-02	North Beach (North)	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU2-03	North Beach (South)	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU2-04	North Beach access, amenity and minor infrastructure	Rare	Rare	Unlikely	Likely	Likely
MU2-05	North Beach Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Rare	Rare	Unlikely	Likely	Likely
MU2-07	North Beach Revetment and Jetty	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Near Impossible	Near Impossible	Rare	Possible	Likely
MU3-01	Mettams Pool Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU3-02	Parking Area, Saunders St	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU3-03	Mettams Pool public toilets	Unlikely	Unlikely	Possible	Almost Certain	Almost Certain
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Near Impossible	Near Impossible	Rare	Possible	Likely
MU3-05	Mettams vegetated dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU3-06	Mettams access, amenity and minor infrastructure	Rare	Rare	Unlikely	Likely	Likely
MU4-01	Bennion Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU4-02	Trigg Beach Dog Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU4-03	Trigg Beach North	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU4-04	Trigg North Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Near Impossible	Near Impossible	Rare	Possible	Likely
MU4-06	Car park between Bennion and Bailey Streets	Near Impossible	Near Impossible	Rare	Possible	Likely
MU4-07	Parking area, Trigg Place	Near Impossible	Near Impossible	Rare	Possible	Likely
MU4-08	Trigg North access, amenity and minor infrastructure	Rare	Rare	Unlikely	Likely	Likely
MU5-01	Trigg Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU5-02	Trigg Beach South	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU5-03	Trigg South Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU5-04	Trigg Surf Lookout	Rare	Rare	Unlikely	Likely	Likely
MU5-05	Parking area, Trigg Beach north	Near Impossible	Near Impossible	Rare	Possible	Likely
MU5-06	Trigg Beach SLSC building 1	Near Impossible	Near Impossible	Near Impossible	Rare	Possible
MU5-07	Trigg Beach SLSC building 2	Near Impossible	Near Impossible	Near Impossible	Rare	Possible
MU5-08	Trigg Beach Café	Near Impossible	Near Impossible	Rare	Possible	Likely
MU5-09	Parking area, Trigg Beach central	Near Impossible	Near Impossible	Near Impossible	Rare	Possible
MU5-10	Trigg South access, amenity and minor infrastructure	Near Impossible	Rare	Possible	Likely	Almost Certain
MU5-11	Surfing WA Headquarters	Near Impossible	Near Impossible	Near Impossible	Rare	Possible
MU5-12	Trigg Beach Carpark	Near Impossible	Near Impossible	Near Impossible	Rare	Possible
MU6-01	Scarborough Beach North	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU6-02	Scarborough Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU6-03	Brighton Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU6-04	Peasholm Beach	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU6-05	Scarborough Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU6-06	Scarborough Beach Carpark	Near Impossible	Near Impossible	Near Impossible	Rare	Possible
MU6-07	Scarborough Amphitheatre	Rare	Rare	Unlikely	Likely	Likely
MU6-08	Scarboro SLSC	Rare	Rare	Unlikely	Likely	Likely
MU6-09	Scarborough Beach Pool	Near Impossible	Near Impossible	Rare	Possible	Likely
MU6-10	Scarborough Beach Restaurant	Near Impossible	Near Impossible	Rare	Possible	Likely
MU6-10		-			Possible	
MU6-11 MU6-12	Scarborough Playground and Skate Park Scarborough Beach carpark south	Near Impossible	Near Impossible Near Impossible	Rare Near Impossible		Likely
	Scarporougn Beach Carpark South	Near Impossible	wear impossible	ivear impossible	Rare	Possible
MU6-13 MU6-14	Brighton Beach carpark Scarborough access, amenity and minor infrastructure	Near Impossible Near Impossible	Near Impossible Rare	Near Impossible	Rare Likely	Possible Almost Certain

C

ASSIGNED INUNDATION LIKELIHOOD RATINGS



		Inundation Li	kelihood Inputs			
		Present Day (2022)		2045		
CHRMAP Asset ID	Asset			Likelihood (Prevailing)		
MU1-01	Watermans Bay Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-02	Watermans Bay Dog Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-03	Watermans vegetated dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU1-04	Watermans GSC revetment	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU1-06	Lookout and amenities, Watermans Bay	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU1-07	Car park and lookout, Margaret St	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU1-08	Watermans access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU2-01	North Beach Dog Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU2-02	North Beach (North)	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU2-03	North Beach (South)	Unlikely	Possible	Likely	Almost Certain	Almost Certain
	North Beach access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU2-04	North Beach Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU2-05	West Coast Drive, footpath and services (Malcolm St to James St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU2-06			Possible			
MU2-07	North Beach Revetment and Jetty	Unlikely		Likely	Almost Certain	Almost Certain
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-01	Mettams Pool Beach	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-02	Parking Area, Saunders St	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-03	Mettams Pool public toilets	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-05	Mettams vegetated dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU3-06	Mettams access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-01	Bennion Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU4-02	Trigg Beach Dog Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU4-03	Trigg Beach North	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU4-04	Trigg North Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-06	Car park between Bennion and Bailey Streets	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-07	Parking area, Trigg Place	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-08	Trigg North access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-01	Trigg Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU5-02	Trigg Beach South	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU5-03	Trigg South Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU5-04	Trigg Surf Lookout	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-05	Parking area, Trigg Beach north	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-06	Trigg Beach SLSC building 1	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
	Trigg Beach SLSC building 2	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-07	Trigg Beach Café	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-08						Unlikely
MU5-09	Parking area, Trigg Beach central	Near Impossible	Near Impossible	Near Impossible	Near Impossible	
MU5-10	Trigg South access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-11	Surfing WA Headquarters	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-12	Trigg Beach Carpark	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-01	Scarborough Beach North	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU6-02	Scarborough Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU6-03	Brighton Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU6-04	Peasholm Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU6-05	Scarborough Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU6-06	Scarborough Beach Carpark	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-07	Scarborough Amphitheatre	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-08	Scarboro SLSC	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-09	Scarborough Beach Pool	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-10	Scarborough Beach Restaurant	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-11	Scarborough Playground and Skate Park	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-12	Scarborough Beach carpark south	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-13	Brighton Beach carpark	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
25	1					

		Inunda <u>tion L</u> i	kelihood Inputs			
		Present Day (2022)	2030	2045	2070	
CHRMAP Asset ID	Asset			Likelihood (Probability)		
MU1-01	Watermans Bay Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-02	Watermans Bay Dog Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-02	Watermans vegetated dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU1-04	Watermans GSC revetment	Unlikely	Possible	Likely	Almost Certain	Almost Certain
	West Coast Drive, footpath and services (Beach Rd to Mary St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU1-05	Lookout and amenities, Watermans Bay	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU1-06	Car park and lookout, Margaret St	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU1-07	Watermans access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU1-08	North Beach Dog Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU2-01	-		Possible		Almost Certain	Almost Certain
MU2-02	North Beach (North)	Unlikely		Likely		
MU2-03	North Beach (South)	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU2-04	North Beach access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU2-05	North Beach Vegetated Dunes	Rare	Unlikely	Fossible	Almost Certain	Almost Certain
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU2-07	North Beach Revetment and Jetty	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-01	Mettams Pool Beach	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-02	Parking Area, Saunders St	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-03	Mettams Pool public toilets	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-05	Mettams vegetated dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU3-06	Mettams access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-01	Bennion Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU4-02	Trigg Beach Dog Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU4-03	Trigg Beach North	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU4-04	Trigg North Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-06	Car park between Bennion and Bailey Streets	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-07	Parking area, Trigg Place	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-08	Trigg North access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
	Trigg Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU5-01	Trigg Beach South	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU5-02	Trigg South Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU5-03			· ·			Unlikely
MU5-04	Trigg Surf Lookout	Near Impossible	Near Impossible	Near Impossible	Near Impossible	
MU5-05	Parking area, Trigg Beach north	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-06	Trigg Beach SLSC building 1	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-07	Trigg Beach SLSC building 2	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-08	Trigg Beach Café	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-09	Parking area, Trigg Beach central	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-10	Trigg South access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-11	Surfing WA Headquarters	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-12	Trigg Beach Carpark	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-01	Scarborough Beach North	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU6-02	Scarborough Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU6-03	Brighton Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU6-04	Peasholm Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU6-05	Scarborough Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU6-06	Scarborough Beach Carpark	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
	Scarborough Amphitheatre	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-07		Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-07 MU6-08	Scarboro SLSC				Near Impossible	Unlikely
MU6-08	Scarboro SLSC Scarborough Beach Pool	Near Impossible	Near Impossible			
MU6-08 MU6-09	Scarborough Beach Pool	Near Impossible		Near Impossible	-	
MU6-08 MU6-09 MU6-10	Scarborough Beach Pool Scarborough Beach Restaurant	Near Impossible Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-08 MU6-09 MU6-10 MU6-11	Scarborough Beach Pool Scarborough Beach Restaurant Scarborough Playground and Skate Park	Near Impossible Near Impossible Near Impossible	Near Impossible Near Impossible	Near Impossible Near Impossible	Near Impossible Near Impossible	Unlikely Unlikely
MU6-08 MU6-09 MU6-10	Scarborough Beach Pool Scarborough Beach Restaurant	Near Impossible Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely

		Inundation L	ikelihood Inputs			
		Present Day (2022)	2030	2045	2070	2122
CHRMAP Asset ID	Asset			Likelihood (Timeframe)		
MU1-01	Watermans Bay Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-02	Watermans Bay Dog Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-03	Watermans vegetated dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU1-04	Watermans GSC revetment	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU1-06	Lookout and amenities, Watermans Bay	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU1-07	Car park and lookout, Margaret St	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU1-08	Watermans access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU2-01	North Beach Dog Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU2-02	North Beach (North)	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU2-03	North Beach (South)	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU2-04	North Beach access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU2-05	North Beach Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU2-07	North Beach Revetment and Jetty	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-01	Mettams Pool Beach	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-02	Parking Area, Saunders St	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-03	Mettams Pool public toilets	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-05	Mettams vegetated dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU3-06	Mettams access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-01	Bennion Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU4-01 MU4-02	Trigg Beach Dog Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
	Trigg Beach North	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU4-03				Possible		
MU4-04	Trigg North Vegetated Dunes	Rare	Unlikely		Almost Certain	Almost Certain
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-06	Car park between Bennion and Bailey Streets	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-07	Parking area, Trigg Place	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-08	Trigg North access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-01	Trigg Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU5-02	Trigg Beach South	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU5-03	Trigg South Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU5-04	Trigg Surf Lookout	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-05	Parking area, Trigg Beach north	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-06	Trigg Beach SLSC building 1	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-07	Trigg Beach SLSC building 2	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-08	Trigg Beach Café	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-09	Parking area, Trigg Beach central	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-10	Trigg South access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-11	Surfing WA Headquarters	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-12	Trigg Beach Carpark	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-01	Scarborough Beach North	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU6-02	Scarborough Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU6-03	Brighton Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU6-04	Peasholm Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU6-05	Scarborough Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU6-06	Scarborough Beach Carpark	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-07	Scarborough Amphitheatre	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-08	Scarboro SLSC	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
	Scarborough Beach Pool	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-09	Scarborough Beach Pool Scarborough Beach Restaurant	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-10	Scarborough Beach Restaurant Scarborough Playground and Skate Park	Near Impossible	Near Impossible	Near Impossible Near Impossible	Near Impossible Near Impossible	Unlikely
MU6-11	7,0					
MU6-12	Scarborough Beach carpark south	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-13	Brighton Beach carpark  Scarborough access, amenity and minor infrastructure	Near Impossible Near Impossible	Near Impossible Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-14				Near Impossible	Near Impossible	

		Inundation Lil	kelihood Inputs			
		Present Day (2022)		2045		
CHRMAP Asset ID	Asset			Likelihoo	d (Experience)	
MU1-01	Watermans Bay Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-02	Watermans Bay Dog Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-03	Watermans vegetated dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU1-04	Watermans GSC revetment	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU1-06	Lookout and amenities, Watermans Bay	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU1-07	Car park and lookout, Margaret St	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU1-08	Watermans access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU2-01	North Beach Dog Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU2-01	North Beach (North)	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU2-02	North Beach (South)	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU2-03	North Beach access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
	North Beach Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU2-05	West Coast Drive, footpath and services (Malcolm St to James St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU2-06	North Beach Revetment and Jetty	Unlikely	Describing	Likely	Almost Certain	Almost Certain
MU2-07			Non-Importing			
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-01	Mettams Pool Beach	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-02	Parking Area, Saunders St	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-03	Mettams Pool public toilets	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU3-05	Mettams vegetated dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU3-06	Mettams access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-01	Bennion Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU4-02	Trigg Beach Dog Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU4-03	Trigg Beach North	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU4-04	Trigg North Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-06	Car park between Bennion and Bailey Streets	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-07	Parking area, Trigg Place	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU4-08	Trigg North access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-01	Trigg Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU5-02	Trigg Beach South	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU5-03	Trigg South Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU5-04	Trigg Surf Lookout	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-05	Parking area, Trigg Beach north	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-06	Trigg Beach SLSC building 1	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-07	Trigg Beach SLSC building 2	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-08	Trigg Beach Café	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-09	Parking area, Trigg Beach central	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-10	Trigg South access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
	Surfing WA Headquarters	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-11	Trigg Beach Carpark	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU5-12		Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU6-01	Scarborough Beach North		Possible			
MU6-02	Scarborough Beach Brighton Beach	Unlikely	Possible Possible	Likely Likely	Almost Certain  Almost Certain	Almost Certain Almost Certain
MU6-03	-					_
MU6-04	Peasholm Beach	Unlikely	Possible	Likely	Almost Certain	Almost Certain
MU6-05	Scarborough Vegetated Dunes	Rare	Unlikely	Possible	Almost Certain	Almost Certain
MU6-06	Scarborough Beach Carpark	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-07	Scarborough Amphitheatre	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-08	Scarboro SLSC	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-09	Scarborough Beach Pool	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-10	Scarborough Beach Restaurant	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-11	Scarborough Playground and Skate Park	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-12	Scarborough Beach carpark south	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-13	Brighton Beach carpark	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely
MU6-14	Scarborough access, amenity and minor infrastructure	Near Impossible	Near Impossible	Near Impossible	Near Impossible	Unlikely

ASSET VALUATIONS



Classification	CHRMAP Asset ID	<u>Assets</u>	Quantity	<u>Units</u>	Cost / unit	<u>Reference</u>	<u>Total Value</u>	Inundation Damage	<u>% Value</u>	Finacial Consequence (Erosion)	Finacial Consequence (Inundation)
Natural Natural	MU1-01 MU1-02	Watermans Bay Beach	5607	sqm	\$3,116	UWA	\$17,471,000		2.00%	Catastrophic	
		Watermans Bay Dog Beach	2592	sqm	\$3,116	UWA	\$8,077,000		0.93%	Catastrophic	
Natural Built	MU1-03 MU1-04	Watermans vegetated dunes Watermans GSC revetment	6593	sqm	\$132.00	UWA	\$870,000		0.10%	Moderate	
			160	m	\$5,250.00	Internal database	\$840,000		0.10%	Moderate	
Built Built	MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	821	sqm	\$186.00	Rawlinsons	\$153,000	\$15,300	0.02%	Low	Low
	MU1-06	Lookout and amenities, Watermans Bay	130	sqm	\$2,780.00	Rawlinsons	\$361,000	\$36,100	0.04%	Low	Insignificant
Built	MU1-07	Car park and lookout, Margaret St	815	sqm	\$126.00	Rawlinsons	\$103,000	\$10,300	0.01%	Low	Low
Built	MU1-08	Watermans access, amenity and minor infrastructure		%	1%	Internal database	\$279,000	\$27,900	0.03%	Moderate	Low
Natural	MU2-01	North Beach Dog Beach	1761	sqm	\$3,116	UWA	\$5,487,000		0.63%	Catastrophic	
latural	MU2-02	North Beach (North)	5260	sqm	\$3,116	UWA	\$16,390,000		1.88%	Catastrophic	
latural	MU2-03	North Beach (South)	5770	sqm	\$3,116	UWA	\$17,979,000		2.06%	Catastrophic	
Built	MU2-04	North Beach access, amenity and minor infrastructure		%	1%	Internal database	\$424,000	\$42,400	0.05%	Moderate	Low
latural	MU2-05	North Beach Vegetated Dunes	7042	sqm	\$132.00	UWA	\$930,000		0.11%	Moderate	
Built	MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	1472	sqm	\$186.00	Rawlinsons	\$274,000	\$27,400	0.03%	Moderate	Low
Built	MU2-07	North Beach Revetment and Jetty	22	m	\$22,000.00	Internal database	\$484,000		0.06%	Moderate	
Built	MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley	4414	sqm	\$186.00	Rawlinsons	\$821,000	\$82,100	0.09%	Moderate	Low
latural	MU3-01	Mettams Pool Beach	15077	sqm	\$3,116	UWA	\$46,980,000		5.38%	Catastrophic	
Built	MU3-02	Parking Area, Saunders St	2149	sqm	\$126.00	Rawlinsons	\$271,000	\$27,100	0.03%	Moderate	Low
Built	MU3-03	Mettams Pool public toilets	152	sqm	\$3,150.00	Rawlinsons	\$479,000	\$47,900	0.05%	Moderate	Low
Built	MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	5726	sam	\$186.00	Rawlinsons	\$1,065,000	\$106.500	0.12%	High	Low
Natural	MU3-05	Mettams vegetated dunes	88	sqm	\$58.00	Rawlinsons	\$5.000		0.00%	Low	
Built	MU3-06	Mettams access, amenity and minor infrastructure		%	1%	Internal database	\$488,000	\$48.800	0.06%	Moderate	Low
latural	MU4-01	Bennion Beach	4150	sqm	\$3,116	UWA	\$12,931,000	<b>\$10,000</b>	1.48%	Catastrophic	2011
latural	MU4-02	Trigg Beach Dog Beach	2255	sqm	\$3,116	UWA	\$7,027,000		0.80%	Catastrophic	
latural	MU4-03	Trigg Beach North	2847	sqm	\$3,116	UWA	\$8,871,000		1.02%	Catastrophic	
Natural	MU4-04	Trigg North Vegetated Dunes	3794	sam	\$132.00	UWA	\$501,000		0.06%	Moderate	
Built	MU4-05	West Coast Drive, footpath and services (near Kathleen St)	464	sqm	\$186.00	Rawlinsons	\$86,000	\$8.600	0.00%	Low	Low
Built	MU4-06	Car park between Bennion and Bailey Streets	1200		\$126.00	Rawlinsons	\$151,000	\$15,100	0.01%	Low	Low
Built	MU4-07	Parking area, Trigg Place	1054	sqm	\$126.00	Rawlinsons	\$133,000	\$13,300	0.02%	Low	Low
Built	MU4-08	Trigg North access, amenity and minor infrastructure	1054	sqm							
Natural	MU5-01	Trigg Beach	07000	%	1%	Internal database	\$297,000	\$29,700	0.03%	Moderate	Low
Vatural	MU5-02	Trigg Beach South	37260	sqm	\$3,116	UWA	\$116,102,000		13.30%	Catastrophic	
Vatural	MU5-03	Trigg South Vegetated Dunes	38684	sqm	\$3,116	UWA	\$120,539,000		13.81%	Catastrophic	
Built	MU5-04	Trigg Surf Lookout	16671	sqm	\$132.00	UWA	\$2,201,000		0.25%	High	
Built	MU5-05	• • • • • • • • • • • • • • • • • • • •	357	sqm	\$2,780.00	Rawlinsons	\$992,000	\$99,200	0.11%	Moderate	Low
		Parking area, Trigg Beach north	2379	sqm	\$126.00	Rawlinsons	\$300,000	\$30,000	0.03%	Moderate	Low
Built	MU5-06	Trigg Beach SLSC building 1	1153	sqm	\$2,780.00	Rawlinsons	\$3,205,000	\$320,500	0.37%	High	Moderate
Built	MU5-07	Trigg Beach SLSC building 2	296	sqm	\$2,780.00	Rawlinsons	\$823,000	\$82,300	0.09%	Moderate	Low
Built	MU5-08	Trigg Beach Café	2607	sqm	\$2,780.00	Rawlinsons	\$7,247,000	\$724,700	0.83%	Catastrophic	Moderate
Built	MU5-09	Parking area, Trigg Beach central	10397	sqm	\$126.00	Rawlinsons	\$1,310,000	\$131,000	0.15%	High	Low
Built	MU5-10	Trigg South access, amenity and minor infrastructure		%	1%	Internal database	\$2,575,000	\$257,500	0.29%	High	Moderate
Built	MU5-11	Surfing WA Headquarters	1360	sqm	\$2,780.00	Rawlinsons	\$3,781,000	\$378,100	0.43%	High	Moderate
Built	MU5-12	Trigg Beach Carpark	8000	sqm	\$126.00	Rawlinsons	\$1,008,000	\$100,800	0.12%	High	Low
latural	MU6-01	Scarborough Beach North	27345	sqm	\$3,116	UWA	\$85,207,000		9.76%	Catastrophic	
latural	MU6-02	Scarborough Beach	41089	sqm	\$3,116	UWA	\$128,033,000		14.66%	Catastrophic	
latural	MU6-03	Brighton Beach	26878	sqm	\$3,116	UWA	\$83,752,000		9.59%	Catastrophic	
latural	MU6-04	Peasholm Beach	34055	sqm	\$3,116	UWA	\$106,115,000		12.15%	Catastrophic	
latural	MU6-05	Scarborough Vegetated Dunes	57810	sqm	\$132.00	UWA	\$7,631,000		0.87%	Catastrophic	
Built	MU6-06	Scarborough Beach Carpark	11300	sqm	\$126.00	Rawlinsons	\$1,424,000	\$142,400	0.16%	High	Low
uilt	MU6-07	Scarborough Amphitheatre	1359	sam	\$2.780.00	Rawlinsons	\$3,778,000	\$377.800	0.43%	High	Moderate
uilt	MU6-08	Scarboro SLSC	1069	sqm	\$2,780.00	Rawlinsons	\$2,972,000	\$297,200	0.34%	High	Moderate
uilt	MU6-09	Scarborough Beach Pool	1	unit	\$28,600,000.00	CoS	\$28,600,000	\$2,860,000	3.28%	Catastrophic	High
uilt	MU6-10	Scarborough Beach Restaurant	3087	sqm	\$2,780.00	Rawlinsons	\$8,582,000	\$858,200	0.98%	Catastrophic	Moderate
uilt	MU6-11	Scarborough Playground and Skate Park	2052	sqm	\$228.00	Rawlinsons	\$468,000	\$46,800	0.05%	Moderate	Low
Built	MU6-12 MU6-13	Scarborough Beach carpark south	7900 4850	sqm	\$126.00	Rawlinsons	\$995,000	\$99,500	0.11%	Moderate Moderate	Low
Built	WIU0-13	Brighton Beach carpark	4850	sqm	\$126.00	Rawlinsons	\$611,000	\$61,100	0.07%	Moderate	Low

ASSIGNED EROSION CONSEQUENCE RATINGS





		Erosion Conseq	uence Inputs			
		Present Day (2022)	2030	2045	2070	2122
CHRMAP Asset ID	<u>Asset</u>			Consequence (Prevailing		
MU1-01	Watermans Bay Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU1-01	Uncontrolled - Watermans Bay Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU1-02	Watermans Bay Dog Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU1-03	Watermans vegetated dunes	High	High	High	High	High
MU1-03 MU1-04	Uncontrolled - Watermans vegetated dunes Watermans GSC revetment	High	High	High	High	High
		Moderate	Moderate	Moderate	Moderate	Moderate
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Catastrophic Moderate	Catastrophic Moderate	Catastrophic Moderate	Catastrophic Moderate	Catastrophic Moderate
MU1-06 MU1-05	Lookout and amenities, Watermans Bay Uncontrolled - West Coast Drive, footpath and services (Beach Rd to Mary St)					
MU1-05	Uncontrolled - Lookout and amenities, Watermans Bay	Catastrophic Moderate	Catastrophic Moderate	Catastrophic Moderate	Catastrophic Moderate	Catastrophic Moderate
MU1-07	Car park and lookout, Margaret St	High	High	High	High	High
MU1-08	Watermans access, amenity and minor infrastructure	High	High	High	High	High
MU2-01	North Beach Dog Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU2-02	North Beach (North)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU2-03	North Beach (North)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU2-04	North Beach access, amenity and minor infrastructure	High	High	High	High	High
MU2-05	North Beach Vegetated Dunes	High	High	High	High	High
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU2-07	North Beach Revetment and Jetty	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU3-01	Mettams Pool Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU3-02	Parking Area, Saunders St	High	High	High	High	High
MU3-03	Mettams Pool public toilets	High	High	High	High	High
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU3-05	Mettams vegetated dunes	High	High	High	High	High
MU3-06	Mettams access, amenity and minor infrastructure	High	High	High	High	High
MU4-01	Bennion Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU4-02	Trigg Beach Dog Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU4-02	Trigg Beach North	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU4-04	Trigg North Vegetated Dunes	High	High			High
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Catastrophic	Catastrophic	High Catastrophic	High Catastrophic	Catastrophic
MU4-05	Car park between Bennion and Bailey Streets					
MU4-06	Parking area, Trigg Place	High High	High High	High High	High High	High High
MU4-08	Trigg North access, amenity and minor infrastructure	High	High	High	High	High
MU5-01	Trigg Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU5-02	Trigg Beach South	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU5-02	Trigg South Vegetated Dunes	-	High	High	High	High
MU5-04	Trigg Surf Lookout	High Moderate	Moderate	Moderate	Moderate	Moderate
MU5-04 MU5-05		Moderate				
	Parking area, Trigg Beach north		High	High	High	High
MU5-06	Trigg Beach SLSC building 1	High	High	High	High	High
MU5-07 MU5-08	Trigg Beach SLSC building 2	High	High	High	High	High
MU5-08	Trigg Beach Café Parking area, Trigg Beach central	Catastrophic High	Catastrophic High	Catastrophic	Catastrophic High	Catastrophic High
			-	High	-	-
MU5-10	Trigg South access, amenity and minor infrastructure	High	High	High	High	High
MU5-11	Surfing WA Headquarters	High	High	High	High	High
MU5-12	Trigg Beach Carpark	High	High	High	High	High
MU6-01	Scarborough Beach North	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU6-02	Scarborough Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU6-03	Brighton Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU6-04	Peasholm Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU6-05	Scarborough Vegetated Dunes	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU6-06	Scarborough Beach Carpark	High	High	High	High	High
MU6-07	Scarborough Amphitheatre	High	High	High	High	High
MU6-08	Scarboro SLSC	High	High	High	High	High
MU6-09	Scarborough Beach Pool	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU6-10	Scarborough Beach Restaurant	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU6-11	Scarborough Playground and Skate Park	High	High	High	High	High
MU6-12	Scarborough Beach carpark south	High	High	High	High	High
MU6-13 MU6-14	Brighton Beach carpark	High	High	High	High	High
	Scarborough access, amenity and minor infrastructure	High	High	High	High	High

		Erosion Conse				
		Present Day (2022)	2030	2045	2070	2122
CHRMAP Asset ID	Asset			Consequence (Environmen		
MU1-01	Watermans Bay Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-01	Uncontrolled - Watermans Bay Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-02	Watermans Bay Dog Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-03 MU1-03	Watermans vegetated dunes	High	High	High	High	High
MU1-03 MU1-04	Uncontrolled - Watermans vegetated dunes  Watermans GSC revetment	High Insignificant	High Insignificant	High Insignificant	High Insignificant	High Insignificant
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-06	Lookout and amenities, Watermans Bay				Insignificant	
MU1-05	Uncontrolled - West Coast Drive, footpath and services (Beach Rd to Mary St)	Insignificant Insignificant	Insignificant Insignificant	Insignificant Insignificant	Insignificant	Insignificant Insignificant
MU1-06	Uncontrolled - Lookout and amenities, Watermans Bay	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-07	Car park and lookout, Margaret St	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-08	Watermans access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-01	North Beach Dog Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-02	North Beach (North)	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-03	North Beach (South)	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-04	North Beach access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-05	North Beach Vegetated Dunes	High	High	High	High	High
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-07	North Beach Revetment and Jetty	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-01	Mettams Pool Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-02	Parking Area, Saunders St	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-03	Mettams Pool public toilets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-05	Mettams vegetated dunes	High	High	High	High	High
MU3-06	Mettams access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-01	Bennion Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-02	Trigg Beach Dog Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-03	Trigg Beach North	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-04	Trigg North Vegetated Dunes	High	High	High	High	High
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-06	Car park between Bennion and Bailey Streets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-07	Parking area, Trigg Place	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-08	Trigg North access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-01	Trigg Beach	High	High	High	High	High
MU5-02	Trigg Beach South	High	High	High	High	High
MU5-03	Trigg South Vegetated Dunes	High	High	High	High	High
MU5-04	Trigg Surf Lookout	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-05	Parking area, Trigg Beach north	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-06	Trigg Beach SLSC building 1	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-07	Trigg Beach SLSC building 2	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-08	Trigg Beach Café	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-09	Parking area, Trigg Beach central	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-10	Trigg South access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-11	Surfing WA Headquarters	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-12	Trigg Beach Carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-01	Scarborough Beach North	High	High	High	High	High
MU6-02	Scarborough Beach	High	High	High	High	High
MU6-03	Brighton Beach	High	High	High	High	High
MU6-04	Peasholm Beach	High	High	High	High	High
MU6-05	Scarborough Vegetated Dunes	High	High	High	High	High
MU6-06	Scarborough Beach Carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-07	Scarborough Amphitheatre	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-08	Scarboro SLSC	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-09	Scarborough Beach Pool	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-10	Scarborough Beach Restaurant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-11	Scarborough Playground and Skate Park	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-12	Scarborough Beach carpark south	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-13	Brighton Beach carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant

		Erosion Conseq				
		Present Day (2022)	2030	2045	2070	2122
CHRMAP Asset ID	Asset			Consequence (Financial)	1	
MU1-01	Watermans Bay Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU1-01	Uncontrolled - Watermans Bay Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU1-02	Watermans Bay Dog Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU1-03	Watermans vegetated dunes	Moderate	Moderate Moderate	Moderate	Moderate Moderate	Moderate Moderate
MU1-03 MU1-04	Uncontrolled - Watermans vegetated dunes Watermans GSC reverment	Moderate		Moderate		
		Moderate	Moderate	Moderate	Moderate	Moderate
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Low	Low	Low	Low	Low
MU1-06 MU1-05	Lookout and amenities, Watermans Bay Uncontrolled - West Coast Drive, footpath and services (Beach Rd to Mary St)	Low	Low	Low	Low	Low
MU1-05	Uncontrolled - Lookout and amenities, Watermans Bay	Low	Low	Low	Low	Low
MU1-07	Car park and lookout, Margaret St	Low	Low	Low	Low	Low
MU1-08	Watermans access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-01	North Beach Dog Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU2-02	North Beach (North)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU2-03	North Beach (South)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU2-04	North Beach access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-05	North Beach Vegetated Dunes	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-07	North Beach Revetment and Jetty	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-01	Mettams Pool Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU3-02	Parking Area, Saunders St	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-03	Mettams Pool public toilets	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	High	High	High	High	High
	Mettams vegetated dunes	Low	Low	Low	Low	Low
MU3-06	Mettams access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-01	Bennion Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU4-02	Trigg Beach Dog Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU4-03	Trigg Beach North	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
	Trigg North Vegetated Dunes	Moderate	Moderate	Moderate	Moderate	Moderate
	West Coast Drive, footpath and services (near Kathleen St)	Low	Low	Low	Low	Low
MU4-06	Car park between Bennion and Bailey Streets	Low	Low	Low	Low	Low
MU4-07	Parking area, Trigg Place	Low	Low	Low	Low	Low
MU4-08	Trigg North access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate
	Trigg Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
	Trigg Beach South	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
	Trigg South Vegetated Dunes	High	High	High	High	High
MU5-04	Trigg Surf Lookout	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-05	Parking area, Trigg Beach north	Moderate	Moderate	Moderate	Moderate	Moderate
	Trigg Beach SLSC building 1	High	High	High	High	High
MU5-07	Trigg Beach SLSC building 2	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-08	Trigg Beach Café	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU5-09	Parking area, Trigg Beach central	High	High	High	High	High
MU5-10	Trigg South access, amenity and minor infrastructure	High	High	High	High	High
MU5-11	Surfing WA Headquarters	High	High	High	High	High
	Trigg Beach Carpark	High	High	High	High	High
MU6-01	Scarborough Beach North	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU6-02	Scarborough Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU6-03	Brighton Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU6-04	Peasholm Beach	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU6-05	Scarborough Vegetated Dunes	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU6-06	Scarborough Beach Carpark	High	High	High	High	High
MU6-07	Scarborough Amphitheatre	High	High	High	High	High
MU6-08	Scarboro SLSC	High	High	High	High	High
	Scarborough Beach Pool	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU6-10	Scarborough Beach Restaurant	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU6-11	Scarborough Playground and Skate Park	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-12	Scarborough Beach carpark south	Moderate	Moderate	Moderate	Moderate	Moderate
		1				1
MU6-13	Brighton Beach carpark	Moderate	Moderate	Moderate	Moderate	Moderate

		Erosion Consec	uence Inputs			
		Present Day (2022)	2030	2045	2070	2122
CHRMAP Asset ID	<u>Asset</u>			uence (Legislative / Regula		
MU1-01	Watermans Bay Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-01	Uncontrolled - Watermans Bay Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-02	Watermans Bay Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-03	Watermans vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-03 MU1-04	Uncontrolled - Watermans vegetated dunes Watermans GSC revetment	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
		Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-05 MU1-06	West Coast Drive, footpath and services (Beach Rd to Mary St)  Lookout and amenities, Watermans Bay	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-05	Uncontrolled - West Coast Drive, footpath and services (Beach Rd to Mary St)	Insignificant Insignificant	Insignificant Insignificant	Insignificant Insignificant	Insignificant Insignificant	Insignificant Insignificant
MU1-06	Uncontrolled - Lookout and amenities, Watermans Bay	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-07	Car park and lookout, Margaret St	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-08	Watermans access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-01	North Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-02	North Beach (North)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-03	North Beach (South)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-04	North Beach access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-05	North Beach Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-07	North Beach Revetment and Jetty	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-01	Mettams Pool Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-02	Parking Area, Saunders St	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-03	Mettams Pool public toilets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-05	Mettams vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-06	Mettams access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-01	Bennion Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-02	Trigg Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-03	Trigg Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-04	Trigg North Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-06	Car park between Bennion and Bailey Streets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-07	Parking area, Trigg Place	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-08	Trigg North access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-01	Trigg Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-02	Trigg Beach South	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-03	Trigg South Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-04	Trigg Surf Lookout	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-05	Parking area, Trigg Beach north	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-06	Trigg Beach SLSC building 1	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-07	Trigg Beach SLSC building 2	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-08	Trigg Beach Café	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-09	Parking area, Trigg Beach central	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-10	Trigg South access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-11	Surfing WA Headquarters	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-12	Trigg Beach Carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-01	Scarborough Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-02	Scarborough Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-03	Brighton Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-04	Peasholm Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-05	Scarborough Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-06	Scarborough Beach Carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-07	Scarborough Amphitheatre	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-08	Scarboro SLSC	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-09	Scarborough Beach Pool	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-10	Scarborough Beach Restaurant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-11	Scarborough Playground and Skate Park	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-12	Scarborough Beach carpark south	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-13	Brighton Beach carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-14	Scarborough access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant

		Erosion Conseq				
		Present Day (2022)	2030	2045 Insequence Health and Saf	2070	2122
CHRMAP Asset ID	Asset					
MU1-01 MU1-01	Watermans Bay Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
	Uncontrolled - Watermans Bay Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-02 MU1-03	Watermans Bay Dog Beach Watermans vegetated dunes	Insignificant Insignificant	Insignificant Insignificant	Insignificant Insignificant	Insignificant Insignificant	Insignificant Insignificant
MU1-03	-					
MU1-03	Uncontrolled - Watermans vegetated dunes Watermans GSC reverment	Insignificant Moderate	Insignificant Moderate	Insignificant Moderate	Insignificant	Insignificant
		Moderate	Moderate	Moderate	Moderate Moderate	Moderate
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)					Moderate
MU1-06 MU1-05	Lookout and amenities, Watermans Bay	Moderate	Moderate Moderate	Moderate Moderate	Moderate Moderate	Moderate
MU1-05	Uncontrolled - West Coast Drive, footpath and services (Beach Rd to Mary St)	Moderate Moderate	Moderate	Moderate	Moderate	
	Uncontrolled - Lookout and amenities, Watermans Bay	Moderate	Moderate	Moderate	Moderate	Moderate Moderate
MU1-07 MU1-08	Car park and lookout, Margaret St	Moderate	Moderate	Moderate	Moderate	Moderate
	Watermans access, amenity and minor infrastructure	Moderate	Moderate	moderate	Moderate	Moderate
MU2-01 MU2-02	North Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
	North Beach (North)	Insignificant	Insignificant	Insignificant		Insignificant
MU2-03	North Beach (South)	Insignificant	Insignificant Moderate	Insignificant Moderate	Insignificant	Insignificant
MU2-04 MU2-05	North Beach access, amenity and minor infrastructure  North Beach Vegetated Dunes	Moderate Insignificant	Moderate Insignificant	Moderate Insignificant	Moderate Insignificant	Moderate Insignificant
	-	-	Insignificant	Insignificant	Insignificant	Insignificant
MU2-06 MU2-07	West Coast Drive, footpath and services (Malcolm St to James St)	Moderate Moderate	Moderate Moderate	Moderate Moderate	Moderate Moderate	Moderate Moderate
	North Beach Revetment and Jetty					
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-01	Mettams Pool Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-02	Parking Area, Saunders St	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-03	Mettams Pool public toilets	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Moderate	Moderate	Moderate	Moderate	Moderate
	Mettams vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-06	Mettams access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-01	Bennion Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-02	Trigg Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-03	Trigg Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-04	Trigg North Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-06	Car park between Bennion and Bailey Streets	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-07	Parking area, Trigg Place	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-08	Trigg North access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-01	Trigg Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-02	Trigg Beach South	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-03	Trigg South Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-04	Trigg Surf Lookout	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-05	Parking area, Trigg Beach north	Moderate	Moderate	Moderate	Moderate	Moderate
	Trigg Beach SLSC building 1	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-07	Trigg Beach SLSC building 2	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-08	Trigg Beach Café	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-09	Parking area, Trigg Beach central	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-10	Trigg South access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-10		Moderate	Moderate	Moderate	Moderate	Moderate
	Surfing WA Headquarters	Moderate	Moderate	Moderate	Moderate	Moderate
	Trigg Beach Carpark					
MU6-01	Scarborough Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-02	Scarborough Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-03	Brighton Beach	Insignificant	Insignificant	Insignificant		Insignificant
MU6-04	Peasholm Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-05	Scarborough Vegetated Dunes	Insignificant	Insignificant	Insignificant		Insignificant
MU6-06	Scarborough Beach Carpark	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-07	Scarborough Amphitheatre	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-08	Scarboro SLSC	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-09	Scarborough Beach Pool	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-10	Scarborough Beach Restaurant	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-11	Scarborough Playground and Skate Park	Moderate	Moderate	Moderate	Moderate	Moderate
	Scarborough Beach carpark south	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-12						
MU6-12 MU6-13	Brighton Beach carpark	Moderate	Moderate	Moderate	Moderate	Moderate

		Erosion Conseq	uence Inputs			
		Present Day (2022)		2045		
CHRMAP Asset ID	Asset		Co	nsequence (Performance)	- NA	
MU1-01	Watermans Bay Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-01	Uncontrolled - Watermans Bay Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-02	Watermans Bay Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-03	Watermans vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-03	Uncontrolled - Watermans vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-04	Watermans GSC revetment	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-06	Lookout and amenities, Watermans Bay	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-05	Uncontrolled - West Coast Drive, footpath and services (Beach Rd to Mary St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-06	Uncontrolled - Lookout and amenities, Watermans Bay	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-07	Car park and lookout, Margaret St	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-08	Watermans access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-01	North Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-02	North Beach (North)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-03	North Beach (South)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-04	North Beach access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-05	North Beach Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-07	North Beach Revetment and Jetty	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-01	Mettams Pool Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-02	Parking Area, Saunders St	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-03	Mettams Pool public toilets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-05	Mettams vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-06	Mettams access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-01	Bennion Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-02	Trigg Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-03	Trigg Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-04	Trigg North Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-06	Car park between Bennion and Bailey Streets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-07	Parking area, Trigg Place	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-08	Trigg North access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-01	Trigg Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-02						
	Trigg Beach South	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-03	Trigg South Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-04	Trigg Surf Lookout	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-05	Parking area, Trigg Beach north	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-06	Trigg Beach SLSC building 1	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-07	Trigg Beach SLSC building 2	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-08	Trigg Beach Café	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-09	Parking area, Trigg Beach central	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-10	Trigg South access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-11	Surfing WA Headquarters	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-12	Trigg Beach Carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-01	Scarborough Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-02	Scarborough Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-03	Brighton Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-04	Peasholm Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-05	Scarborough Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-06	Scarborough Beach Carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-07	Scarborough Amphitheatre	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-08	Scarboro SLSC	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-09	Scarborough Beach Pool	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-10	Scarborough Beach Restaurant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-11	Scarborough Playground and Skate Park	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-11	Scarborough Peach carpark south	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
		pro- Service of the s				
MU6-12	Brighton Beach carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant

			Erosion Conseq				
MM.10.10 Vacantumas Bay Seach Insignificant			Present Day (2022)	2030	2045	2070	2122
MAX-12 Variaments by the feath of the second	CHRMAP Asset ID	<u>Asset</u>			Consequence (Project) - N	<u>A</u>	
MAX-29 Varienman Sky politised does minginfloard minginfl							
MIX.10 Watermans vegetated dunes (mignificant mignificant mignific							
MULG Wert Cost Drive, fostpath and services (Beach file to Mary 3) misginificant misgi							
MAJ 50 Watermans GK revenement meginfloart					-		
MAJ 56 Most Coast Drive, Fotopath and services (Beach Ref to Mary 50) mignificant mignific					-		
MULG device and amentities. Vesternames Bay MULGS devicentational - Vesternames Bay MULGS devicentational - Vesternames Bay MULGS devicentional -					-		
MULG Uncontrolled - Lower Coast Drive, Tectpath and services (Basch et de Mary 9) mignificant mignific							
MML9 of Locational an amenites, Waterman by MML9 of Locational Caleboard and amenites, Waterman by MML9 of Locational Caleboard Caleboar							
M.M.1-20 (ar part and foolwork, Margant 51 (mignificant misginificant mi					-		
MU.20 North Reach (potent) MU.20 North Reach (po					-		
MU2-Q2 (North Beach (Desch)   Insignificant							
MU2-29 North Beach (Downh) Insignificant Ins							
MU2-04 North Beach (South) Insignificant Ins	MU2-02	-					-
MU2-26 North Beach secess, amenity and minor infrastructure   Insignificant				-	-		-
MV2-06 West Coast Drive, footpath and services (Macionn St to James S) Insignificant I							
MU2-07 Not-the Beach Revention and services (Nation) 51 to James S1) Insignificant Ins		. ,	-	-	-	-	-
MU2-8 Wert Coast Drive, botgash and services (Sorrento St to Hamersley St) Insignificant Insignifica	MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)					
MU3-21 A Netama Pool Beach I Insignificant I I	MU2-07	North Beach Revetment and Jetty	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
Mu3-9.2 Parking Area, Saunders S  Mu3-9.2 Metterns Pool public tolets  Mu3-9.3 Metterns Pool public tolets  Mu3-9.5 Metterns Pool public tolets  Mu3-9.5 Metterns Pool public tolets  Mu3-9.5 Metterns Seguetated dunes  Mu3-9.5 Metterns wegetated dunes  Mu3-9.6 Metterns wegetated dunes  Mu3-9.7 Metterns wegetated	MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
Mul-3 di Mettans Pool public tolets insignificant insignif	MU3-01	Mettams Pool Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
M3-9.4 West Cost Drive, footpath and services (Sholl Ave to Balley St)  Mil-3-05 Mettams vegetated dunes  M3-3-06 Mettams secess, amenity and minor infrastructure  Insignificant  M3-3-06 Mettams secess, amenity and minor infrastructure  Insignificant  M3-3-01 Insignificant  M3-3-01 Insignificant  M3-4-01 Bennion Beach  M3-4-01 Bennion Beach  M3-4-02 Insignificant  M3-4-03 Trigg Beach North  M3-4-04 Trigg North Vegetated Dunes  M3-4-04 Insignificant  M3-4-05 West Coast Drive, footpath and services (near Kathleen St)  M3-4-05 West Coast Drive, footpath and services (near Kathleen St)  M3-4-06 Car parb between Bennion and Balley Streets  M3-4-06 Car parb between Bennion and Balley Streets  M3-4-07 Trigg Beach  M3-4-08 Trigg Beach  M3-4-08 Trigg Beach  M3-4-08 Trigg Beach  M3-4-08 Trigg Beach  M3-5-08 Trigg Beach  M3-5-09 Trigg Beac	MU3-02	Parking Area, Saunders St	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-9.5 Mettams sezes, amenity and minor infrastructure  misginficant  mu3-9.5 Mettams sezes, amenity and minor infrastructure  misginficant  mu3-9.2 Trigg Beach Dog Beach  misginficant  misginfican	MU3-03	Mettams Pool public toilets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-96 Mettams access, amenity and minor infrastructure MU4-01 Bennion Beach MU4-02 Trigg Beach Dog Beach MU4-03 Trigg Beach Dog Beach MU4-03 Trigg Beach North MU4-03 Trigg Beach North MU4-03 Trigg Beach North MU4-04 Trigg Weath Vegetated Dunes MU4-05 West Coast Drive, Footpath and services (near Kathleen St) MU4-05 West Coast Drive, Footpath and services (near Kathleen St) MU4-05 West Coast Drive, Footpath and services (near Kathleen St) MU4-06 West Coast Drive, Footpath and services (near Kathleen St) MU4-07 Parking area, Trigg Place MU4-08 Trigg Worth Vegetated Dunes MU4-09 Trigg West Coast Drive, Footpath and services (near Kathleen St) MU4-09 Parking area, Trigg Place MU4-09 Trigg Beach Booth MU4-09 Trigg Beach Morth MU4-09 Trigg Beach South MU5-01 Trigg Beach South MU5-01 Trigg Beach South MU5-01 Trigg Beach South MU5-02 Trigg Beach South MU5-03 Trigg South Vegetated Dunes MU5-03 Trigg South Vegetated Dunes MU5-04 Trigg South Vegetated Dunes MU5-05 Parking area, Trigg Beach north MU5-05 Parking area, Trigg Beach north MU5-06 Trigg Beach South MU5-07 Trigg Beach South MU5-08 Trigg Beach Morth MU5-09 Parking area, Trigg Beach north MU5-01 Trigg Beach South MU5-02 Trigg Beach South MU5-03 Trigg Beach South MU5-04 Trigg Beach South MU5-05 Trigg Beach South MU5-06 Trigg Beach South MU5-07 Trigg Beach South MU5-08 Trigg Beach Carpark MU5-09 Parking area, Trigg Beach north MU5-09 Parking area, Trigg Beach central MU5-09 Parking area, Trigg Beach Carpark MU5-00 Trigg Beach Carpark MU5-00 Trigg Beach Carpark MU5-00 Trigg Beach Carpark MU5-00 Trigg Beach Carpark MU5-0	MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-02 Prigg Beach Dog Beach Insignificant I	MU3-05	Mettams vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-02 Tigg Beach Dog Beach  MU4-03 Tigg Beach Dog Beach  MU4-04 Insignificant  MU4-05 Tigg Rooth Vegetated Dunes  Insignificant  MU4-05 West Coast Drive, Footpath and services (near Kathleen St)  MU4-05 West Coast Drive, Footpath and services (near Kathleen St)  MU4-06 West Coast Drive, Footpath and services (near Kathleen St)  MU4-07 Parking area, Trigg Place  MU4-07 Parking area, Trigg Place  MU4-07 Parking area, Trigg Place  MU4-08 Tigg Rooth access, amenity and minor infrastructure  MU4-09 Insignificant  MU4-09 Tigg Rooth Access, amenity and minor infrastructure  MU4-09 Insignificant  MU4-09 Tigg Seach South  MU4-09 Insignificant  MU5-01 Tigg Beach South  MU5-01 Tigg Seach South  MU5-01 Insignificant  MU5-02 Tigg Seach South  MU5-03 Insignificant  MU5-04 Tigg Seach South  MU5-05 Insignificant  MU5-06 Tigg Beach State Building 1  MU5-06 Tigg Beach State Building 2  MU5-07 Tigg Beach State Building 2  Insignificant  MU5-08 Tigg Beach State Building 2  Insignificant  MU5-09 Tigg Beach State Building 2  Insignificant  MU5-09 Parking area, Trigg Beach north  MU5-09 Parking area, Trigg Beach Carpark  MU5-09 Parking area, Trigg Beach Carpark  MU5-01 Tigg South Vegetated Dunes  MU5-01 Tigg Beach State Building 2  Insignificant  Insign	MU3-06	Mettams access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-03 Trigg Beach North  MU4-04 Trigg North Vegetated Dunes  MU4-05 (Ar park between Bennion and Balley Streets  Insignificant  MU4-05 (Car park between Bennion and Balley Streets  Insignificant  MU4-06 (Car park between Bennion and Balley Streets  Insignificant  MU4-07 (Arring and Mu4-07)  MU4-08 Trigg North access, amenity and minor infrastructure  Insignificant  MU4-09 (Trigg Beach  MU5-01 (Trigg Beach  MU5-01 (Trigg Beach  MU5-02 (Trigg Beach  MU5-02 (Trigg Beach  MU5-03 (Trigg Beach  MU5-03 (Trigg Beach  MU5-04 (Trigg Beach  MU5-04 (Trigg Beach  MU5-05 (Trigg Beach  MU5-05 (Trigg Beach  MU5-06 (Trigg Beach Stafe building 2 in Insignificant  MU5-07 (Trigg Beach Stafe building 2 in Insignificant  MU5-08 (Trigg Beach Stafe building 2 in Insignificant  MU5-09 (Trigg Beach Carpark  MU5-09 (Trigg Beach Carpa	MU4-01	Bennion Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-04 Trigg North Vegetated Dunes Insignificant Insignifi	MU4-02	Trigg Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-05 West Coast Drive, footpath and services (near Kathleen St)  MU4-06 Car park between Bennin and Balley Streets  Insignificant  MU4-07 Parking area, Frigg Pace  Insignificant  MU4-08 Trigg North access, amenity and minor infrastructure  Insignificant  MU4-08 Trigg Rorth access, amenity and minor infrastructure  Insignificant  MU5-01 Trigg Beach  MU5-02 Trigg Boach  MU5-03 Trigg South Vegetated Dunes  Insignificant  MU5-04 Trigg South Vegetated Dunes  Insignificant  MU5-05 Parking area, Frigg Beach north  Insignificant  Insignificant  Insignificant  Insignificant  MU5-06 Trigg Beach SLSC building 2  Insignificant  MU5-07 Trigg Beach SLSC building 2  Insignificant  MU5-09 Parking area, Frigg Beach entral  MU5-09 Parking area, Frigg Beach entral  MU5-09 Trigg Beach Cafe  Insignificant  MU5-09 Parking area, Frigg Beach entral  MU5-01 Trigg Beach Cafe  Insignificant  MU5-01 Trigg Beach Cafe  Insignificant  Insi	MU4-03	Trigg Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-06 Car park between Bennion and Bailey Streets insignificant insigni	MU4-04	Trigg North Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-07 Parking area, Trigg Place Insignificant Insignifica	MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-08 Trigg Boach Missensity and minor infrastructure insignificant ins	MU4-06	Car park between Bennion and Bailey Streets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MUS-01 Trigg Beach South Insignificant Insig	MU4-07	Parking area, Trigg Place	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MUS-02 Trigg Beach South MUS-03 Trigg South Vegetated Dunes Insignificant MUS-04 Trigg South Vegetated Dunes Insignificant MUS-04 Trigg South Vegetated Dunes Insignificant MUS-05 Parking area, Trigg Beach north MUS-06 Parking area, Trigg Beach north MUS-06 Trigg Beach SUSC building 1 MUS-06 Trigg Beach SUSC building 1 MUS-07 Trigg Beach SUSC building 2 Insignificant MUS-08 Trigg Beach Cafe Insignificant MUS-09 Parking area, Trigg Beach Cafe Insignificant MUS-09 Parking area, Trigg Beach central MUS-09 Parking area, Trigg Beach central MUS-09 Parking area, Trigg Beach Cafe Insignificant MUS-10 Trigg South access, amenty and minor infrastructure Insignificant MUS-10 Trigg South Access, amenty and minor infrastructure Insignificant MUS-10 Trigg Beach Cafe Insignificant MUS-11 Trigg South access, amenty and minor infrastructure Insignificant MUS-12 Trigg Beach Carpark Insignificant MUS-13 Surfing WA Headquarters Insignificant MUS-14 Trigg Beach Carpark Insignificant MUS-15 Trigg Beach Carpark Insignificant MUS-16 Scarborough Beach North Insignificant Insignifi	MU4-08	Trigg North access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MUS-03 Trigg South Vegetated Dunes Insignificant Insignifi	MU5-01	Trigg Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MUS-04 Trigg Surf Lookout Insignificant Insi			Insignificant	Insignificant	Insignificant	Insignificant	
MUS-05 Parking area, Trigg Beach north Insignificant Insig	MU5-03	Trigg South Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MUS-06 Trigg Beach SLSC building 1 Insignificant Insignifi	MU5-04	Trigg Surf Lookout	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MUS-07 Trigg Beach SLSC building 2 Insignificant Insignifi	MU5-05	Parking area, Trigg Beach north	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MUS-08 Trigg Beach Café  MUS-09 Parking area, Trigg Beach central  MUS-09 Parking area, Trigg Beach central  MUS-01 Lingsinificant  MUS-11 Surfing WA Headquarters  MUS-11 Surfing WA Headquarters  MUS-12 Trigg Beach Carpark  MUS-12 Trigg Beach Carpark  MUS-12 Trigg Beach Carpark  MUS-12 Trigg Beach Morth  MUS-13 Searborough Beach  MUS-14 Insignificant  MUS-15 Insignificant  MUS-16 Searborough Beach  MUS-17 Insignificant  MUS-18 Insignificant  MUS-19 Trigg Beach Carpark  MUS-10 Insignificant  MUS-10 Insignificant  MUS-11 Insignificant  MUS-12 Trigg Beach Carpark  MUS-13 Insignificant  MUS-14 Insignificant  MUS-15 Insignificant  MUS-16 Insignificant  MUS-17 Insignificant  MUS-18 Insignificant  MUS-18 Insignificant  MUS-19 Insignificant  MUS-19 Insignificant  MUS-10 Insignificant  MUS-11 Insignificant  MUS-11 Insignificant  MUS-12 Insignificant  MUS-13 Insignificant  MUS-14 Insignificant  MUS-15 Insignificant  MUS-15 Insignificant  MUS-16 Insignificant  MUS-17 Insignificant  MUS-18 Insignificant  MUS-18 Insignificant  MUS-19 Insignificant  MUS-19 Insignificant  MUS-19 Insignificant  MUS-	MU5-06	Trigg Beach SLSC building 1		Insignificant	Insignificant	Insignificant	Insignificant
MUS-09 Parking area, Trigg Beach central Insignificant Ins							
MUS-10 Trigg South access, amenity and minor infrastructure Insignificant Insignifican							
MUS-11 Surfing WA Headquarters Insignificant							
MUS-12 Trigg Beach Carpark Insignificant Ins							-
MU6-01 Scarborough Beach North Insignificant							
MU6-02 Scarborough Beach Insignificant Insig							
MUG-03 Brighton Beach Insignificant Insignif							
MU6-04 Peasholm Beach  MU6-05 Scarborough Vegetated Dunes Insignificant		-			-		
MU6-05 Scarborough Vegetated Dunes Insignificant Insignifi							
MU6-06 Scarborough Beach Carpark Insignificant Insignifica					-		
MUG-07 Scarborough Amphitheatre Insignificant Insignifican					-		
MU6-08 Scarboro SLSC Insignificant Insignifi							
MU6-09 Scarborough Beach Pool Insignificant					-		
MUG-10 Scarborough Beach Restaurant Insignificant Insignif					-		
MUG-11 Scarborough Playground and Skate Park Insignificant		-	-	-	-	-	-
MUG-12 Scarborough Beach carpark south Insignificant		-	-				-
MUG-13 Brighton Beach carpark Insignificant Insignificant Insignificant Insignificant Insignificant Insignificant							
		-	-	-	-	-	-
MU6-14   Scarborough access, amenity and minor infrastructure   Insignificant   Insignificant		-	-	-	-		
	MU6-14	Scarborough access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant

		Erosion Consequ	uence Inputs			
		Present Day (2022)	2030	2045	2070	2122
CHRMAP Asset ID	<u>Asset</u>			Consequence (Reputation	1	
MU1-01	Watermans Bay Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-01	Uncontrolled - Watermans Bay Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-02	Watermans Bay Dog Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-03	Watermans vegetated dunes	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-03	Uncontrolled - Watermans vegetated dunes	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-04	Watermans GSC revetment	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU1-06 MU1-05	Lookout and amenities, Watermans Bay	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-05	Uncontrolled - West Coast Drive, footpath and services (Beach Rd to Mary St)  Uncontrolled - Lookout and amenities, Watermans Bay	Catastrophic Moderate	Catastrophic Moderate	Catastrophic Moderate	Catastrophic Moderate	Catastrophic Moderate
MU1-07	Car park and lookout, Margaret St	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-08	Watermans access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-01	North Beach Dog Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-02	North Beach (North)	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-03	North Beach (South)	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-04	North Beach access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-05	North Beach Vegetated Dunes	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU2-07	North Beach Revetment and Jetty	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU3-01	Mettams Pool Beach	High	High	High	High	High
MU3-02	Parking Area, Saunders St	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-03	Mettams Pool public toilets	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU3-05	Mettams vegetated dunes	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-06	Mettams access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-01	Bennion Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-02	Trigg Beach Dog Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-03	Trigg Beach North	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-04	Trigg North Vegetated Dunes	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU4-06	Car park between Bennion and Bailey Streets	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-07	Parking area, Trigg Place	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-08	Trigg North access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-01	Trigg Beach	High	High	High	High	High
MU5-02	Trigg Beach South	High	High	High	High	High
MU5-03	Trigg South Vegetated Dunes	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-04	Trigg Surf Lookout	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-05	Parking area, Trigg Beach north	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-06	Trigg Beach SLSC building 1	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-07	Trigg Beach SLSC building 2	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-08	Trigg Beach Café	High	High	High	High	High
MU5-09	Parking area, Trigg Beach central	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-10	Trigg South access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-11	Surfing WA Headquarters	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-12	Trigg Beach Carpark	High	High	High	High	High
MU6-01	Scarborough Beach North	High	High	High	High	High
MU6-02	Scarborough Beach	High	High	High	High	High
MU6-03	Brighton Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-04	Peasholm Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-05	Scarborough Vegetated Dunes	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-06	Scarborough Beach Carpark	High	High	High	High	High
MU6-07	Scarborough Amphitheatre	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-08	Scarboro SLSC	Moderate	Moderate	Moderate	Moderate	Moderate
		Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU6-08	Scarborough Beach Pool		opine			
MU6-09	Scarborough Beach Pool Scarborough Beach Restaurant		Catastrophic	Catastrophic	Catastrophic	
MU6-09 MU6-10	Scarborough Beach Restaurant	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic High
MU6-09 MU6-10 MU6-11	Scarborough Beach Restaurant Scarborough Playground and Skate Park	Catastrophic High	High	High	High	High
MU6-09 MU6-10	Scarborough Beach Restaurant	Catastrophic				

		Erosion Consequ	uence Inputs			
				2045		
CHRMAP Asset ID	<u>Asset</u>		Consequence	(Service Delivery / Busine	ess Disruption)	
MU1-01	Watermans Bay Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-01	Uncontrolled - Watermans Bay Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-02	Watermans Bay Dog Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-03	Watermans vegetated dunes	Low	Low	Low	Low	Low
MU1-03	Uncontrolled - Watermans vegetated dunes	Low	Low	Low	Low	Low
MU1-04	Watermans GSC revetment	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU1-06	Lookout and amenities, Watermans Bay	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-05	Uncontrolled - West Coast Drive, footpath and services (Beach Rd to Mary St)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU1-06	Uncontrolled - Lookout and amenities, Watermans Bay	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-07	Car park and lookout, Margaret St	High	High	High	High	High
MU1-08	Watermans access, amenity and minor infrastructure	High	High	High	High	High
MU2-01	North Beach Dog Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-02	North Beach (North)	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-03	North Beach (South)	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-04	North Beach access, amenity and minor infrastructure	High	High	High	High	High
MU2-05	North Beach Vegetated Dunes	Low	Low	Low	Low	Low
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU2-07	North Beach Revetment and Jetty	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU3-01	Mettams Pool Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-02	Parking Area, Saunders St	High	High	High	High	High
MU3-03	Mettams Pool public toilets	High	High	High	High	High
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU3-05	Mettams vegetated dunes	Low	Low	Low	Low	Low
MU3-06	Mettams access, amenity and minor infrastructure	High	High	High	High	High
MU4-01	Bennion Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-02	Trigg Beach Dog Beach	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-03	Trigg Beach North	Moderate	Moderate	Moderate	Moderate	Moderate
	Trigg North Vegetated Dunes	Low	Low	Low	Low	Low
	West Coast Drive, footpath and services (near Kathleen St)	Catastrophic	Catastrophic	Catastrophic	Catastrophic	Catastrophic
MU4-06	Car park between Bennion and Bailey Streets	High	High	High	High	High
MU4-07	Parking area, Trigg Place	High	High	High	High	High
	Trigg North access, amenity and minor infrastructure	High	High	High	High	High
	Trigg Beach	Moderate	Moderate	Moderate	Moderate	Moderate
		Moderate	Moderate	Moderate	Moderate	Moderate
	Trigg Beach South		woderate			ivioderate
	Trigg South Vegetated Dunes		Laure Control			t access
MU5-04		Low	Low	Low	Low	Low
	Trigg Surf Lookout	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-05	Parking area, Trigg Beach north	Moderate High	Moderate High	Moderate High	Moderate High	Moderate High
MU5-06	Parking area, Trigg Beach north Trigg Beach SLSC building 1	Moderate High High	Moderate High High	Moderate High High	Moderate High High	Moderate High High
MU5-06 MU5-07	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2	Moderate High High High	Moderate High High High	Moderate High High High	Moderate High High High	Moderate High High High
MU5-06 MU5-07 MU5-08	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach Cafe	Moderate High High High High	Moderate High High High High	Moderate High High High High	Moderate High High High High	Moderate High High High High
MU5-06 MU5-07 MU5-08 MU5-09	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central	Moderate High High High High High	Moderate High High High High High	Moderate High High High High High	Moderate High High High High High	Moderate High High High High High
MU5-06 MU5-07 MU5-08 MU5-09 MU5-10	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure	Moderate High High High High High High High	Moderate High High High High High High	Moderate High High High High High High	Moderate High High High High High High	Moderate High High High High High High
MU5-06 MU5-07 MU5-08 MU5-09	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central	Moderate High High High High High	Moderate High High High High High	Moderate High High High High High	Moderate High High High High High	Moderate High High High High High
MU5-06 MU5-07 MU5-08 MU5-09 MU5-10 MU5-11	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure	Moderate High High High High High High High	Moderate High High High High High High	Moderate High High High High High High High High	Moderate High High High High High High High High	Moderate High High High High High High
MU5-06 MU5-07 MU5-08 MU5-09 MU5-10 MU5-11	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters	Moderate High High High High High High Migh Migh Moderate	Moderate High High High High High High High Migh High High	Moderate High High High High High High Moderate	Moderate High High High High High High Migh High High	Moderate High High High High High High Moderate
MU5-06 MU5-07 MU5-08 MU5-09 MU5-10 MU5-11 MU5-12	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach Cafe Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark	Moderate High High High High High High High High	Moderate High High High High High High High High	Moderate High High High High High High High High	Moderate High High High High High High High High	Moderate High High High High High High High High
MU5-06 MU5-07 MU5-08 MU5-09 MU5-10 MU5-11 MU5-12 MU6-01	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North	Moderate High High High High High High High High	Moderate High High High High High High High High	Moderate High High High High High High High High	Moderate High High High High High High High High	Moderate High High High High High High High High
MU5-06 MU5-07 MU5-08 MU5-09 MU5-10 MU5-11 MU5-12 MU6-01 MU6-02	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach North	Moderate High High High High High High Moderate Moderate Moderate Moderate	Moderate High High High High High High High Moderate Moderate Moderate Moderate	Moderate High High High High High High High Moderate High Moderate Moderate Moderate	Moderate High High High High High High Moderate High Moderate Moderate Moderate	Moderate High High High High High High High Moderate Moderate Moderate
MUS-06 MUS-07 MUS-08 MUS-09 MUS-10 MUS-11 MUS-11 MUS-12 MUG-01 MUG-02 MUG-03	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach Cafe Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach Model Brighton Beach	Moderate High High High High High Moderate High Moderate Moderate Moderate Moderate Moderate	Moderate High High High High High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate	Moderate High High High High High Migh Moderate High Moderate Moderate Moderate Moderate Moderate Moderate	Moderate High High High High High Migh Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Moderate High High High High High High High Moderate Moderate Moderate Moderate Moderate
MU5-06 MU5-07 MU5-08 MU5-09 MU5-10 MU5-11 MU5-11 MU6-01 MU6-02 MU6-03 MU6-04	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach North Scarborough Beach Peasholm Beach	Moderate High High High High High High High Moderate	Moderate High High High High High High High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Moderate High High High High High High High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Moderate High High High High High High High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Moderate High High High High High High High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate
MUS-06 MU5-07 MU5-08 MU5-09 MU5-10 MU5-11 MU5-12 MU6-01 MU6-02 MU6-03 MU6-04 MU6-05	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach Brighton Beach Peasholm Beach Scarborough Vegetated Dunes	Moderate High High High High High High Moderate High Moderate Moderate Moderate Moderate Moderate Low	Moderate High High High High High High High Moderate High Moderate Moderate Moderate Moderate Low	Moderate High High High High High High High Moderate Moderate Moderate Moderate Moderate Low	Moderate High High High High High High High Moderate High Moderate Moderate Moderate Moderate Low	Moderate High High High High High High High Moderate High Moderate Moderate Moderate Moderate Low
MUS-06 MUS-07 MUS-08 MUS-09 MUS-10 MUS-11 MUS-11 MUG-01 MUG-02 MUG-03 MUG-04 MUG-05 MUG-06	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach SLSC building 2 Trigg Beach Cafe Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach Brighton Beach Peasholm Beach Scarborough Vegetated Dunes Scarborough Vegetated Dunes Scarborough Vegetated Dunes	Moderate High High High High High Moderate High Moderate	Moderate High High High High High Moderate High Moderate Low High Moderate	Moderate High High High High High High Moderate High Moderate	Moderate High High High High High High Moderate High Moderate	Moderate High High High High High High Moderate High Moderate
MUS-06 MUS-07 MUS-08 MUS-09 MUS-10 MUS-11 MUG-01 MUG-01 MUG-02 MUG-03 MUG-04 MUG-05 MUG-06 MUG-06 MUG-07 MUG-08	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach Caré Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach Peasholm Beach Peasholm Beach Peashough Beach Scarborough Amphitheatre Scarborough Amphitheatre	Moderate High High High High High High Moderate High Moderate	Moderate High High High High High High Moderate	Moderate High High High High High High Moderate High Moderate	Moderate High High High High High High Moderate	Moderate High High High High High High High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate
MUS-06 MUS-07 MUS-08 MUS-09 MUS-10 MUS-11 MUG-01 MUG-02 MUG-03 MUG-04 MUG-05 MUG-06 MUG-07 MUG-07 MUG-08 MUG-09	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach SLSC building 2 Trigg Beach Cafe Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach North Peasholim Beach Peasholim Beach Scarborough Amphitheatre Scarborough Amphitheatre Scarborough Beach Carpark Scarborough Beach Pool	Moderate High High High High High High Moderate High Moderate	Moderate High High High High High High High Moderate High Moderate	Moderate High High High High High High Moderate	Moderate High High High High High High Moderate High Moderate	Moderate High High High High High High Moderate High Moderate
MUS-06 MUS-07 MUS-08 MUS-09 MUS-10 MUS-11 MUS-12 MUG-01 MUG-03 MUG-04 MUG-05 MUG-05 MUG-06 MUG-07 MUG-08 MUG-09 MUG-09 MUG-09	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach Cafe Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach Mediane Brighton Beach Peasholm Beach Peasholm Beach Scarborough Vegetated Dunes Scarborough Beach Carpark Scarborough Amphitheatre Scarborough Beach Carpark Scarborough Beach Carpark Scarborough Beach Carpark Scarborough Beach Pool Scarborough Beach Pool	Moderate High High High High High Moderate High Moderate	Moderate High High High High High High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Moderate High High High High High High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate High Moderate High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Moderate High High High High High High Noderate High Moderate Moderate Moderate Moderate Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Low High Moderate High Moderate High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Moderate High High High High High High High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate High Moderate Moderate Moderate Moderate Moderate High Moderate High Moderate High Moderate High Moderate Moderate Moderate
MUS-06 MUS-07 MUS-08 MUS-09 MUS-10 MUS-11 MUS-12 MUG-01 MUG-03 MUG-04 MUG-05 MUG-06 MUG-06 MUG-07 MUG-09 MUG-09 MUG-09 MUG-01 MUG-09 MUG-09 MUG-01 MUG-01	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach Café Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach North Scarborough Beach Peasholm Beach Peasholm Beach Peasholm Beach Scarborough Beach Carpark Scarborough Beach Restaurant Scarborough Beach Restaurant Scarborough Beach Pool	Moderate High High High High High High High High	Moderate High High High High High High High High	Moderate High High High High High High High High	Moderate High High High High High High High High	Moderate High High High High High High High High
MUS-06 MUS-07 MUS-08 MUS-09 MUS-10 MUS-11 MUS-12 MUG-01 MUG-03 MUG-04 MUG-05 MUG-05 MUG-05 MUG-06 MUG-07 MUG-08 MUG-09 MUG-09 MUG-10	Parking area, Trigg Beach north Trigg Beach SLSC building 1 Trigg Beach SLSC building 2 Trigg Beach Cafe Parking area, Trigg Beach central Trigg South access, amenity and minor infrastructure Surfing WA Headquarters Trigg Beach Carpark Scarborough Beach North Scarborough Beach Mediane Brighton Beach Peasholm Beach Peasholm Beach Scarborough Vegetated Dunes Scarborough Beach Carpark Scarborough Amphitheatre Scarborough Beach Carpark Scarborough Beach Carpark Scarborough Beach Carpark Scarborough Beach Pool Scarborough Beach Pool	Moderate High High High High High Moderate High Moderate	Moderate High High High High High High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Moderate High High High High High High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate High Moderate High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Moderate High High High High High High Noderate High Moderate Moderate Moderate Moderate Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Low High Moderate High Moderate High Moderate High Moderate Moderate Moderate Moderate Moderate Moderate Moderate Moderate	Moderate High High High High High High High Moderate High Moderate High Moderate High Moderate High Moderate High Moderate Moderate

## ASSIGNED INUNDATION CONSEQUENCE RATINGS





		Inundation Co	nsequence Inputs			
		Present Day (2022)		2045		
CHRMAP Asset ID	<u>Asset</u>			Consequence (Prevailing	<u>s)</u>	
MU1-01	Watermans Bay Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-02	Watermans Bay Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-03	Watermans vegetated dunes	Low	Low	Low	Low	Low
MU1-04	Watermans GSC revetment	Low	Low	Low	Low	Low
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-06	Lookout and amenities, Watermans Bay	Low	Low	Low	Low	Low
MU1-07	Car park and lookout, Margaret St	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-08	Watermans access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU2-01	North Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-02	North Beach (North)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-03	North Beach (South)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-04	North Beach access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU2-05	North Beach Vegetated Dunes	Low	Low	Low	Low	Low
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-07	North Beach Revetment and Jetty	Low	Low	Low	Low	Low
MU2-07	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-01	Mettams Pool Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-01 MU3-02	Parking Area, Saunders St	Moderate	Moderate	Moderate	Moderate	Moderate
	<del>-</del> -					
MU3-03	Mettams Pool public toilets	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-05	Mettams vegetated dunes	Low	Low	Low	Low	Low
MU3-06	Mettams access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU4-01	Bennion Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-02	Trigg Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-03	Trigg Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-04	Trigg North Vegetated Dunes	Low	Low	Low	Low	Low
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-06	Car park between Bennion and Bailey Streets	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-07	Parking area, Trigg Place	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-08	Trigg North access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU5-01	Trigg Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-02	Trigg Beach South	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-03	Trigg South Vegetated Dunes	Low	Low	Low	Low	Low
MU5-04	Trigg Surf Lookout	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-05	Parking area, Trigg Beach north	Moderate	Moderate	Moderate	Moderate	Moderate
	Trigg Beach SLSC building 1	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-06		Moderate			_	Moderate
MU5-07	Trigg Beach SLSC building 2		Moderate	Moderate	Moderate	
MU5-08	Trigg Beach Café	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-09	Parking area, Trigg Beach central	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-10	Trigg South access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-11	Surfing WA Headquarters	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-12	Trigg Beach Carpark	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-01	Scarborough Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-02	Scarborough Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-03	Brighton Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-04	Peasholm Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-05	Scarborough Vegetated Dunes	Low	Low	Low	Low	Low
MU6-06	Scarborough Beach Carpark	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-07	Scarborough Amphitheatre	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-08	Scarboro SLSC	Moderate	Moderate	Moderate	Moderate	Moderate
	Scarborough Beach Pool	High	High	High	High	High
MU6-09	Scarborough Beach Restaurant	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-10	-					
MU6-11	Scarborough Playground and Skate Park	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-12	Scarborough Beach carpark south	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-13	Brighton Beach carpark	Moderate	Moderate Moderate	Moderate	Moderate	Moderate
	Scarborough access, amenity and minor infrastructure	Moderate		Moderate	Moderate	Moderate

		Inundation	Consequence Inputs			
		Present Day (20	22) 2030	2045	2070	2122
HRMAP Asset ID	Asset			Consequence (Enviror	imental)	
MU1-01	Watermans Bay Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-02	Watermans Bay Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-03	Watermans vegetated dunes	Low	Low	Low	Low	Low
MU1-04	Watermans GSC revetment	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-06	Lookout and amenities, Watermans Bay	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-07	Car park and lookout, Margaret St	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-08	Watermans access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-01	North Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-02	North Beach (North)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-03	North Beach (South)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-04	North Beach access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-05	North Beach Vegetated Dunes	Low	Low	Low	Low	Low
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-07	North Beach Revetment and Jetty	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-01	Mettams Pool Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-01	Parking Area, Saunders St	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
	-				-	-
MU3-03	Mettams Pool public toilets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-05	Mettams vegetated dunes	Low	Low	Low	Low	Low
MU3-06	Mettams access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-01	Bennion Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-02	Trigg Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-03	Trigg Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-04	Trigg North Vegetated Dunes	Low	Low	Low	Low	Low
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-06	Car park between Bennion and Bailey Streets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-07	Parking area, Trigg Place	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-08	Trigg North access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-01	Trigg Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-02	Trigg Beach South	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-03	Trigg South Vegetated Dunes	Low	Low	Low	Low	Low
MU5-04	Trigg Surf Lookout	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
	Parking area, Trigg Beach north	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-05	Trigg Beach SLSC building 1	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-06						
MU5-07	Trigg Beach SLSC building 2	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-08	Trigg Beach Café	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-09	Parking area, Trigg Beach central	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-10	Trigg South access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-11	Surfing WA Headquarters	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-12	Trigg Beach Carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-01	Scarborough Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-02	Scarborough Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-03	Brighton Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-04	Peasholm Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-05	Scarborough Vegetated Dunes	Low	Low	Low	Low	Low
MU6-06	Scarborough Beach Carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-07	Scarborough Amphitheatre	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-08	Scarboro SLSC	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
	Scarborough Beach Pool	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-09	· ·				-	
MU6-10	Scarborough Beach Restaurant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-11	Scarborough Playground and Skate Park	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-12	Scarborough Beach carpark south	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-13	Brighton Beach carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-14	Scarborough access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant

		Inundation Co.	nsequence Inputs			
		Present Day (2022)	2030	2045	2070	
CHRMAP Asset ID	Asset			Consequence (Financial	)	
MU1-01	Watermans Bay Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-02	Watermans Bay Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-03	Watermans vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-04	Watermans GSC revetment	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Low	Low	Low	Low	Low
MU1-06	Lookout and amenities, Watermans Bay	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-07	Car park and lookout, Margaret St	Low	Low	Low	Low	Low
MU1-08	Watermans access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU2-01	North Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-02	North Beach (North)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-03	North Beach (South)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-04	North Beach access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU2-05	North Beach Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Low	Low	Low	Low	Low
MU2-07	North Beach Revetment and Jetty	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Low	Low	Low	Low	Low
MU3-01	Mettams Pool Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
	Parking Area, Saunders St	Low	Low	Low	Low	Low
MU3-02	Mettams Pool public toilets	Low	Low	Low	Low	Low
MU3-03		Low	Low	Low	Low	Low
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)					
MU3-05	Mettams vegetated dunes	Low	Low	Low	Low	Low
MU3-06	Mettams access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU4-01	Bennion Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-02	Trigg Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-03	Trigg Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-04	Trigg North Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Low	Low	Low	Low	Low
MU4-06	Car park between Bennion and Bailey Streets	Low	Low	Low	Low	Low
MU4-07	Parking area, Trigg Place	Low	Low	Low	Low	Low
MU4-08	Trigg North access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU5-01	Trigg Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-02	Trigg Beach South	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-03	Trigg South Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-04	Trigg Surf Lookout	Low	Low	Low	Low	Low
MU5-05	Parking area, Trigg Beach north	Low	Low	Low	Low	Low
	Trigg Beach SLSC building 1	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-06	Trigg Beach SLSC building 2	Low	Low			
MU5-07				Low	Low	Low
MU5-08	Trigg Beach Café	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-09	Parking area, Trigg Beach central	Low	Low	Low		Low
MU5-10	Trigg South access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-11	Surfing WA Headquarters	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-12	Trigg Beach Carpark	Low	Low	Low	Low	Low
MU6-01	Scarborough Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-02	Scarborough Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-03	Brighton Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-04	Peasholm Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-05	Scarborough Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-06	Scarborough Beach Carpark	Low	Low	Low	Low	Low
MU6-07	Scarborough Amphitheatre	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-08	Scarboro SLSC	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-09	Scarborough Beach Pool	High	High	High	High	High
	Scarborough Beach Restaurant	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-10	Scarborough Playground and Skate Park	Low	Low	Low	Low	Low
MU6-11	0 10			-		
	-					
MU6-12 MU6-13 MU6-14	Scarborough Beach carpark south Brighton Beach carpark Scarborough access, amenity and minor infrastructure	Low Low Moderate	Low Low Moderate	Low Low Moderate	Low Low Moderate	Low Low Mode

		Inundation	Consequence Inputs				
		Present Day (20	22) 2030	2045	2070	2122	
CHRMAP Asset ID	Asset		Con	sequence (Legislative / R	egulatory) - NA		
MU1-01	Watermans Bay Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU1-02	Watermans Bay Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU1-03	Watermans vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU1-04	Watermans GSC revetment	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU1-06	Lookout and amenities, Watermans Bay	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU1-07	Car park and lookout, Margaret St	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU1-08	Watermans access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU2-01	North Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU2-02	North Beach (North)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU2-03	North Beach (South)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU2-04	North Beach access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU2-05	North Beach Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU2-07	North Beach Revetment and Jetty	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU3-01	Mettams Pool Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU3-02	Parking Area, Saunders St	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU3-03	Mettams Pool public toilets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU3-05	Mettams vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU3-06	Mettams access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU4-01	Bennion Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU4-02	Trigg Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU4-03	Trigg Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU4-04	Trigg North Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU4-06	Car park between Bennion and Bailey Streets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU4-07	Parking area, Trigg Place	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU4-08	Trigg North access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU5-01	Trigg Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU5-02	Trigg Beach South	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU5-03	Trigg South Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU5-04	Trigg Surf Lookout	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU5-05	Parking area, Trigg Beach north	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU5-06	Trigg Beach SLSC building 1	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU5-07	Trigg Beach SLSC building 2	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU5-08	Trigg Beach Café	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU5-09	Parking area, Trigg Beach central	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU5-10	Trigg South access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU5-11	Surfing WA Headquarters	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU5-12	Trigg Beach Carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU6-01	Scarborough Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU6-02	Scarborough Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU6-03	Brighton Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU6-04	Peasholm Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU6-05	Scarborough Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU6-06	Scarborough Beach Carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU6-07	Scarborough Amphitheatre	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
	Scarboro SLSC	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU6-08	Scarborough Beach Pool	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU6-09	-	-					
MU6-10	Scarborough Beach Restaurant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU6-11	Scarborough Playground and Skate Park	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant	
MU6-12	Scarborough Beach carpark south	Insignificant	Insignificant Insignificant	Insignificant Insignificant	Insignificant Insignificant	Insignificant	
MU6-13	Brighton Beach carpark	Insignificant				Insignificant	

		Inundation	Consequence Inputs			
		Present Day (20)	22) 2030	2045		
HRMAP Asset ID	Asset			Consequence Health ar	nd Safety)	
MU1-01	Watermans Bay Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-02	Watermans Bay Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-03	Watermans vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-04	Watermans GSC revetment	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Low	Low	Low	Low	Low
MU1-06	Lookout and amenities, Watermans Bay	Low	Low	Low	Low	Low
MU1-07	Car park and lookout, Margaret St	Low	Low	Low	Low	Low
MU1-08	Watermans access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU2-01	North Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-02	North Beach (North)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-03	North Beach (South)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-04	North Beach access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU2-05	North Beach Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Low	Low	Low	Low	Low
MU2-07	North Beach Revetment and Jetty	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Low	Low	Low	Low	Low
MU3-01	Mettams Pool Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-02	Parking Area, Saunders St	Low	Low	Low	Low	Low
MU3-03	Mettams Pool public toilets	Low	Low	Low	Low	Low
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Low	Low	Low	Low	Low
MU3-05	Mettams vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-06	Mettams access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU4-01	Bennion Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-02	Trigg Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-03	Trigg Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-04	Trigg North Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Low	Low	Low	Low	Low
MU4-05	Car park between Bennion and Bailey Streets	Low	Low	Low	Low	Low
MU4-07	Parking area, Trigg Place	Low	Low	Low	Low	Low
MU4-07	Trigg North access, amenity and minor infrastructure	Low	Low	Low	Low	Low
	Trigg Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-01	Trigg Beach South	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-02	Trigg South Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-03		Low	Low	Low	Low	Low
MU5-04	Trigg Surf Lookout					
MU5-05	Parking area, Trigg Beach north	Low	Low	Low	Low	Low
MU5-06	Trigg Beach SLSC building 1	Low	Low	Low	Low	Low
MU5-07	Trigg Beach SLSC building 2	Low	Low	Low	Low	Low
MU5-08	Trigg Beach Café	Low	Low	Low	Low	Low
MU5-09	Parking area, Trigg Beach central	Low	Low	Low	Low	Low
MU5-10	Trigg South access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU5-11	Surfing WA Headquarters	Low	Low	Low	Low	Low
MU5-12	Trigg Beach Carpark	Low	Low	Low	Low	Low
MU6-01	Scarborough Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-02	Scarborough Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-03	Brighton Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-04	Peasholm Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-05	Scarborough Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-06	Scarborough Beach Carpark	Low	Low	Low	Low	Low
MU6-07	Scarborough Amphitheatre	Low	Low	Low	Low	Low
MU6-08	Scarboro SLSC	Low	Low	Low	Low	Low
MU6-09	Scarborough Beach Pool	Low	Low	Low	Low	Low
MU6-10	Scarborough Beach Restaurant	Low	Low	Low	Low	Low
MU6-11	Scarborough Playground and Skate Park	Low	Low	Low	Low	Low
MU6-12	Scarborough Beach carpark south	Low	Low	Low	Low	Low
MU6-13	Brighton Beach carpark	Low	Low	Low	Low	Low
13	Scarborough access, amenity and minor infrastructure	Low	Low	Low	Low	Low

		Inundation	Consequence Inputs			
		Present Day (202		2045	2070	
CHRMAP Asset ID	Asset			onsequence (Performa		
MU1-01	Watermans Bay Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-02	Watermans Bay Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-03	Watermans vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-04	Watermans GSC revetment	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-06	Lookout and amenities, Watermans Bay	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-07	Car park and lookout, Margaret St	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-08	Watermans access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-01	North Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-02	North Beach (North)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-03	North Beach (South)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-04	North Beach access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-05	North Beach Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-07	North Beach Revetment and Jetty	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-01	Mettams Pool Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-02	Parking Area, Saunders St	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-03	Mettams Pool public toilets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-05	Mettams vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-06	Mettams access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-01	Bennion Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-02	Trigg Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-03	Trigg Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-04	Trigg North Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-06	Car park between Bennion and Bailey Streets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-07	Parking area, Trigg Place	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-08	Trigg North access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-01	Trigg Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
	Trigg Beach South	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-02	Trigg South Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-03	Trigg Surf Lookout	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-04	Parking area, Trigg Beach north	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-05						
MU5-06	Trigg Beach SLSC building 1	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-07	Trigg Beach SLSC building 2	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-08	Trigg Beach Café	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-09	Parking area, Trigg Beach central	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-10	Trigg South access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-11	Surfing WA Headquarters	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-12	Trigg Beach Carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-01	Scarborough Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-02	Scarborough Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-03	Brighton Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-04	Peasholm Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-05	Scarborough Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-06	Scarborough Beach Carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-07	Scarborough Amphitheatre	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-08	Scarboro SLSC	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-09	Scarborough Beach Pool	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-10	Scarborough Beach Restaurant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-11	Scarborough Playground and Skate Park	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-12	Scarborough Beach carpark south	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-13	Brighton Beach carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-14	Scarborough access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant

		Inundation	Consequence Inputs			
		Present Day (20	22) 2030	2045	2070	2122
CHRMAP Asset ID	Asset			Consequence (Project	t) - NA	
MU1-01	Watermans Bay Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-02	Watermans Bay Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-03	Watermans vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-04	Watermans GSC revetment	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-06	Lookout and amenities, Watermans Bay	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-07	Car park and lookout, Margaret St	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-08	Watermans access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-01	North Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-02	North Beach (North)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-03	North Beach (South)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-04	North Beach access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-05	North Beach Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-07	North Beach Revetment and Jetty	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-01	Mettams Pool Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-02	Parking Area, Saunders St	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-03	Mettams Pool public toilets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-05	Mettams vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-06	Mettams access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-01	Bennion Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-02	Trigg Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-03	Trigg Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-04	Trigg North Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-06	Car park between Bennion and Bailey Streets	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-07	Parking area, Trigg Place	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-08	Trigg North access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-01	Trigg Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-02	Trigg Beach South	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
	Trigg South Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-03	Trigg Surf Lookout	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-04	Parking area, Trigg Beach north	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-05	Trigg Beach SLSC building 1	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-06						
MU5-07	Trigg Beach SLSC building 2	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-08	Trigg Beach Café	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-09	Parking area, Trigg Beach central	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-10	Trigg South access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-11	Surfing WA Headquarters	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-12	Trigg Beach Carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-01	Scarborough Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-02	Scarborough Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-03	Brighton Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-04	Peasholm Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-05	Scarborough Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-06	Scarborough Beach Carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-07	Scarborough Amphitheatre	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-08	Scarboro SLSC	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-09	Scarborough Beach Pool	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-10	Scarborough Beach Restaurant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-11	Scarborough Playground and Skate Park	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-12	Scarborough Beach carpark south	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-13	Brighton Beach carpark	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
	Scarborough access, amenity and minor infrastructure	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant

		Inundation (	Consequence Inputs			
		Present Day (2022		2045	2070	
CHRMAP Asset ID	Asset			Consequence (Reputat	ion)	
MU1-01	Watermans Bay Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-02	Watermans Bay Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-03	Watermans vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-04	Watermans GSC revetment	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-06	Lookout and amenities, Watermans Bay	Low	Low	Low	Low	Low
MU1-07	Car park and lookout, Margaret St	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-08	Watermans access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU2-01	North Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-02	North Beach (North)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-03	North Beach (South)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-04	North Beach access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU2-05	North Beach Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-07	North Beach Revetment and Jetty	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-01	Mettams Pool Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-01 MU3-02	Parking Area, Saunders St	Moderate	Moderate	Moderate	Moderate	Moderate
				Low		Low
MU3-03	Mettams Pool public toilets  Wast Coast Drive footpath and services (Shall Ave to Pailou St)	Low Moderate	Low Moderate	Moderate	Low Moderate	Moderate
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)					
MU3-05	Mettams vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-06	Mettams access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU4-01	Bennion Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-02	Trigg Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-03	Trigg Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-04	Trigg North Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-06	Car park between Bennion and Bailey Streets	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-07	Parking area, Trigg Place	Low	Low	Low	Low	Low
MU4-08	Trigg North access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU5-01	Trigg Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-02	Trigg Beach South	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-03	Trigg South Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-04	Trigg Surf Lookout	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-05	Parking area, Trigg Beach north	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-06	Trigg Beach SLSC building 1	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-07	Trigg Beach SLSC building 2	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-08	Trigg Beach Café	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-08	Parking area, Trigg Beach central	Moderate	Moderate	Moderate	Moderate	Moderate
	Trigg South access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU5-10	Surfing WA Headquarters	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-11						Moderate
MU5-12	Trigg Beach Carpark	Moderate	Moderate	Moderate	Moderate	
MU6-01	Scarborough Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-02	Scarborough Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-03	Brighton Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-04	Peasholm Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-05	Scarborough Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-06	Scarborough Beach Carpark	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-07	Scarborough Amphitheatre	Low	Low	Low	Low	Low
MU6-08	Scarboro SLSC	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-09	Scarborough Beach Pool	High	High	High	High	High
MU6-10	Scarborough Beach Restaurant	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-11	Scarborough Playground and Skate Park	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-12	Scarborough Beach carpark south	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-13	Brighton Beach carpark	Moderate	Moderate	Moderate	Moderate	Moderate
	= *:				Low	

		Inundation	Consequence Inputs			
		Present Day (2022	2030	2045	2070	2122
CHRMAP Asset ID	Asset		Consequ	ence (Service Delivery / E	Susiness Disruption)	
MU1-01	Watermans Bay Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-02	Watermans Bay Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-03	Watermans vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU1-04	Watermans GSC revetment	Low	Low	Low	Low	Low
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-06	Lookout and amenities, Watermans Bay	Low	Low	Low	Low	Low
MU1-07	Car park and lookout, Margaret St	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-08	Watermans access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU2-01	North Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-02	North Beach (North)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-03	North Beach (South)	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-04	North Beach access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU2-05	North Beach Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-07	North Beach Revetment and Jetty	Low	Low	Low	Low	Low
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-01	Mettams Pool Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-02	Parking Area, Saunders St	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-03	Mettams Pool public toilets	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU3-05	Mettams vegetated dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU3-06	Mettams access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU4-01	Bennion Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-02	Trigg Beach Dog Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-03	Trigg Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-04	Trigg North Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-06	Car park between Bennion and Bailey Streets	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-07	Parking area, Trigg Place	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-08	Trigg North access, amenity and minor infrastructure	Low	Low	Low	Low	Low
MU5-01	Trigg Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-02	Trigg Beach South	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-03	Trigg South Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU5-04	Trigg Surf Lookout	Low	Low	Low	Low	Low
MU5-05	Parking area, Trigg Beach north	Moderate	Moderate	Moderate	Moderate	Moderate
	Trigg Beach SLSC building 1	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-06 MU5-07	Trigg Beach SLSC building 1  Trigg Beach SLSC building 2	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-08	Trigg Beach Café  Parking area Trigg Beach central	Moderate Moderate	Moderate Moderate	Moderate Moderate	Moderate Moderate	Moderate Moderate
MU5-09	Parking area, Trigg Beach central	Low	Low	Low	Low	Low
MU5-10	Trigg South access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-11	Surfing WA Headquarters					
MU5-12	Trigg Beach Carpark	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-01	Scarborough Beach North	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-02	Scarborough Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-03	Brighton Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-04	Peasholm Beach	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-05	Scarborough Vegetated Dunes	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
MU6-06	Scarborough Beach Carpark	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-07	Scarborough Amphitheatre	Low	Low	Low	Low	Low
MU6-08	Scarboro SLSC	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-09	Scarborough Beach Pool	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-10	Scarborough Beach Restaurant	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-11	Scarborough Playground and Skate Park	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-12	Scarborough Beach carpark south	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-13	Brighton Beach carpark	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-14	Scarborough access, amenity and minor infrastructure	Low	Low	Low	Low	Low

G

ASSIGNED ADAPTIVE CAPACITY RATINGS





CHRMAP		Adaptive Ca	apacity 2022	Adaptive Ca	apacity 2030	Adaptive 0	Capacity 2045	Adaptive (	Capacity 2070	Adaptive Ca	pacity 2122
Asset ID	Asset	Erosion	Inundation	Erosion	Inundation	Erosion	Inundation	Erosion	Inundation	Erosion	Inundation
MU1-01	Watermans Bay Beach	High	Very High	High	Very High	Moderate	Very High	Low	Very High	Low	Very High
MU1-01	Uncontrolled - Watermans Bay Beach	High	Very High	Moderate	Very High	Low	Very High	Low	Very High	Low	Very High
MU1-02	Watermans Bay Dog Beach	High	Very High	High	Very High	Moderate	Very High	Low	Very High	Low	Very High
MU1-03	Watermans vegetated dunes	High	Moderate	High	Moderate	Moderate	Moderate	Low	Moderate	Low	Moderate
MU1-03	Uncontrolled - Watermans vegetated dunes	High	Moderate	High	Moderate	Moderate	Moderate	Low	Moderate	Low	Moderate
MU1-04	Watermans GSC revetment	Moderate	High	Moderate	High	Moderate	High	Low	Moderate	Low	Moderate
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate
MU1-06	Lookout and amenities, Watermans Bay	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-05	Uncontrolled - West Coast Drive, footpath and services (Beach Rd to Mary S	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate
MU1-06	Uncontrolled - Lookout and amenities, Watermans Bay	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-07	Car park and lookout, Margaret St	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
MU1-08	Watermans access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
MU2-01	North Beach Dog Beach	High	Very High	High	Very High	Moderate	Very High	Low	Very High	Low	Very High
MU2-02	North Beach (North)	High	Very High	High	Very High	Moderate	Very High	Low	Very High	Low	Very High
MU2-03	North Beach (South)	High	Very High	High	Very High	Moderate	Very High	Low	Very High	Low	Very High
MU2-04	North Beach access, amenity and minor infrastructure	Moderate	Very High	Moderate	Very High	Moderate	Very High	Moderate	Very High	Moderate	Very High
MU2-05	North Beach Vegetated Dunes	High	Moderate	High	Moderate	Moderate	Moderate	Low	Moderate	Low	Moderate
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate
MU2-07	North Beach Revetment and Jetty	Moderate	High	Moderate	High	Moderate	High	Moderate	Moderate	Moderate	Moderate
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Low	Very High	Low	Very High	Low	Very High	Low	Very High	Low	Very High
MU3-01	Mettams Pool Beach	High	Very High	High	Very High	Moderate	Very High	Low	Very High	Low	Very High
MU3-02	Parking Area, Saunders St	Moderate	Very High	Moderate	Very High	Low	Very High	Low	Very High	Low	Very High
MU3-03	Mettams Pool public toilets	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate
MU3-05	Mettams vegetated dunes	High	Moderate	High	Moderate	Moderate	Moderate	Low	Moderate	Low	Moderate
MU3-06	Mettams access, amenity and minor infrastructure	Moderate	Very High	Moderate	Very High	Moderate	Very High	Moderate	Very High	Moderate	Very High
MU4-01	Bennion Beach	High	Very High	High	Very High	Moderate	Very High	Low	Very High	Low	Very High
MU4-02	Trigg Beach Dog Beach	High	Very High	High	Very High	Moderate	Very High	Low	Very High	Low	Very High
MU4-03	Trigg Beach North	High	Very High	High	Very High	Moderate	Very High	Low	Very High	Low	Very High
MU4-04	Trigg North Vegetated Dunes	High	Moderate	High	Moderate	Moderate	Moderate	Low	Moderate	Low	Moderate
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate
MU4-06	Car park between Bennion and Bailey Streets	Moderate	Very High	Moderate	Very High	Low	Very High	Low	Very High	Low	Very High
MU4-07	Parking area, Trigg Place	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
MU4-08	Trigg North access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-01	Trigg Beach	High	Very High	High	Very High	High	Very High	Moderate	Very High	Moderate	Very High
MU5-02	Trigg Beach South	High	Very High	High	Very High	High	Very High	Moderate	Very High	Moderate	Very High
MU5-03	Trigg South Vegetated Dunes	Moderate	Moderate	Moderate	Moderate	Low	Moderate	Low	Moderate	Low	Moderate
MU5-04	Trigg Surf Lookout	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-05	Parking area, Trigg Beach north	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-06	Trigg Beach SLSC building 1	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate
MU5-07	Trigg Beach SLSC building 2	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate
MU5-08	Trigg Beach Café	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate
MU5-09	Parking area, Trigg Beach central	Moderate	Very High	Moderate	Very High	Moderate	Very High	Low	Very High	Low	Very High
MU5-10	Trigg South access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
MU5-11	Surfing WA Headquarters	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate
MU5-12	Trigg Beach Carpark	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-01	Scarborough Beach North	High	Very High	High	Very High	High	Very High	Moderate	Very High	Moderate .	Very High
MU6-02	Scarborough Beach	High	Very High	Moderate	Very High	Moderate	Very High	Moderate	Very High	Low	Very High
MU6-03	Brighton Beach	High	Very High	Moderate	Very High	Moderate	Very High	Moderate	Very High	Low	Very High
MU6-04	Peasholm Beach	High	Very High	High	Very High	High	Very High	Moderate	Very High	Moderate	Very High
MU6-05	Scarborough Vegetated Dunes	Moderate	Moderate	Moderate	Moderate	Low	Moderate	Low	Moderate	Low	Moderate
MU6-06	Scarborough Beach Carpark	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-07	Scarborough Amphitheatre	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Low	Moderate	Low	Moderate
MU6-08	Scarboro SLSC	Moderate .	Moderate .	Moderate .	Moderate .	Low .	Moderate .	Low	Moderate .	Low	Moderate .
MU6-09	Scarborough Beach Pool	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
MU6-10	Scarborough Beach Restaurant	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate	Low	Moderate
MU6-11	Scarborough Playground and Skate Park	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
MU6-12	Scarborough Beach carpark south	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-13	Brighton Beach carpark	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
MU6-14	Scarborough access, amenity and minor infrastructure	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate

H

EROSION RISK ASSESSMENT OUTCOMES





	Erosion Risk Ratings					
		Present Day (2022)	2030	2045	2070	2122
CHRMAP Asset ID	Asset			Risk Rating	<u>s</u>	
MU1-01	Watermans Bay Beach	High	High	Extreme	Extreme	Extreme
MU1-01	<u>Uncontrolled</u> - Watermans Bay Beach	High	High	Extreme	Extreme	Extreme
MU1-02	Watermans Bay Dog Beach	Medium	High	High	Extreme	Extreme
MU1-03	Watermans vegetated dunes	Medium	Medium	High	Extreme	Extreme
MU1-03	Uncontrolled - Watermans vegetated dunes	Medium	High	High	Extreme	Extreme
MU1-04	Watermans GSC revetment	Medium	Medium	High	High	High
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Very Low	Very Low	Medium Medium	High	Extreme
MU1-06 MU1-05	Lookout and amenities, Watermans Bay Uncontrolled - West Coast Drive, footpath and services (Beach Rd to Mary St)	Low Medium	Low Medium	High	High Extreme	High Extreme
MU1-06	Uncontrolled - Lookout and amenities, Watermans Bay	Medium	Medium	Medium	High	High
MU1-07	Car park and lookout, Margaret St	Medium	Medium	Medium	High	High
MU1-08	Watermans access, amenity and minor infrastructure	Medium	Medium	Medium	High	High
MU2-01	North Beach Dog Beach	Medium	High	High	Extreme	Extreme
MU2-02	North Beach (North)	Medium	High	High	Extreme	Extreme
MU2-03	North Beach (South)	Medium	High	High	Extreme	Extreme
MU2-04	North Beach access, amenity and minor infrastructure	Medium	Medium	Medium	High	High
MU2-05	North Beach Vegetated Dunes	Medium	Medium	High	Extreme	Extreme
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Medium	Medium	High	Extreme	Extreme
MU2-07	North Beach Revetment and Jetty	Medium	Medium	High	High	High
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Very Low	Very Low	Medium	High	Extreme
MU3-01	Mettams Pool Beach	High	High	Extreme	Extreme	Extreme
MU3-02	Parking Area, Saunders St	Medium	High	High	Extreme	Extreme
MU3-03	Mettams Pool public toilets	Medium	Medium	High	Extreme	Extreme
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Very Low	Very Low	Medium	High	Extreme
MU3-05	Mettams vegetated dunes	Medium	Medium	High	Extreme	Extreme
MU3-06	Mettams access, amenity and minor infrastructure	Medium	Medium	Medium	High	High
MU4-01	Bennion Beach	Medium	High	High	Extreme	Extreme
MU4-02	Trigg Beach Dog Beach	Medium	High	High	Extreme	Extreme
MU4-03	Trigg Beach North	Medium	High	High	Extreme	Extreme
MU4-04	Trigg North Vegetated Dunes	Medium	Medium	High	Extreme	Extreme
MU4-05 MU4-06	West Coast Drive, footpath and services (near Kathleen St)	Very Low Very Low	Very Low	Medium Medium	High	Extreme
MU4-07	Car park between Bennion and Bailey Streets Parking area, Trigg Place	Very Low	Very Low Very Low	Medium	High High	High High
MU4-08	Trigg North access, amenity and minor infrastructure	Medium	Medium	Medium	High	High
MU5-01	Trigg Beach	Medium	High	High	Extreme	Extreme
MU5-02	Trigg Beach South	Medium	High	High	Extreme	Extreme
MU5-03	Trigg South Vegetated Dunes	Medium	Medium	High	Extreme	Extreme
MU5-04	Trigg Surf Lookout	Low	Low	Medium	High	High
MU5-05	Parking area, Trigg Beach north	Very Low	Very Low	Medium	High	High
MU5-06	Trigg Beach SLSC building 1	Very Low	Very Low	Very Low	Medium	High
MU5-07	Trigg Beach SLSC building 2	Very Low	Very Low	Very Low	Medium	High
MU5-08	Trigg Beach Café	Very Low	Very Low	Medium	High	Extreme
MU5-09	Parking area, Trigg Beach central	Very Low	Very Low	Very Low	Medium	High
MU5-10	Trigg South access, amenity and minor infrastructure	Very Low	Medium	High	High	Extreme
MU5-11	Surfing WA Headquarters	Very Low	Very Low	Very Low	Medium	High
MU5-12	Trigg Beach Carpark	Very Low	Very Low	Very Low	Medium	High
MU6-01	Scarborough Beach North	Medium	High	High	Extreme	Extreme
MU6-02	Scarborough Beach	Medium	High	High	Extreme	Extreme
MU6-03	Brighton Beach	Medium	High	High	Extreme	Extreme
MU6-04	Peasholm Beach	Medium	High	High	Extreme	Extreme
MU6-05	Scarborough Vegetated Dunes	Medium	High	High	Extreme	Extreme
MU6-06	Scarborough Beach Carpark	Very Low	Very Low	Very Low	Medium	High
MU6-07	Scarborough Amphitheatre	Medium	Medium	Medium	High	High
MU6-08	Scarboro SLSC	Medium	Medium	Medium	High	High
MU6-09	Scarborough Beach Pool	Very Low	Very Low	Medium	High	Extreme
MU6-10	Scarborough Beach Restaurant	Very Low	Very Low	Medium	High	Extreme
MU6-11 MU6-12	Scarborough Playground and Skate Park Scarborough Beach carpark south	Very Low Very Low	Very Low Very Low	Medium Very Low	High Medium	High High
MU6-12 MU6-13	Brighton Beach carpark	Very Low	Very Low	Very Low	Medium	High
MU6-14	Scarborough access, amenity and minor infrastructure	Very Low	Medium	High	High	Extreme
	1	,		0		

U

EROSION VULNERABILITY ASSESSMENT OUTCOMES





	Erosion Vulnerability Ratings	,				
		Present Day (2022)	2030	2045	2070	2122
CHRMAP Asset ID	Asset		<u>Vul</u>	nerability Ra	tings	
MU1-01	Watermans Bay Beach	High	High	Very High	Very High	Very High
MU1-01	Uncontrolled - Watermans Bay Beach	High	High	Very High	Very High	Very High
MU1-02	Watermans Bay Dog Beach	Medium	High	High	Very High	Very High
MU1-03 MU1-03	Watermans vegetated dunes	Medium	Medium	High	Very High	
MU1-03	Uncontrolled - Watermans vegetated dunes Watermans GSC revetment	Medium Medium	High Medium	High High	Very High	Very High Very High
MU1-05		Low	Low	High	Very High	
MU1-06	Lookout and amenities, Watermans Bay	Low	Low	Medium	High	High
MU1-05	Uncontrolled - West Coast Drive, footpath and services (Beach Rd to Mary		High			Very High
MU1-06 MU1-07	Uncontrolled - Lookout and amenities, Watermans Bay	Medium	Medium Medium	Medium Medium	High	High
MU1-08	Car park and lookout, Margaret St Watermans access, amenity and minor infrastructure	Medium Medium	Medium	Medium	High High	High High
MU2-01	North Beach Dog Beach	Medium	High	High	Very High	
MU2-02	North Beach (North)	Medium	High	High		Very High
MU2-03	North Beach (South)	Medium	High	High		Very High
MU2-04 MU2-05	North Beach access, amenity and minor infrastructure	Medium	Medium	Medium	High	High
MU2-05	North Beach Vegetated Dunes West Coast Drive, footpath and services (Malcolm St to James St)	Medium High	Medium High	High	Very High Very High	Very High Very High
MU2-07		Medium	Medium	High	High	High
MU2-08		Low	Low	High		Very High
MU3-01	Mettams Pool Beach	High	High	Very High		Very High
MU3-02		Medium	High		Very High	Very High
MU3-03	Mettams Pool public toilets	High	High		Very High	
MU3-04 MU3-05	<del>, , , , , , , , , , , , , , , , , , , </del>	Low	Low	High		Very High
MU3-06	Mettams vegetated dunes  Mettams access, amenity and minor infrastructure	Medium Medium	Medium Medium	High Medium	High	Very High High
MU4-01	Bennion Beach	Medium	High	High	Very High	
MU4-02	Trigg Beach Dog Beach	Medium	High	High	Very High	Very High
MU4-03	Trigg Beach North	Medium	High	High	Very High	Very High
MU4-04	Trigg North Vegetated Dunes	Medium	Medium	High		Very High
MU4-05 MU4-06		Low	Low	High	Very High	Very High
MU4-07		Very Low Very Low	Very Low Very Low	High Medium	Very High High	Very High High
MU4-08		Medium	Medium	Medium	High	High
MU5-01	Trigg Beach	Medium	High	High	Very High	
MU5-02	Trigg Beach South	Medium	High	High	Very High	Very High
MU5-03	Trigg South Vegetated Dunes	Medium	Medium		Very High	Very High
MU5-04 MU5-05	Trigg Surf Lookout	Low	Low	Medium	High	High
MU5-06	Parking area, Trigg Beach north Trigg Beach SLSC building 1	Very Low Low	Very Low Low	Medium Low	High High	High Very High
MU5-07	Trigg Beach SLSC building 1	Low	Low	Low	High	Very High
MU5-08	Trigg Beach Café	Low	Low	High	Very High	Very High
MU5-09	Parking area, Trigg Beach central	Very Low	Very Low	Very Low	High	Very High
MU5-10		Very Low	Medium	High	High	Very High
MU5-11	Surfing WA Headquarters	Low	Vory Low	Low	High	Very High
MU5-12 MU6-01	Trigg Beach Carpark Scarborough Beach North	Very Low Medium	Very Low High	Very Low High	Medium Very High	High Very High
MU6-02		Medium	High	High	Very High	Very High
MU6-03		Medium	High	High	Very High	Very High
MU6-04	Peasholm Beach	Medium	High	High	Very High	Very High
MU6-05		Medium	High	Very High	Very High	Very High
MU6-06 MU6-07		Very Low	Very Low	Very Low	Medium	High
MU6-07		Medium Medium	Medium Medium	Medium High	Very High Very High	
MU6-09		Low	Low	High	Very High	Very High
MU6-10		Low	Low	High	Very High	Very High
MU6-11	Scarborough Playground and Skate Park	Low	Low	High	Very High	Very High
MU6-12		Very Low	Very Low	Very Low	Medium	High
MU6-13	-	Very Low	Very Low	Very Low	Medium	High
MU6-14	Scarborough access, amenity and minor infrastructure	Very Low	Medium	High	High	Very High

J

INUNDATION RISK ASSESSMENT OUTCOMES





	Inundation Risk Ratings					
	number of the first fulligg	Durana				
		Present Day (2022)	2030	2045	2070	2122
CHRMAP Asset ID	Asset			Risk Rating	S	
MU1-01	Watermans Bay Beach	Low	Low	Medium	Medium	Medium
MU1-02	Watermans Bay Dog Beach	Low	Low	Medium	Medium	Medium
MU1-03	Watermans vegetated dunes	Low	Low	Medium	High	High
MU1-04	Watermans GSC revetment	Low	Medium	Medium	High	High
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Very Low	Very Low	Very Low	Very Low	Medium
MU1-06	Lookout and amenities, Watermans Bay	Very Low	Very Low	Very Low	Very Low	Low
MU1-07	Car park and lookout, Margaret St	Low	Medium	Medium	High	High
MU1-08	Watermans access, amenity and minor infrastructure	Very Low	Very Low	Very Low	Very Low	Low
MU2-01	North Beach Dog Beach	Low	Low	Medium	Medium	Medium
MU2-02	North Beach (North)	Low	Low	Medium	Medium	Medium
MU2-03	North Beach (South)	Low	Low	Medium	Medium	Medium
MU2-04	North Beach access, amenity and minor infrastructure	Very Low	Very Low	Very Low	Very Low	Low
MU2-05	North Beach Vegetated Dunes	Low	Low	Medium	High	High
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Very Low	Very Low	Very Low	Very Low	Medium
MU2-07	North Beach Revetment and Jetty	Low	Medium	Medium	High	High
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Very Low	Very Low	Very Low	Very Low	Medium
MU3-01	Mettams Pool Beach	Very Low	Very Low	Very Low	Very Low	Low
MU3-02	Parking Area, Saunders St	Very Low	Very Low	Very Low	Very Low	Medium
MU3-03	Mettams Pool public toilets	Very Low	Very Low	Very Low	Very Low	Medium
MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Very Low	Very Low	Very Low	Very Low	Medium
MU3-05	Mettams vegetated dunes	Low	Low	Medium	High	High
MU3-06	Mettams access, amenity and minor infrastructure	Very Low	Very Low	Very Low	Very Low	Low
MU4-01	Bennion Beach	Low	Low	Medium	Medium	Medium
MU4-02	Trigg Beach Dog Beach	Low	Low	Medium	Medium	Medium
MU4-03	Trigg Beach North	Low	Low	Medium	Medium	Medium
MU4-04	Trigg North Vegetated Dunes	Low	Low	Medium	High	High
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Very Low	Very Low	Very Low	Very Low	Medium
MU4-06	Car park between Bennion and Bailey Streets	Very Low	Very Low	Very Low	Very Low	Medium
MU4-07	Parking area, Trigg Place	Very Low	Very Low	Very Low	Very Low	Medium
MU4-08	Trigg North access, amenity and minor infrastructure	Very Low	Very Low	Very Low	Very Low	Low
MU5-01	Trigg Beach	Low	Low	Medium	Medium	Medium
MU5-02	Trigg Beach South	Low	Low	Medium	Medium	Medium
MU5-03	Trigg South Vegetated Dunes	Low	Low	Medium	High	High
MU5-04	Trigg Surf Lookout	Very Low	Very Low	Very Low	Very Low	Medium
MU5-05	Parking area, Trigg Beach north	Very Low	Very Low	Very Low	Very Low	Medium
MU5-06	Trigg Beach SLSC building 1	Very Low	Very Low	Very Low	Very Low	Medium
MU5-07	Trigg Beach SLSC building 2	Very Low	Very Low	Very Low	Very Low	Medium
MU5-08	Trigg Beach Café	Very Low	Very Low	Very Low	Very Low	Medium
MU5-09	Parking area, Trigg Beach central	Very Low	Very Low	Very Low	Very Low	Medium
MU5-10	Trigg South access, amenity and minor infrastructure	Very Low	Very Low	Very Low	Very Low	Medium
MU5-11	Surfing WA Headquarters	Very Low	Very Low	Very Low	Very Low	Medium
MU5-12	Trigg Beach Carpark	Very Low	Very Low	Very Low	Very Low	Medium
MU6-01	Scarborough Beach North	Low	Low	Medium	Medium	Medium
MU6-02	Scarborough Beach	Low	Low	Medium	Medium	Medium
MU6-03	Brighton Beach	Low	Low	Medium	Medium	Medium
MU6-04	Peasholm Beach	Low	Low	Medium	Medium	Medium
MU6-05	Scarborough Vegetated Dunes	Low	Low	Medium	High	High
MU6-06	Scarborough Beach Carpark	Very Low	Very Low	Very Low	Very Low	Medium
MU6-07	Scarborough Amphitheatre	Very Low	Very Low	Very Low	Very Low	Medium
MU6-08	Scarboro SLSC	Very Low	Very Low	Very Low	Very Low	Medium
MU6-09	Scarborough Beach Pool	Very Low	Very Low	Very Low	Very Low	Medium
MU6-10	Scarborough Beach Restaurant	Very Low	Very Low	Very Low	Very Low	Medium
MU6-11	Scarborough Playground and Skate Park	Very Low	Very Low	Very Low	Very Low	Medium
MU6-12	Scarborough Beach carpark south	Very Low	Very Low	Very Low	Very Low	Medium
MU6-13	Brighton Beach carpark	Very Low	Very Low	Very Low	Very Low	Medium
MU6-14	Scarborough access, amenity and minor infrastructure	Very Low	Very Low	Very Low	Very Low	Medium

K

INUNDATION VULNERABILITY ASSESSMENT OUTCOMES





	Inundation Vulnerability Ratin	gs				
		Present Day (2022)	2030	2045	2070	2122
CHRMAP Asset ID	<u>Asset</u>		<u>Vul</u>	nerability Ra	ntings	
MU1-01	Watermans Bay Beach	Low	Low	Medium	High	High
MU1-02	Watermans Bay Dog Beach	Low	Low	High	High	High
MU1-03	Watermans vegetated dunes	Low	Low	Medium	Very High	Very High
MU1-04	Watermans GSC revetment	Low	Medium	Medium	Very High	Very High
MU1-05	West Coast Drive, footpath and services (Beach Rd to Mary St)	Very Low	Very Low	Very Low	Low	High
MU1-06	Lookout and amenities, Watermans Bay	Very Low	Very Low	Very Low	Low Very High	Medium
MU1-07 MU1-08	Car park and lookout, Margaret St Watermans access, amenity and minor infrastructure	Medium Very Low	High Very Low	High Very Low	Very Low	Very High Low
MU2-01	North Beach Dog Beach	Medium	Medium	High	High	High
MU2-02	North Beach (North)	Low	Low	Medium	Medium	Medium
MU2-03	North Beach (South)	Low	Low	Medium	Medium	Medium
MU2-04	North Beach access, amenity and minor infrastructure	Very Low	Very Low	Very Low	Very Low	Low
MU2-05	North Beach Vegetated Dunes	Low	Low	Medium	Very High	Very High
MU2-06	West Coast Drive, footpath and services (Malcolm St to James St)	Very Low	Very Low	Very Low	Low	High
MU2-07	North Beach Revetment and Jetty	Low	Medium	Medium		Very High
MU2-08	West Coast Drive, footpath and services (Sorrento St to Hamersley St)	Very Low	Very Low	Very Low	Very Low	Medium
MU3-01	Mettams Pool Beach	Very Low	Very Low	Very Low	Low	Medium
MU3-02	Parking Area, Saunders St Mettams Pool public toilets	Low	Low	Low	Low	High
MU3-03 MU3-04	West Coast Drive, footpath and services (Sholl Ave to Bailey St)	Very Low Low	Very Low Low	Very Low	Very Low Low	Medium High
MU3-05	Mettams vegetated dunes	Low	Low	Medium		Very High
MU3-06	Mettams access, amenity and minor infrastructure	Very Low	Very Low	Low	Low	Medium
MU4-01	Bennion Beach	Medium	Medium	High	High	High
MU4-02	Trigg Beach Dog Beach	Medium	Medium	High	High	High
MU4-03	Trigg Beach North	Low	Low	Medium	High	High
MU4-04	Trigg North Vegetated Dunes	Low	Low	Medium	High	High
MU4-05	West Coast Drive, footpath and services (near Kathleen St)	Very Low	Very Low	Very Low	Low	High
MU4-06	Car park between Bennion and Bailey Streets	Very Low	Very Low	Very Low	Low	High
MU4-07	Parking area, Trigg Place	Very Low	Very Low	Very Low	Low	High
MU4-08	Trigg North access, amenity and minor infrastructure	Very Low	Very Low	Very Low	Low	Medium
MU5-01	Trigg Beach	Medium	Medium	High	High	High
MU5-02 MU5-03	Trigg Beach South Trigg South Vegetated Dunes	Low	Low	High Medium	High High	High High
MU5-04	Trigg South Vegetated Dunes  Trigg Surf Lookout	Very Low	Very Low	Very Low	Very Low	Medium
MU5-05	Parking area, Trigg Beach north	Very Low	Very Low	Very Low	Very Low	Medium
MU5-06	Trigg Beach SLSC building 1	Very Low	Very Low	Very Low	Very Low	Medium
MU5-07	Trigg Beach SLSC building 2	Very Low	Very Low	Low	Low	High
MU5-08	Trigg Beach Café	Very Low	Very Low	Very Low	Very Low	Medium
MU5-09	Parking area, Trigg Beach central	Very Low	Very Low	Very Low	Very Low	Medium
MU5-10	Trigg South access, amenity and minor infrastructure	Low	Low	Low	Low	High
MU5-11	Surfing WA Headquarters	Low	Low	Low	Low	High
MU5-12	Trigg Beach Carpark	Low	Low	Low	Low	High
MU6-01	Scarborough Beach North	Low	Low	Medium	High	High
MU6-02	Scarborough Beach	Low	Low	Medium	Medium	Medium
MU6-03 MU6-04	Brighton Beach Peasholm Beach	Medium Low	Medium Low	High Medium	High Medium	High Medium
MU6-05	Scarborough Vegetated Dunes	Low	Low	Medium	High	High
MU6-06	Scarborough Beach Carpark	Very Low	Very Low	Very Low	Very Low	High
MU6-07	Scarborough Amphitheatre	Very Low	Very Low	Very Low	Very Low	High
MU6-08	Scarboro SLSC	Very Low	Very Low	Very Low	Very Low	Medium
MU6-09	Scarborough Beach Pool	Very Low	Very Low	Low	Low	High
MU6-10	Scarborough Beach Restaurant	Very Low	Very Low	Very Low	Very Low	Medium
MU6-11	Scarborough Playground and Skate Park	Very Low	Very Low	Very Low	Low	High
MU6-12	Scarborough Beach carpark south	Very Low	Very Low	Low	Low	High
MU6-13	Brighton Beach carpark	Low	Low	Low	Low	High
MU6-14	Scarborough access, amenity and minor infrastructure	Low	Low	Low	Low	High