Isle of Wight Shoreline Management Plan 2
Appendix F - Strategic Environmental Assessment Environmental Report

Isle of Wight Council

December 2010

SEA - Final Environmental Report

9V8288

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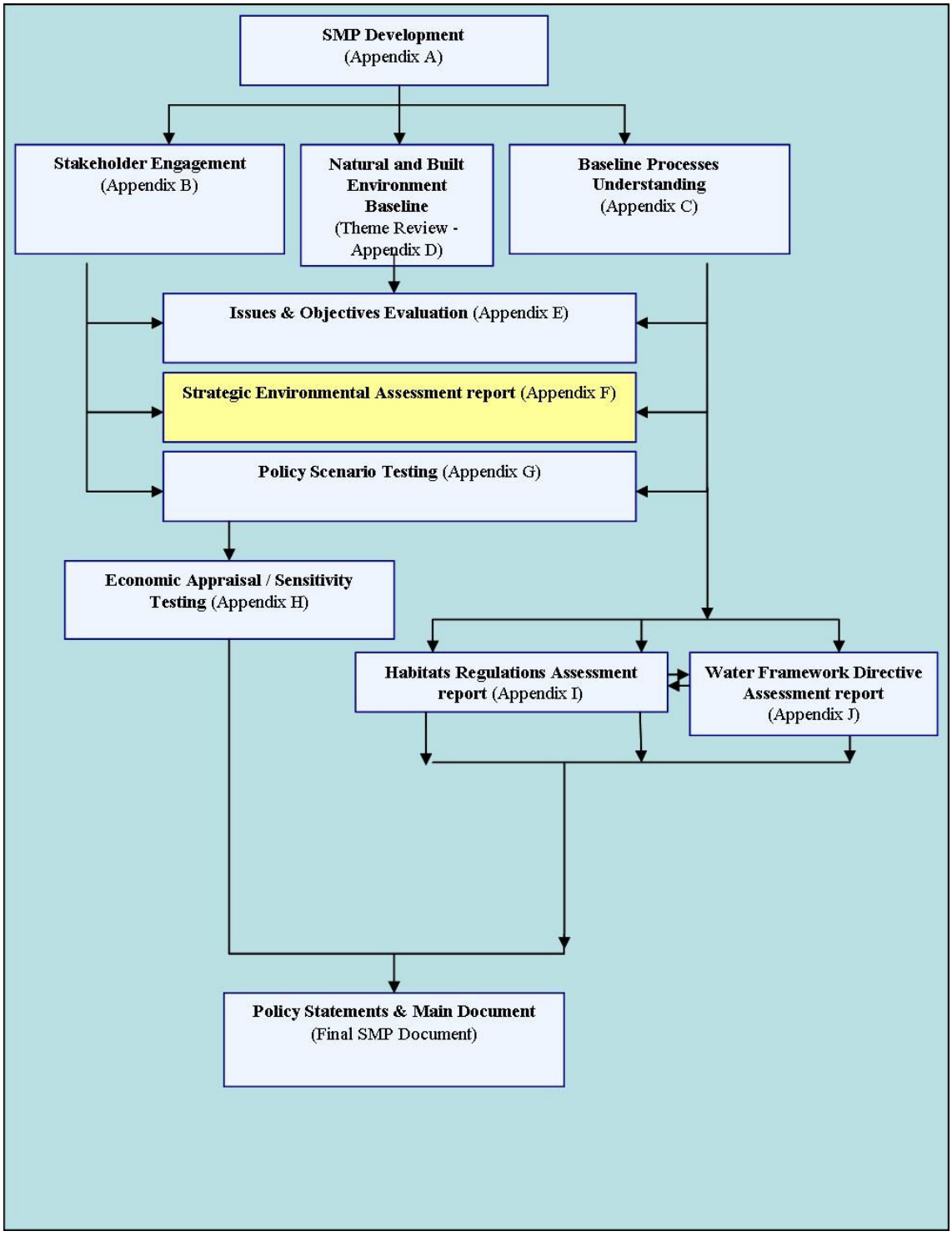
FOREWORD

Royal Haskoning was commissioned to undertake a Strategic Environmental Assessment (SEA) on the first review of the Shoreline Management Plan (SMP2). This appendix and the accompanying Annexes provide all the information required for the SEA process of the Isle of Wight SMP2, and sit alongside the other supporting appendices as shown below:



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NON-TECHNICAL SUMMARY

This is a non-technical summary of the 'Strategic Environmental Assessment' (SEA) process for the second Isle of Wight Shoreline Management Plan (SMP2). This summary describes the background and purpose of both the Strategic Environmental Assessment and the Shoreline Management Plan, and sets out the assessment process for establishing the recommended strategic management options for the Island's coastlines.

Introduction

A Shoreline Management Plan (SMP) is a large-scale assessment of the risks associated with coastal processes and aims to reduce the risks to the social, economic, natural and historic environment through effective and sustainable shoreline management. The SMP aims to manage risk by using a range of methods which reflect both national and local priorities, to reduce the threat of flooding and erosion to people and their property, as well as benefiting the environment, society and the economy in line with the Government's 'sustainable development principles'.

This SMP covers the entire coastline of the Isle of Wight off the southern coast of England, of which almost two-thirds (60%) is open coast and is the remainder (40%) within the five main estuaries. Much of the Island is undefended, with a third protected from tidal flooding and coastal erosion by variety of coastal defences.

The plan includes an SEA to ensure that the recommendations of the final plan are environmentally sustainable and potential opportunities for enhancement are identified, as defined by European legislation. SEA is the appraisal of the potential socio-economic and environmental consequences of strategic high level decision-making. The assessment aims to provide a high-quality level of protection for the environment and to help ensure environmental considerations are integrated into the preparation and adoption of the SMP. Within this assessment process and in a manner similar to that used throughout the SMP process, the term 'environment' has been used to cover the following receptors:

- Human population and communities;
- Land use, infrastructure and material assets;
- Water quality and resources;
- Geology and soils;
- Landscape;
- Biodiversity, habitats and species;
- Historic Environment; and
- Air and climatic factors.

This SEA process has developed two distinct and key documents; a Scoping Report and an Environmental Report (this Appendix). The Scoping Report established an environmental baseline and the key environmental issues for the Isle of Wight coastline. This enabled the development of a series of assessment criteria and indicators, by which the alternative policy options for managing the coastline could be assessed. The Scoping Report then underwent a five week consultation period with the Isle of Wight Shoreline Management Client Steering Group (itself comprised of statutory consultees, including the appropriate local authorities and government agencies). This Appendix, the draft Environmental Report summarises the environmental characteristics of the plan area, identifies a set of proposed environmental objectives and targets for the study based on the identified key environmental issues, assessment criteria and indicators and assess the potential effects of the draft SMP.

Baseline Environment

The following text is a summary of the existing environment within the study area, the key issues, and the scope of the assessment for each environmental receptor.

Human population and communities – It is important to ensure the safe, secure and social/physical well-being for occupants of properties within areas at coastal flood or erosion risk. Population and properties are concentrated around the coastline, for example, Cowes, Ryde, Sandown Bay and Yarmouth. Recreation and tourism on the island is largely centred along the coast, from coastal walking and cycling to birdwatching and water-based activities. The area also attracts visitors to the landscape of the rural environment and historic attractions. Human health (i.e. disease, stress and trauma) was scoped out of the assessment as the impact as a result of tidal flooding/coastal erosion cannot be assessed meaningfully at SMP level.
Land use, infrastructure and material assets - Land around the coast of the Isle of Wight comprises a combination of urban areas, ports and harbours, industry, areas of nature conservation and good/moderate quality agricultural land. Coastal communities on the island are often dependent on key features located outside of the settlement areas. The Isle of Wight is served by a network of ferries, roads and limited rail around the coast, linking coastal towns and communities and that all link to the centre of the island to Newport. The maintenance of this infrastructure is important in regard to the utility it provides for the coastal economy and quality of life. There is potential for some of these networks to be affected by coastal erosion and flooding. Any critical or transport infrastructure not at risk from coastal erosion and tidal flooding has been scoped out.
Water quality and resources - There are numerous estuarine, coastal, freshwater, and groundwater bodies in and around the study area that have the potential to be affected by management of the coast. There is also a need to maintain freshwater supply and the delivery of this supply has the potential to be threatened by intrusion of salt water into freshwater aquifers and from loss of boreholes at risk from erosion. Sites include designated bathing waters, shellfish waters, surface and ground water bodies, as well as historic and active landfill sites, hazardous waste sites and areas of potentially contaminated land.
Geology and soils - There are a number of geologically important areas around the Isle of Wight; these range in their level of importance from national, regional to local. Along the coast there are also areas of good/moderate quality soil that are of agricultural importance. Local geologically designated sites have been scoped out of the assessment as these are considered more applicable to assessment at strategy, scheme or project level rather than at this strategic level. Furthermore, it is usual for these sites to fall within other designated areas such as geological Sites of Special Scientific Interest, which have been scoped into this assessment.
Landscape - The Isle of Wight coast contains a range of nationally and locally important landscapes, with much of the coast being designated for its landscape characteristics. A key issue is the potential for change in the landscape in response to shifts in coastal habitat composition. Changes in landscape character and views within Landscape Character Areas and international or national designated sites (e.g. National Parks, Areas of Outstanding Natural Beauty, Heritage Coasts and Special Landscape Areas (SLA)) have been scoped into the assessment.
Biodiversity, habitats and species - The study area supports a variety of coastal and marine habitats including estuaries, saltmarsh, intertidal mud and sandflats, grazing marsh, saline lagoons, maritime cliffs, rocky reefs and coastal woodland. The quality of these habitats and their associated species are reflected in the number of international, national and local designations. Coastal squeeze, saline intrusion, changes to coastal processes and interruption of natural erosion have the potential to adversely affect the integrity of international (Special Areas of Conservation, Special Protection Areas and Ramsar sites) and national sites (Sites of Special Scientific Interest). Where there will be immediate or future loss of habitat as a result of the management options, alternative sites for habitat creation are required to be identified. Furthermore, it is important to maintain a balance of designated freshwater or terrestrial habitat protected by defences and designated coastal habitat seaward of defences. International and national conservation sites that will not be affected by tidal flooding or coastal erosion have been scoped out of the assessment.

Local Nature Reserves and Sites of Importance for Nature Conservation have also been scoped out of the environmental assessment because they are of local importance and are more applicable to be assessed at strategy or scheme level.
Cultural heritage - The Isle of Wight coast contains a range of historic sites, structures and landscapes that are of international, national and local importance. These archaeological features may be at risk from loss/damage from erosion or inundation within the timeline of the SMP. Sites designated as Scheduled Monuments, Listed Buildings, Conservation Areas, Protected Wecks, and Registered Historic Parks and Gardens have been included in the assessment, whilst non-statutory historic assets / features have not because they are better assessed in more detailed strategies and projects.
Air and Climatic Factors - There are no environmental issues with regards to air quality and thus has been scoped out of the assessment. The long term effects of rising sea levels expected due to climate change could have significant implications for future flood risks to the natural, historic and built environment across large areas of low-lying land in the study area. The plan is driven by climate change and sea level rise; however, climatic factors will not be affected by the recommendations of the plan's policies, and therefore have been scoped out.

Strategic Environmental Assessment Objectives

Following the consultation period, and the provision of feedback by the statutory consultees, SEA objectives were identified for the SMP. These were based on the key environmental features (or assets) and understanding of the strategic environmental issues along the coastline. These objectives have been used to appraise the preferred policy options during the assessment process; these are as follows:

Environmental Receptors	Objectives
Human population and communities	To prevent or minimise loss / damage to residential properties from coastal erosion and flooding.
	To prevent or minimise coastal erosion and flooding to key community assets (doctors, hospitals) and recreation and tourism assets (leisure areas, beaches).
	To prevent or minimise the loss / disruption to public footpaths and cycle routes.
Land use, infrastructure and material assets	To prevent or minimise the loss / damage / disruption to commercial properties and industrial sites.
	To prevent or minimise the loss / damage / disruption to agricultural land.
	Prevent the loss / damage / disruption to transport and service infrastructure.
Water quality and resources	To achieve the Environmental Objectives of the EC Water Framework Directive.
Geology and soils	To prevent or minimise coastal erosion / flood management works that cause the loss / damage to designated geomorphological or geological interest features or significantly interrupt the supply of sediment to other areas around the island.
Coastal landscapes	To protect and enhance the character and quality of the landscape and visual amenity from flooding and flood risk management works.
Biodiversity, habitats and species	Identify and promote biodiversity opportunities to maintain, improve and avoid net loss of internationally and nationally important sites and habitats by sustainably managing coastal erosion and flood risk.
	Promote a balanced approach when maintaining, improving and avoiding net loss of terrestrial, freshwater and coastal habitats.
Historic Environment	To prevent heritage assets (e.g. Scheduled Monuments, Historic Parks and Gardens, Listed Buildings and Conservation Areas) from being lost / damaged by coastal erosion or flooding without implementing appropriate mitigation measures or preservation of evidence by record.

Alternative SMP Policy Options

Four generic coastal management options were considered as part of the SMP. The definitions for these are listed below as defined by Defra (2006):

No Active Intervention (NAI) – where there is no investment in coastal defences or operations.
Hold the existing defence Line (HTL) – by maintaining or changing the standard of protection. This policy covers those situations where work or operations are carried out in front of the existing defences (such as beach recharge, rebuilding the toe of a structure, building offshore breakwaters and so on) to improve or maintain the standard of protection provided by the existing defence line. It also includes operations to the back of existing defences (such as building secondary floodwalls) where they form an essential part of maintaining the current coastal defence system.
Managed Realignment (MR) – by allowing the shoreline to move backwards or forwards, with management to control or limit movement (such as reducing erosion or building new defences on the landward side of the original defences); and
Advance the existing defence Line (ATL) – by building new defences on the seaward side of the original defences. Using this policy should be limited to those policy units where significant land reclamation is considered

A 'with present management' policy was also assessed during the development of the plan. This policy assumes that the present management practices will be continued indefinitely, regardless of whether it is affordable or if there are technical constraints.

An environmental assessment of the alternative policy options on the SEA receptors was carried out. This assessment and a comparison of how well the SEA objectives have been achieved for the various policy scenarios have contributed in identifying the environmentally preferred policy scenarios.

Environmental Impacts of the SMP

The predicted potentially significant impacts associated with the preferred policy options are presented in this appendix, and are summarised for each SEA receptor below:

Human population and communities: There are seven key urban areas where the preferred Shoreline Management Plan policy is to maintain existing defences, since they have been deemed economically viable in the long-term. This will result in a beneficial impact on people, their health and property by protecting the communities and their assets from flooding or erosion. Protection is predominantly focussed upon larger towns, where the highest level of benefit is achieved. The SMP has identified areas where a more naturally functioning coastline would be to the benefit of the natural environment and to estuarine processes. However, there would be potential changes to land and environmental assets should these policies be implemented. Under the recommended policies the great majority of residential and commercial assets will be protected, although the NAI option for the entirety of the south-west coast and the north-east coast will result in increased erosion and flood risk to properties and communities.

Land use, infrastructure and material assets: The SMP has aimed to protect major infrastructure, commercial and industrial areas and material assets for the entire plan's period, where economically viable to do so. This is to minimise risk to commercial property and assets, particularly where they are of great importance to the Island's economy. Infrastructure affected by managed realignment or no active intervention is not strategic and its loss can be relatively easily mitigated at a local level. The time period allows for long term thinking, considering the planned and likely natural development of the shoreline.

The proposed policies are unlikely to affect marine activities with the majority of policies protecting key port, marina and harbour facilities, such as at Yarmouth, Cowes, Ryde, Bembridge and Freshwater. However, where there is a change in management policy and a return to natural processes considered beneficial for European sites, or where a hold the line policy is no longer acceptable economically or technically, there is potential for some impacts on infrastructure. Some re-routing of infrastructure will be required in the medium and longer term under this plan, though not many critical services are likely to be affected. Agriculture represents a relatively important part of the local economy. Though there are some areas of agricultural land that will be exposed to coastal flooding and erosion under managed realignment or no active intervention policies over the plans time period, the cumulative loss of agricultural land due to tidal flooding, saline intrusion and cliff slumping is moderate rather than significant.

Water quality and resources: In most areas around the Isle of Wight, the preferred SMP policy provides protection from flooding or erosion to the majority of potentially polluting features such as landfill sites. The separate Water Framework Directive (WFD) assessment (**Appendix J**) has addressed impacts of proposed policies under the SMP on freshwater, transitional, coastal and groundwater bodies in detail. One coastal water body (Solent) and four transitional water bodies (Medina, Wootton Creek, Eastern Yar and Western Yar) have the potential to fail one of the WFD Environmental objectives as a result of the SMP2 policies within PDZs 1, 2, 3 and 6. Four freshwater bodies (Dodnor Creek, Alverstone Stream, Thorley Brook and Barnsfield Stream) have the potential to also fail to reach/maintain 'Good Ecological Status/Potential' as a result of the SMP2 policies in PDZs 1 and 6. However, these effects are because no active intervention or managed realignment policies will result in saline intrusion within the lower reaches of the rivers, thus allowing the estuarine and riverine systems to act more naturally in the long term.

Geology and soils: The preferred policies of no active intervention or managed realignment have been recommended in areas where there are limited human assets or along areas of undeveloped coastline, which amongst other things ensures the preservation of the geological interests and nationally designated geological sites. The cumulative impact on coastal geology of constraining coastal processes along the shoreline is of minor significance given that only small parts of two geological Sites of Special Scientific Interest (Colwell, and Compton Chine to Steephill Cove) and features of the South Wight Maritime Special Areas of Conservation have been affected.

Landscape: Overall there is no plan to construct new defences in currently undefended areas, therefore most of the coastline which is nationally important for its landscape, with one Area of Outstanding Natural Beauty and the two Heritage Coasts will have negligible cumulative impacts as they will remain as today. The Heritage Coasts mostly span areas that are continuing to be undefended and that will allow a continued natural erosion of varied coastline. The long term aim of the Shoreline Management Plan is to sustain the important coastal communities and allow as much of the island to evolve naturally, therefore there will be significant changes to the landscape due to allowing existing defences to fail and either weather down or be removed. As natural processes are to be allowed where possible, these are assessed as cumulative beneficial effects.

Biodiversity, habitats and species: Along the majority of the Isle of Wight coastline, coastal, intertidal and subtidal habitats are designated under International legislation for their conservation interests. The SMP recommends adopting a no active intervention or managed realignment policy along an increasing area of coastal/estuarine frontage to provide accommodation space for the natural roll-back or increase in extent of these internationally designated intertidal habitats. However, managed realignment policies will result in losses of internationally important terrestrial and freshwater grazing marsh habitat

in some places, for example, Thorley Brook and Barnfields Stream (21.6ha). For this reason, managed realignment has not been an option for Embankment Road in Bembridge Harbour. Where there are areas of undesignated terrestrial and freshwater habitat, no compensation would need to be sought. One opportunity for habitat creation is a policy to manage the sluices under the Wootton Bridge to the Old Mill Pond to allow a gradual change in saline intrusion and tidal exposure. Overall, there will be no significant intertidal habitat losses due to coastal squeeze where holding the line is essential to protect significant urban settlements as sea levels rise. However, based on the losses due to MR at Thorley Brook and Barnfields Stream, it will be necessary to provide 30.9ha of coastal grazing marsh compensatory habitat with approval from Natural England, and which will be sought through the Southern Regional Habitat Creation Programme. The effects of the SMP2 policies on International designated sites are addressed in detail in the Appropriate Assessment of the Habitats Regulations Assessment (see **Appendix I** of this SMP).

Historic Environment: Moderate cumulative adverse impacts on heritage assets are likely, as all policy options cause some adverse impact. Managed realignment and no active intervention will result in flooding or erosion of identified and unknown asset sites and hold the line and managed realignment will result in disturbance of heritage sites as new defences are built and coastal squeeze increases erosion in the foreshore. Nationally designated heritage sites (e.g. Scheduled Monuments) are likely to remain protected, whilst the more ephemeral, non-designated sites are likely to be more sensitive to coastal change and coastal management issues. There is a wide range of heritage assets around the coastline of the Isle of Wight, with many more of these being protected through the SMP policies than would survive under a NAI policy. Significant protected features include the three Scheduled Monuments, Puckpool Mortar Battery, Sandown Barrack Battery and Yarmouth Castle and a large number of Grade I and II* Listed Buildings. Quarr Abbey, a Scheduled Monument is landward of a no active intervention policy frontage and the northern side is at risk of erosion or coastal flooding in the second and third epochs. In addition, Yaverland Fort Battery, a Scheduled Monument on a continuing unprotected coastline within Sandown Bay will start to incurr damages/losses in the second and third epochs. Whilst, the medieval settlement and cultivation remains at Newtown, also a Scheduled Monument continues to be damaged by coastal flooding because the estuary has been left to evolve naturally. These increased risks must be recognised and consideration should be given to an appropriate programme of survey, recording and investigation to record these important sites, and those potential features not yet identified.

Next Steps

The Plan and accompanying documents, including this appendix will be available for public consultation, so that questions and other issues relating to the environmental effects of the plan can be taken on board. Feedback received will shape the finalisation of this report and the evaluation of the environmental effects of the SMP. The final consideration and endorsement of the SMP will be provided in response to these issues.

There are a number of steps required to ensure that the recommendations of the SEA and SMP are taken forward in the short and medium-term, both in land use planning and coastal defence management. Actions to facilitate the implementation of the longer-term policies also need to be initiated as appropriate. Generally, the policy recommendations in the SMP will be implemented through the development of coastal flood risk management strategies, which cover smaller but strategically linked sections of the coast. Subsequently, implementation of coastal flood and erosion risk management schemes will deliver works on the ground. Environmental Statements and Appropriate Assessments (if required) will be prepared at scheme level, and these will be subject to public consultation.

The plan, which will require on-going review, will be informed by further understanding of changes in the environment, policy/legislation changes and environmental assessment. The process of implementation will be underpinned by monitoring of the shoreline to identify ongoing behaviour, together with targeted study and investigation where there are specific uncertainties. Monitoring of environmental receptors such as designated habitats, areas of potential contamination etc will inform environmental assessment at the strategy and scheme level.

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F1 INTRODUCTION AND BACKGROUND

F1.1 Background to Shoreline Management Plans (SMPs)

F1.1.1 Until the 1990's coastal defences were constructed on an ad-hoc basis often over short lengths of coastline (e.g. 1 – 2 kilometres), rather than being planned at a more strategic level over greater lengths of coastline (e.g. over 100's kilometres). The ranges of these coastal defences were usually defined by land ownership and administrative borders. This approach failed to consider the impact of such defences on the adjacent areas of coastline and often resulted in erosion and flood problems further along the coast. In 1994 the Ministry of Agriculture, Fisheries and Food (MAFF) (now the Department for Environment, Food and Rural Affairs (Defra)) responded to the need for a more strategic large-scale approach to the management of coastal erosion and flood risk by requiring that Shoreline Management Plans (SMPs) be in place for any 'operating authority'[1] seeking publically funded grant aid for coastal defence works.

F1.1.2 A SMP is a non-statutory policy document that provides a high level assessment of the coastal change processes (such as erosion and accretion), coastal flooding and associated risks and impacts. These documents present a long term policy framework (i.e. over the next 100 years) to reduce these risks and the consequences of climate change to people and the developed, historic and natural environments in a sustainable manner. The SMPs provide a 'route map' for the management of coastal flooding and erosion risks for a pre-determined length of coast to aid local authorities and other decision makers in the development of their respective coastal defence strategies and subsequent individual coastal defence schemes.

F1.1.3 The first generation of SMPs were completed for the entire coastline of England and Wales approximately ten years ago. These are now under review to ensure that they take account of the latest knowledge, information and understanding of the risks we face in the future. The second generation of SMPs (SMP2s) need to identify sustainable and deliverable solutions to manage risks while working with natural processes wherever possible.

F1.2 The Isle of Wight SMP2

F1.2.1 The Isle of Wight is the largest island within the UK and sits off the coast of Hampshire in the south of England. The Island covers an area of 380.73km^2 (147 square miles), with a coastline of approximately 168km (104 miles) including estuaries (**Figure 1.1**).

F1.2.2 The Isle of Wight SMP2 frontage includes the entire coastline of the Island, of which 60% is coastal and 40% is within the five main estuaries. The majority (64%) of the Island is undefended from tidal flooding and coastal erosion, with only 36% protected by variety of coastal defences.

F1.2.3 The first round of SMPs for the Isle of Wight area was completed in 1997. At the time, Defra guidance suggested that SMPs be reviewed and, if necessary, updated approximately every five years. Thus it is 13 years since the completion of the first Isle of Wight SMP. In March 2005, Defra issued new High Level Targets for Flood and Coastal

[1] Operating Authorities consist of maritime local authorities and the Environment Agency. The maritime local authority (in this case the Isle of Wight Council) has certain permissive powers under the Coast Protection Act 1949 to undertake works to defend the coastline from erosion by the sea (coast protection). Since April 2008, the Environment Agency has the strategic overview for all sea flooding and coastal erosion risk management.

Erosion Risk Management. One of these targets requires 'Operating Authorities' to produce second generation SMPs in accordance with revised Defra guidance and to be completed by March 2010.

F1.2.4 Significant new information is now available as a result of *inter alia* strategic studies, coastal monitoring, coastal defence schemes, climate change studies and changes in environmental designations. Furthermore, since 1997, there have been significant nationally focused studies such as FutureCoast and new indicative coastal flood mapping activity that need to be taken into consideration. Defra has also published updated guidance on how to produce SMPs (Defra, 2006a, 2006b).

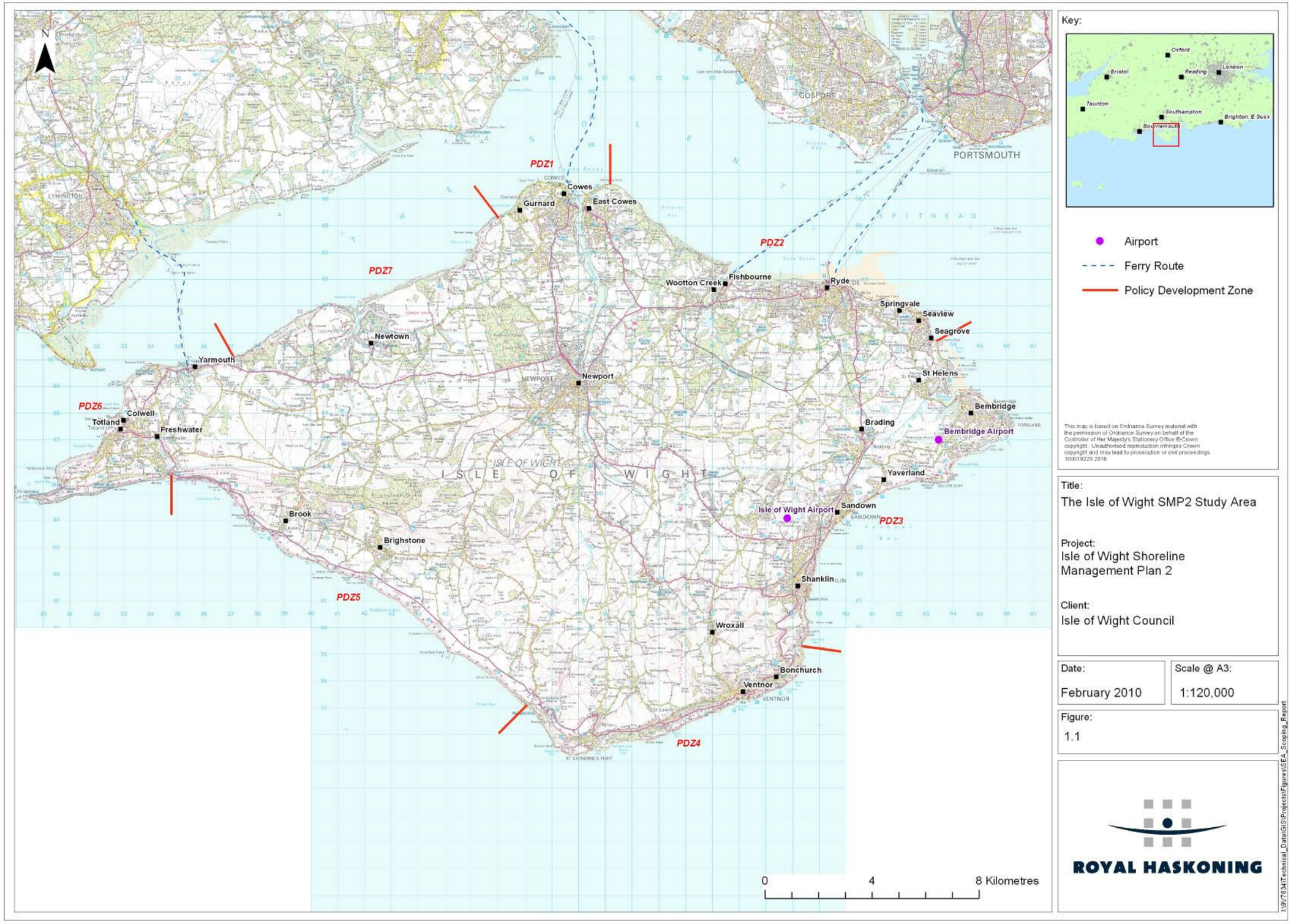
F1.2.5 This report presents the Strategic Environmental Assessment (SEA), which is a key part of the second review process of the Isle of Wight SMP. The purpose of undertaking the SEA is presented in **Section F1.3** below and the methodology for undertaking SEA is explained in **Section F2**.

F1.2.6 The SMP2 will ensure that the long-term sustainability of the shoreline is considered. It will also ensure that clear policies are determined, based on both the original data used in developing the first generation SMP together with the updated data and scientific knowledge. The objectives of the Isle of Wight SMP2 are as follows:

- To support an integrated approach to spatial planning, in particular recognising the interrelationships between:
  - Centres of development and surrounding communities;
  - Human acitivity and the natural and historic environment;
- To contribute to sustainable communities and development:
  - To maintain and support the main centres of economic activity; and
  - To sustain the vitality and support adaptation of smaller scale settlement.
- To maintain the iconic status of the Isle of Wight;
- To minimise reliance on coastal defence and increase resilience of communities;
- To maintain or enhance the high quality landscape;
- To support tourism and recreational opportunities;
- To support the historic environment;
- To avoid damage to and seek sustainable opportunities to enhance the natural environment; and
- To maintain access to and from the Island.

F1.2.7 Seven high level Policy Development Zones (PDZs), as illustrated in **Figure 1.1,** have been developed which incorporate specific sections of the coast. These sections of coastline have been considered with respect to their influence on, and interaction with, other areas of the SMP. Furthermore, each PDZ has been divided into Management Units (MUs), which are themselves divided into Policy Units (PUs). The SMP2 will then determine the preferred shoreline management policy option for each of the PUs for three time periods (referred to as epochs) over the 100 year plan.

Figure 1.1 **Isle of Wight Shoreline Management Plan study area**



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F1.2.8 There are four generic shoreline management policies that are used within SMPs, as presented in **Table 1.1**. The final preferred option, which is proposed for each Policy Unit is appraised based on technical, environmental, social and economic factors, in line with the Government's strategy for managing floods and coastal erosion.

Table 1.1 Shoreline Management Policy Options

No Active Intervention (NAI) – where there is no investment in coastal defences or operations.
Hold the existing defence Line (HTL) – by maintaining or changing the standard of protection. This policy covers those situations where work or operations are carried out in front of the existing defences (such as beach recharge, rebuilding the toe of a structure, building offshore breakwaters and so on) to improve or maintain the standard of protection provided by the existing defence line. It also includes operations to the back of existing defences (such as building secondary floodwalls) where they form an essential part of maintaining the current coastal defence system.
Managed Realignment (MR) – by allowing the shoreline to move backwards or forwards, with management to control or limit movement (such as reducing erosion or building new defences on the landward side of the original defences); and
Advance the existing defence Line (ATL) – by building new defences on the seaward side of the original defences. Using this policy should be limited to those policy units where significant land reclamation is considered

F1.3 Purpose of the Strategic Environmental Assessment (SEA)

F1.3.1 The SEA component of the Isle of Wight SMP2 has been prepared by Royal Haskoning for the Isle of Wight Council for the Coastal Environment (IWCCE) on behalf of the Isle of Wight Council (the only operating authority) and the Environment Agency.

F1.3.2 SEA provides a systematic appraisal of the potential environmental consequences of high-level decision-making (i.e. plans, policies and programmes). By addressing strategic level issues, SEA aids the selection of the preferred options, directs individual schemes towards the most appropriate solutions and locations, and helps to ensure that resulting schemes comply with legislation and other environmental requirements.

F1.3.3 The requirement to undertake SEA derives from the European SEA Directive (2001/42/EC), as transposed into domestic law in 2004 through The Environmental Assessment of Plans and Programmes Regulations 2004 (SI No.1633). These regulations make SEA a mandatory requirement for certain plans and programmes that are likely to have significant environmental effects. The overall aims of this SEA for the SMP2 are to:

- Provide for a high level of environmental protection;
- Ensure that likely significant effects on the environment, as a result of the implementation of the SMP2, are identified, described and evaluated, so that they can be taken into account before the plan is adopted; and
- Evaluate reasonable alternatives for their likely significant effects, taking into account the objectives and geographical scope and the SMP2 policies, so that these can inform the nature and content of the SMP2.

F1.3.4 Defra and the Environment Agency have determined that SMPs (along with CFMPs) are plans that can influence development, and should therefore be subject to the requirements of the SEA Regulations (Defra, 2006a).

F1.3.5 During the preparation of this document we have utilised, where applicable, the following guidance:

- Defra guidance on SEA (2004);
- Internal Environment Agency guidance on SEA of internal Plans and Programmes (2009);
- Environment Agency guidance on SEA (2005);
- A Practical Guide to the Strategic Environmental Assessment Directive – Practical guidance on applying European Directive 2001/42/EC "on assessment of the effects of certain plans and programmes on the environment (Office for the Deputy Prime Minister (ODPM), 2005);
- Coastal Defence and the Historic Environment: English Heritage Guidance (2003); and
- SMP Review and the Historic Environment: English Heritage Guidance (2006).

F1.4 Report Structure

F1.4.1 This appendix documents the staged approach to the SEA process that has been undertaken throughout the SMP planning process and covers:

- **Section 1** – **Introduction and background**: describes the purpose of the SEA with relation to the Isle of Wight SMP2, the SEA Directive, Regulations and Guidance followed, and sets out the structure of the appendix;
- **Section 2** – **SEA Assessment Methodology**: sets out the SEA assessment process, scope of the SEA, assessment methodology, and cross references where in the SMP and this appendix the requirements of the SEA Directive have been reported and complied with;
- **Section 3** – **Strategic and Planning Policy Context**: explains the context of the SEA in the wider planning system and signposts relevant appendices that describes relevant plans and policies;
- **Section 4** – **Environmental Baseline:** explains the link between the SMP terminology and the SEA receptors, summarises the baseline environment and key issues described in the SEA Scoping Report and that detailed in the (Theme Review) '**Appendix D of the SMP**';
- **Section 5** – **Establishing SEA Environmental Objectives**: provides a list of the SEA objectives, assessment criteria, indicators and targets that were used to appraise the preferred SMP policy options;
- **Section 6** – **Consultation**: describes communications and the types of stakeholders involved for the SEA and signposts consultation for the SMP;
- **Section 7** – **SMP Policy Options Appraisal:** describes the generic SMP policy options and their links to policy scenarios that were developed for the SMP and provides a detailed environmental assessment of the alternative policy options;
- **Section 8** – **Environmental Effects of the Preferred Policy Options**: summarises the environmental assessment of the preferred SMP policies and the cumulative environmental impacts and mitigation and opportunities for enhancement. The SEA objectives and an overview as to whether they have been met or not is also presented and summarised;

- **Section 9** – **Mitigation & Monitoring:** summarises the necessary mitigation and monitoring requirements, including consideration of the designated habitats and historic environment sites;
- **Section 10** – **The Next Steps in the SEA Process:** provides details of the next steps to be taken in the SEA process including details for consultation;
- **Section 11** – **References**: lists the references used while preparing this document.
- **Section 12** – **Acronyms, Abbreviations and Glossary of Terms**;
- **Annex F-I** – presents the key plans, policies and programmes that are relevant to the Strategic Environment Assessment of the Isle of Wight SMP2;
- **Annex F-II** – details the consultation responses to the SEA Scoping Report and SEA Environmental Report;
- **Annex F-III** – presents the detailed environmental assessment of the alternative policy options;
- **Annex F-IV** – presents the detailed environmental assessment of the preferred policy options; and
- **Annex F-V** – present the summary of the environmental effects of the preferred plan on each Management Unit around the Isle of Wight.

F2 SEA ASSESSMENT METHODOLOGY

F2.1 SEA Process

F2.1.1 The SEA process follows five stages, which combine the specifics of the SMP development with the stages of an SEA, as set out in the guidance suite (specifically "A Practical Guide to the Strategic Environmental Assessment Directive' (ODPM, 2005)). The key stages of undertaking the SEA are presented below.

SEA STAGE 1 – Screening and Scoping - Setting the context and objectives, establishing the baseline and deciding the scope

- Identify other plans, programmes and environmental protection objectives of relevance - *to establish how the SMP2 is affected by outside factors, to suggest ideas for how any constraints can be addressed, and to help to identify SEA objectives*;
- Collecting baseline information - *to provide an evidence base for environmental problems/issues, prediction of baseline information analysis, setting of the SEA objectives, prediction of effects and monitoring*;
- Identify environmental problems - *to focus the SEA and streamline the subsequent stages*;
- Develop the SEA objectives - *to provide a means by which the environmental performance of the plan or programme and alternatives can be assessed*; and
- Initial consultation with key organisations and statutory consultees on the scope of SEA - *to ensure the SEA covers the likely significant environmental effects of the plan or programme*.

SEA STAGE 2 – Developing and refining policy options and assessing effects

- Testing the plan or programme objectives against the SEA objectives - *to identify potential synergies or inconsistencies between the objectives of the plan or programme and the SEA objectives and help in to identify the preferred policy option*;
- Developing strategic alternatives for the preferred policy options;
- Predicting the effects of the SMP2, including alternatives;
- Evaluating the effects of the SMP2, including alternatives;
- Mitigating adverse effects - *ensure that adverse effects are identified and potential mitigation measures are considered*; and
- Proposing measures to monitor the environmental effects of SMP2 implementation - *detail the means by which the environmental performance of the plan or programme can be assessed*.

SEA STAGE 3 – Preparing the Environmental Report

- To present the predicted environmental effects of the plan or programme, including alternatives in a form suitable for public consultation and use by decision-makers.

SEA STAGE 4 – Consulting on the draft SMP2 and the SEA Environmental Report

- Consulting the public and consultation bodies;
- Assessing significant changes - *to ensure that the environmental implications of any significant changes to the draft SMP2 at this stage are assessed and taken into account*; and
- Making decisions and providing information - *provide information on how the ER and consultees' opinion were taken into account in deciding the final form of the SMP2*.

SEA STAGE 5 – Monitoring significant effects of implementing the SMP2 on the environment

- Developing aims and methods for monitoring – *to track environmental effects of the SMP2 to show whether they are as predicted; to help identify adverse effects*; and
- Responding to adverse effects - *to prepare for appropriate responses where adverse effects are identified*.

F2.2 Screening and Scoping

F2.2.1 The screening of the proposed plan or programme determines whether there is a need for SEA. In the case of SMPs there is no legal requirement to apply the 'SEA Regulations'. However, best practice guidelines, and those of Defra, recommend preparing voluntary SEA for SMPs. It is generally accepted that they help set the framework for future planning and allow a strategic approach towards managing coastal erosion and flooding, as SMPs potentially have significant environmental implications and require extensive consultation.

F2.2.2 A formal Scoping Report (Royal Haskoning, 2010) was prepared and issued to the statutory consultees and key organisations with the request to provide comments on the scope of the SEA (see **Section F6** for further details). The purpose of the Scoping Stage was to identify the environmental receptors likely to be impacted by the SMP2 policies and to clarify the *SEA objectives, assessment criteria,* and *indicators* that have helped provide the basis for the assessment of the policy scenarios, and which will be considered within the course of producing the SMP (see **Section F5**). Comments have subsequently been received and used in finalising the Scoping Report as well as assisting in the structuring of this SEA draft Environmental Report.

F2.2.3 **Table 2.2** summarises the features that have been scoped out of the development of the SMP. Not all of the features/assets around the Isle of Wight are of relevance for the SMP, since it is a plan that only requires a high level of detail. For example, locally important and undesignated nature conservation sites and heritage assets have not been considered further in the environmental assessment as they are regarded as being better assessed at strategy, scheme or project level.

F2.3 Establish SEA Objectives

F2.3.1 A recognised way of considering the environmental effects of a plan and developing sustainable coastal management policies is the identification of agreed SMP wide SEA objectives for developing and appraising sustainable policy options at a later stage in the assessment process.

F2.3.2 The SEA objectives for the SMP were developed along with SEA assessment criteria and indicators for each of the SEA receptors during the Scoping Stage of the study and are described in **Section F5** of this appendix.

F2.4 Baseline Data Collection

F2.4.1 As part of the SEA, baseline data was collected to provide a baseline against which the significant environmental effects of the plan could be measured and assessed. The baseline data identifies the key environmental issues and trends that characterise the area covered by the SMP. An integral part of the SMP development process has been the identification of strategically important environmental issues that need to be addressed by future shoreline management strategies along a particular stretch of coastline, which are fundamental to policy appraisal. These features have been identified through site visits, data review, and consultation with key organisations.

Table 2.1 Scope of the SEA in relation to the Isle of Wight SMP2

SEA ENVIRONMENTAL RECEPTOR	SCOPED IN	SCOPED OUT	RELEVANCE TO SMP (Negative policies)
POPULATION, COMMUNITIES AND HUMAN HEALTH	The impact of tidal flooding and coastal erosion on isolated properties, housing coastal villages, towns, cities and communities.	Human health – disease, stress and trauma as a result of tidal flooding/coastal erosion as it cannot be assessed meaningfully at SMP level.	**NAI/MR policies** could cause flood/erosion risks to people, property, community and recreational facilities and other local services.
	Sites included key vulnerable community facilities, key recreational facilities and access to community/amenity facilities	N/A	
LAND USE, MATERIAL ASSETS / INFRASTRUCTURE	Agriculture, Industry, Recreation and Ports and Harbours	N/A	Agricultural land and industry can be affected by changes in flooding and erosion. Policies of **NAI** or **MR** could result in the damage to or loss of some of these land uses.
	Shops, offices, businesses, factories, warehouses, areas identified for regeneration, nursery grounds, caravan parks, military establishments and other key areas of employment. Critical Infrastructure - Non hazardous waste facility, landfill sites.	Any critical infrastructure or asset not at risk from coastal erosion or tidal flooding has been scoped out.	Within the SMP area, there are 2 authorised landfill sites, seven telephone exchanges. These would be negatively affected by **MR** or **NAI** SMP policies.
	Transport Infrastructure – A, B and minor roads (where linkage is a key issue), railway lines, stations, bridges, ferry links and cycle routes.	Any transport links not at risk from coastal erosion or tidal flooding have been scoped out.	Railway lines and stations in Ryde and Shanklin, A roads along Sandown-Shanklin Bay, from Ventnor to Niton, Military Road, around Yarmouth ports and harbours at Yarmouth, Cowes, Fishbourne, Ryde, Bembridge and Ventnor could be negatively affected by **MR** or **NAI** SMP policies.
AIR QUALITY	N/A	Air quality will not influence or be affected by the recommendations of the SMP2 policies and therefore can be scoped out.	N/A
WATER QUALITY AND RESOURCES	Sites include designated bathing waters, shellfish waters, surface and ground water bodies (transitional & coastal). Historic and active landfill sites and hazardous waste sites as well as areas of potentially contaminated land are also included.	N/A	Within the SMP area, there are 24 bathing waters, 20 shellfish waters, four groundwater bodies, three coastal waterbodies and six transitional (estuaries). **NAI** or **MR** policies would have a negative affect on any diffuse pollution from landfill sites since contaminants could be spread over a wide area if landfill sites are eroded and flooded.

SEA ENVIRONMENTAL RECEPTOR	SCOPED IN	SCOPED OUT	RELEVANCE TO SMP (Negative policies)
GEOLOGY AND SOILS	Sites designated as SSSIs (geological) and by the Geological Conservation Review as being of regional (RIGS), national or international importance.	Local designated geological sites as these are considered more applicable to assessment at strategy or scheme level rather than at SMP level. Furthermore, it is usual for locally important designations to fall within other designated areas such as geological SSSIs, which have been scoped into this assessment.	Within the SMP area, there are 7 geological SSSIs and 40 coastal GCRs. These have the potential to be affected by changes in flooding or erosion, particularly in a negative way by **ATL** or **HTL** coastal management policies.
LANDSCAPE	Changes in landscape character and views within Landscape Character Areas and within sites internationally or nationally designated as National Parks, Areas of Outstanding Natural Beauty (AONB), Heritage Coasts and Special Landscape Areas (SLAs).	N/A	Within the SMP area, there are no National Parks, one AONB, two Heritage Coasts and 11 Landscape Character Areas. **ATL** or **HTL** could have the most negative effects on this SEA receptor.
BIODIVERSITY, HABITATS AND SPECIES	International conservation sites designated as Special Protection Areas (SPA), Special Areas of Conservation (SACs), and Ramsar sites that will be affected by tidal flooding or coastal erosion as a result of the SMP policies. *A Habitats Regulations Assessment for the Natura 2000 sites has been prepared in conjunction with the development of the SMP policy options (**Appendix I**).*	International, national and local conservation sites that will not be affected by tidal flooding or coastal erosion. Local Nature Reserves (LNRs), Sites of Important Nature Conservation (SINCs) and BAP species have been scoped out of the SEA assessment. This is because LNRs and SINCs are of local importance and are more applicable to assess at strategy or scheme level. Also the locations of the BAP species within the SMP are unknown – these should be assessed during subsequent strategies or projects where there is sufficient information.	Within the SMP area, there is one SPA, 5 SACs and 1 Ramsar site. These could be affected by coastal management, in particular in a negative way from **HTL** or **ATL** policies.
	National conservation sites designated as Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs).		Within the SMP area, there are 12 coastal SSSIs and one NNR. These could be affected by coastal management, in particular **HTL** or **ATL** policies.
	Biodiversity Action Plan (BAP) Habitats.		Within the SMP area, there are six Habitat Action Plans, which cover a variety of coastal priority habitats and could be affected by the coastal management policies, in particular by **HTL** or **ATL** policies.
	Freshwater and terrestrial habitats that have the potential to be affected by the SMP coastal management policies.		NAI/MR could have a positive effect on coastal habitats by causing a gain, whilst it could cause a loss in freshwater or terrestrial habitat. There is a difference between loss and gain caused by natural coastal processes and that which is man induced.

SEA ENVIRONMENTAL RECEPTOR	SCOPED IN	SCOPED OUT	RELEVANCE TO SMP (Negative policies)
CLIMATIC FACTORS	N/A	Climatic factors will not be affected by the recommendations of the SMP2 policies and therefore can be scoped out. However, the SMP policies do take into consideration climate change adaptation through Defra's recommended allowances for sea level rise.	N/A
HISTORIC ENVIRONMENT	Sites designated as Scheduled Monuments, Listed Buildings, Conservation Areas, Protected Wrecks and registered Historic Parks and Gardens.	Non-statutory heritage assets.	Within the SMP area, there are 120 Scheduled Monuments, 1951 listed buildings, 7 Grade II and one Grade II* Registered Parks and Gardens, and 32 built Conservation Areas.

F2.4.2 All economic, environmental and social assets or features of 'strategic' importance were identified around the Isle of Wight coastline together with any key issues and benefits that may be important, particularly to stakeholders, or that may influence policy decision-making during the SMP appraisal process. A qualitative description was provided regarding issues along the coastal frontage where there may be conflicting interests in terms of coastal management. Consideration has also been given to other plans and projects that may be relevant to the coastline (see **Section F3** for more details).

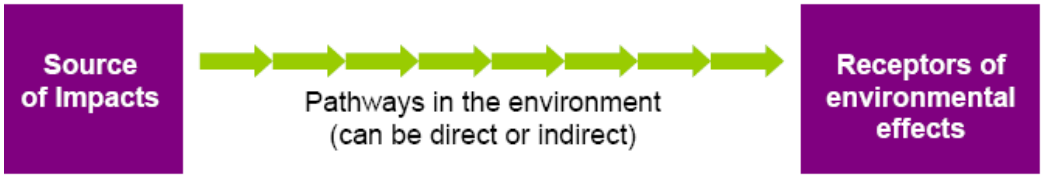
F2.4.3 The features or assets at risk of tidal flooding or erosion were identified using indicative erosion and flood risk zones.

F2.5 Assessment Methodology

F2.5.1 The process of assessment involves the identification of potential environmental effects and an evaluation of the significance of the predicted environmental effects; this process is described below.

F2.5.2 To assess the possible and likely environmental effects of implementing the SMP, we have adopted an evidence based expert judgement system. This approach is based on the widely accepted Source-Pathway-Receptor model (SPR) (**Figure 2.1**). Determination of the effect is based on examining the sources of effect that may occur (physical, chemical or biological), the pathway (or route) by which the effect could influence a receptor (e.g. direct footprint disturbance or indirect coastal process change), and the receiving environment or resource (the receptor).

Figure 2.1 The Source-Pathway-Receptor model as applied to SEA



F2.5.3 The appraisal will be a qualitative exercise supported by peer-reviewed literature where possible. It is important to stress that given the nature of SMP policy, which is high level and therefore lacks the detail of an actual scheme, the assessment will be based on established effects wherever possible, but will rely heavily on expert judgement of anticipated effects. This assessment will be based on available information and will have regard to the relatively abstract nature of SMP2 policy (in comparison to scheme level data). The methodology and appraisal used to identify and predict environmental effects on the SEA receptors and environmental features identified, arising from the SMP is outlined below.

Identification of Impacts

F2.5.4 Following the principles of 'Making Space for Water' (a Defra strategy to improve flood and coastal erosion risk management both for now and in the future in England only), the methodology initially appraised a policy of no active intervention (NAI) around the coastline (see **Appendix C**). The implications of NAI and the alternative policies (hold the line, advance the line and managed realignment) on the features and issues identified were analysed to determine the potential environmental effects on the SEA receptors.

Significance of Impacts

F2.5.5 Significance of impact refers to the product of impact magnitude and receptor sensitivity. The performance of each SMP2 policy against each assessment criterion will be given a

significance classification in addition to a short descriptive summary (e.g. widespread negative effects with no uncertainty). Non strategic impacts and issues not considered to be significant at SMP level were not considered in the SEA.

F2.5.6 For each SMP2 policy, the assessment includes a more comprehensive rationale of the judgment process used for determining the environmental effects and likely significance of each SMP2 policy. In particular, the following considerations will be paramount in determining environmental effect and likely significance:

- Value and sensitivity of the receptors;
- Is the effect permanent / temporary;
- Is the effect positive / negative;
- Is the effect probable / improbable;
- Is the effect frequent / rare;
- Is the effect direct / indirect; and
- Will there be secondary, cumulative and / or synergistic effects.

F2.5.7 The Environmental Report will identify the likely significant positive or negative effects of the proposed policies on the relevant **SEA objectives** (including positive and negative, direct, indirect, short, medium and long-term, permanent and temporary effects). Using this information, in broad terms, impacts have been classified as either beneficial or adverse, with the descriptor of 'minor' or 'major' used to denote whether the impact is significant or not significant based on particular criteria. **Table 2.2** details the significance criteria for each of the broad terms.

Table 2.2 Significance criteria to be used in the assessment of impacts

Score	Description
Major (Significant) Beneficial ✓✓✓	The policy is likely to lead to a beneficial impact on nationally (or internationally) important parameters, or a significant achievement of the SEA objectives. The positive impacts may be short-term large-scale or long-term and national in scale. In addition, significant cumulative and indirect positive impacts are likely within and outside the Isle of Wight SMP2 area.
Moderate Beneficial ✓✓	The policy is likely to lead to a beneficial impact on regionally important parameters, or a moderate achievement of the SEA objectives, or a significant positive impact of local scale. The positive impacts may be short-term large-scale or long-term and regional in scale. Positive cumulative impacts would arise between local areas or a number of parameters.
Minor Beneficial ✓	The policy is likely to lead to a beneficial impact to locally important parameters, or a minor achievement of the SEA objectives. Impacts would be short and long-term, or could be moderate negative impacts in the short-term. There may be limited if any cumulative or indirect impacts within the Isle of Wight SMP2 area.
Neutral O	The policy would have no positive or negative impacts or change to the objective in either the short or long-term. A neutral score arises when there is a fair degree of certainty that no positive or negative impact is predicted, or where an impact would be dependent on the location of the measures of such a policy.
Minor Adverse ✖	The policy is likely to lead to an adverse impact to locally important parameters, or a minor reduction to the SEA objectives. Impacts would be short and long-term, or could be moderate negative impacts in the short-term. There may be limited if any cumulative or indirect impacts within the Isle of Wight SMP2 area.

Score	Description
Moderate Adverse **	The policy is likely to lead to an adverse impact on regionally important parameters, or a moderate reduction of the SEA objectives. Impacts would be short and long-term, or could be significant negative impacts in the short-term. The policy may have limited cumulative and indirect impacts within a project area.
Major (Significant) Adverse ***	The policy is likely to have an adverse impact on nationally (or internationally) important parameters or a series of long-term small scale (cumulative) impacts. The policy is likely to significantly disrupt the achievement of the SEA objectives. Indirect impacts may also extend outside the Isle of Wight SMP2 area.

Data gaps and uncertainty

F2.5.8 The SEA for the SMP is a high level assessment covering a large geographical area and a long timescale (i.e. 100 years), and uncertainty is therefore inherent. A number of uncertainties exist, for example, with regard to the coastal processes, sediment transport pathways, and the level of coastal erosion within the estuaries over time. An awareness of the limitations and uncertainties involved with SEA is important when undertaking decision-making.

F2.5.9 Potential environmental effects of the strategic options have been predicted and evaluated based upon the best available knowledge of the existing environment. SEA is an iterative process and as such the decisions made should be reviewed on a regular basis (e.g. after 5 years) with the best available knowledge at that time, and also at strategy, scheme and project level. Uncertainty can also be addressed through a programme of monitoring and this needs to be incorporated into the Action Plan produced with completion of the SMP.

F2.5.10 Data gaps in the SEA relate to the strategic level of assessment. Although detail of some local level and non-statutory designations were included in the baseline environment (e.g. **Appendix E 'Issues and Objectives'** and **SEA Scoping Study**), it has been decided that assessment taking these into consideration is more appropriate for strategy study and scheme level (refer to **Table 2.1** and **Appendix G 'Scenario Testing'**).

Selection of Preferred SMP Policy Scenarios

F2.5.11 The selection of the preferred SMP policy scenarios is based on the appraisal of policy scenarios. An explanation and justification for the selection of non-environmentally optimal policy scenarios on the basis of technical or economic and infrastructure and community grounds are also provided in **Appendices G** and **H**.

Cumulative Effects

F2.5.12 The SEA Directive requires the analysis of cumulative effects of the strategic options on the environment (see **Section F8** of this Appendix).

Mitigation

F2.5.13 Where potential adverse effects on the environment are identified at the assessment stage, clear measures for mitigation will be specified. Such measures will be included within the SMP Action Plan and the Post-Adoption Statement.

F2.5.14 Mitigation measures were identified for inclusion in the assessment process, and included avoidance and measures to minimise adverse effects (see **Section F9** of this Appendix). The combined use of mitigation and monitoring will ensure that anticipated environmental effects are prevented and unexpected effects accounted for.

F2.6 Consultation

F2.6.1 In addition to the consultation for the SEA, the Isle of Wight SMP has followed the procedures for consultation specified in the SMP guidance, with consultation having been undertaken with a wide variety of statutory and non-statutory stakeholders and consultees.

F2.6.2 The approach to consultation is further discussed in **Section F6** 'Consultation' of this Appendix. A full account of the consultation and the responses to feedback so far in the process are provided in **Appendix B** of the SMP.

F2.7 Reporting

F2.7.1 The SEA has been integrated (in process terms) into the SMP and this report describes how the Isle of Wight SMP achieves the requirements of the 2004 SEA Regulations. The results of the SEA process are documented in this report, which identifies, describes and evaluates the likely effects of the SMP as well as any reasonable alternatives. It sets out how alternative policy options have been appraised against environmental objectives and identifies and evaluates likely environmental effects, both positive and negative, of preferred policy options. It sets out how adverse effects can be mitigated and describes recommended follow up actions.

F2.8 Monitoring

F2.8.1 The key principles of monitoring are to ensure that the mitigation measures are implemented and effective and also to monitor the potentially significant environmental effects identified during the assessment.

F2.8.2 **Section F9** discusses the proposed monitoring of the predicted environmental effects of the plan, which have been reflected and incorporated into the **SMP Action Plan**.

F2.9 SEA Compliance

F2.9.1 To meet the requirements of the SEA Directive, a SEA compliance table (**Table 2.3**) is provided below, which is sub-divided into sections detailing the key requirements of the SEA Regulations and where this information can be located (or is signposted to other SMP documents) within the SEA appendix.

Table 2.3 SEA Compliance Table

Environmental Report Requirements	Location of information within this SEA Appendix
(a) an outline of the: • Contents; • Main objectives of the plan or programme; and • Relationship with other relevant plans and programmes.	• Table of Contents • Section F1 – Introduction and Background (objectives of the SMP) • Section F3 – Strategic and Planning Context • Annex FI – Key Plans, Policies and Programmes
(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	• Section F4 – Environmental Baseline • Annex FIII – Detailed Environmental Assessment of Alternative SMP Options
(c) the environmental characteristics of areas likely to be significantly affected;	• Table 2.1 in Section F2.4 – Baseline Data Collection • Section F4 – Environmental Baseline

Environmental Report Requirements	Location of information within this SEA Appendix
(d) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas, designated pursant to Directives 79/409/EEC (now 2009/147/EC) and 92/43/EEC;	• Section F4 – Environmental Baseline
(e) the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;	• Section F5 – Establishing SEA Environmental Objectives
(f) the likely significance effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationships between the above factors;	• Section F7 – SMP Policy Options Appraisal • Section F8 – Environmental Effects of the Preferred Policy Options
(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	• Section F8 – Environmental Effects of the Preferred Policy Options • Section F9 – Mitigation and Monitoring • Annex FIV - Detailed Environmental Assessment of Preferred Policy Options
(h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	• Section F2.5 Assessment Methodology – Data gaps and uncertainty • Section F8.1 – The Preferred Policy Options • Section F8.2 – Environmental Assessment of the Preferred Plan
(i) a description of the measures envisaged concerning monitoring in accordance with Article 10;	• Section F9 – Mitigation and Monitoring
(j) a non-technical summary of the information provided under the above headings.	• Non-Technical Summary

F3 STRATEGIC AND PLANNING POLICY CONTEXT

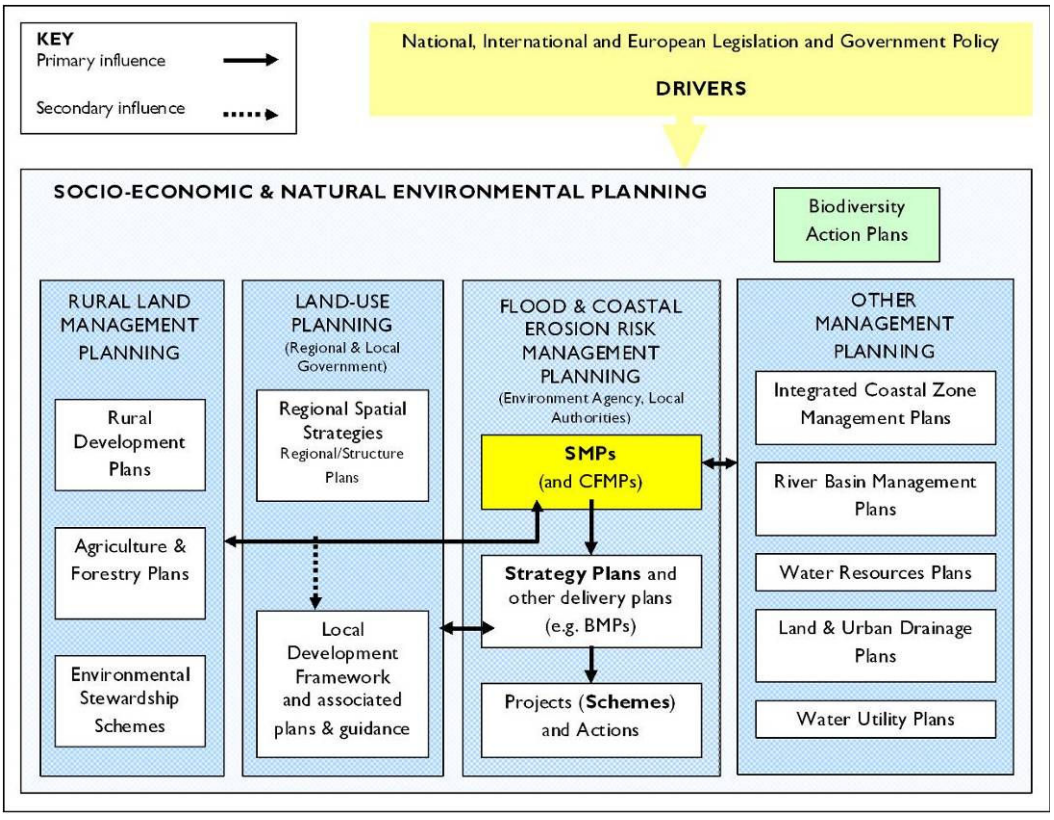
F3.1 SMP and the Planning System

F3.1.1 In order to determine the legislative, strategic, planning and policy context within which the SMP2 is being developed, all the policies and local planning legislation needs to be identified and considered (refer to **Annex FI**).

F3.1.2 First it is necessary to illustrate the context of the SMP in relation to spatial development and other plans that may impact, or be impacted by, agreed SMP policies. The need for SMPs and other socio-economic and natural environmental planning is driven by legislation at international, community and European Member State level. **Figure 3.1** illustrates that SMPs, which deal with the risks of coastal flooding and erosion, are high-level management plans that sit alongside Catchment Flood Management Plans (CFMPs), which deal with the risks of fluvial flooding. SMPs and CFMPs are then used to guide 'Strategy Plans' such as Beach Management Plans (BMPs), Estuary Management Plans (EMPs) and Coastal Defence Strategies. Information from the SMPs are important drivers of rural land management planning, for aiding local land-use planners (e.g. Local Development Frameworks), as well as a variety of other management plans such as Coastal Zone Management Plans and River Basin Management Plans. Additional information is provided in **Appendix D** of the SMP report, which sets out future land use and planning targets, .

F3.1.3 SEA is driven by the European SEA Directive 2001/42/EC, which has been implemented into the Environmental Assessment of Plans and Programmes Regulations 2004. The aim is to achieve systematic assessment and incorporation of environmental considerations into strategic level (regional and local) plans and programmes (and policies and strategies where deemed necessary). Environmental Impact Assessment (EIA) on the other hand deals with assessing the specific effects of local level schemes or projects.

Figure 3.1 SMPs in context with the Planning System



Source: Halcrow (2010)

F3.1.4 Furthermore, this SEA must ensure the consideration of other international environmental legislation that is specificed in the SEA Directive (see **Annex FI** for details). This refers to the compliance with the Water Framework Directive (WFD) 2000/60/EC, and with the Habitats Directive 92/43/EEC and Birds Directive 2009/147/EC, for which there are two separate assessments for the SMP – **Appendix I** (Habitats Regulations Assessment) complies with the Habitats and Birds Directive and **Appendix J** (WFD Assessment) complies with the WFD.

F3.2 Policy Appraisal Methodology

F3.2.1 The review of these policies, plans and programmes is essential in ensuring that the SMP2 achieves an integrated and sustainable approach to coastal management. As such, there is significant overlap with a number of existing and on-going plans and strategies at various scales.

F3.2.2 The policies, plans and programmes collected as part of the SEA are given in detail in the SEA Scoping Report (Royal Haskoning, 2010). These plans were selected for their potential to be influenced by or have influence over the SMP2. Any plans with conflicting or complementary objectives to those of the SMP and SEA will be considered. The available policies, plans and programmes have been reviewed in order to identify the key environmental and sustainability influences, trends and issues, and to aid in the identification of the relevant SEA objectives and targets.

F4 ENVIRONMENTAL BASELINE

F4.1 Study Area

F4.1.1 The boundary of the Isle of Wight SMP2 is contained within a major sediment cell that extends from Portland Bill to Selsey Bill (SMP Subcell 5). The total length of coast, including the estuaries within the SMP2 is 168 km (104 miles), of which 60% is coastal and 40% is within the five main estuaries (**Figure 1.1**). The majority of the Island is undefended (64%), with 36% protected from tidal flooding and coastal erosion by variety of coastal defences.

F4.1.2 The SMP guidance requires that the SMP is developed in response to a consideration of the environmental features of the coast, features which need to be assessed to determine the nature and characterisation of the coast. This SEA has considered the key features and characteristics of the study area that would influence decisions at a strategic level. As such, it is less detailed and quantitative than an EIA and is focused on broad directions of change. SEA guidance identifies a series of environmental receptors, which should form the initial basis and scope of the SEA (Defra, 2004; ODPM, 2005). The receptors are the environmental features which may be impacted by the effects of the SMP; however, there is a difference of language between the building block of the SEA and the SMP. It is therefore necessary to clarify how SMP features relate to SEA receptors, and to then establish how the SMP may impact on the receptors. **Table 4.1** shows how *SEA receptors* relate to the SMP terminology used within the SMP, in particular **Appendix E**, the Issues and Objectives tables and **Appendix D**, the Theme Review, both of which have been prepared and consulted on with the Client Steering Group (CSG). Furthermore, **Table 4.1** indicates how the SMP documentation describes the baseline information to SEA Directive requirements.

Table 4.1 The link between SEA and SMP Terminology

SEA Receptors	SMP Terminology	Location of Baseline Information
Human Population, Communities & Health	Current and Future Land Use / Built Environment / Amenity & Recreation Use / Property & Land Use	SMP Section 4, Theme Review (Appendix D), Baseline Process Understanding (Appendix C1 – Flooding Risk)
Land Use, Infrastructure, Material Assets		
Water	Coastal Processes	SMP Section 4, Theme Review (Appendix D), Baseline Process Understanding (Appendix C1)
Geology & Soils		
Landscape	Landscape	Theme Review (Appendix D)
Biodiversity, Habitats & Species	Nature Conservation	SMP Section 4, Theme Review (Appendix D)
Climatic Factors	Climate Change & Sea Level Rise	Baseline Process Understanding (Appendix C1)
Historic Environment	Heritage / Historic Environment	SMP Section 4, Theme Review (Appendix D)

F4.1.3 The SEA Regulations require that for each specific environmental receptor, an initial appraisal is provided relating to how the SMP may impact it. The SEA receptors developed for the Isle of Wight SMP have been altered slightly from those identified in the SEA Regulations due to the nature of the SMP process and its application; hence, 'biodiversity, fauna and flora' has been renamed, 'biodiversity, habitats and species'. The assessment of impacts upon these receptors can be better described by this division.

F4.2 Baseline Environment Summary and Key Environmental Issues

F4.2.1 The Isle of Wight coastline is diverse in physical form, human usage and natural environment; examples of the diverse features of the coastline are illustrated below:

- There are key economic and commercial centres along the Medina Estuary at Cowes, East Cowes and Newport;
- The majority of the Island's residential communities are along the coastline;
- There are vital marine transport gateways to the island (Yarmouth, Cowes, East Cowes, Ryde and Fishbourne);
- There are important tourism centres at Ryde, Sandown, Shanklin and Ventnor;
- The island presents geological, geomorphological and biological diversity, with many areas designated for their international, European and national importance:
    - The north coast comprises soft slumping eroding cliffs, sheltered estuarine creeks and harbours, floodplains, coastal grazing marsh, saltmarsh, seagrass and intertidal mud and sand flat habitats; and
    - The south coast provides for a combination of high Chalk cliffs and slumping soft cliffs with grassy slopes, with diverse intertidal and subtidal rocky reefs and caves at their base.
- Illustrations of historic landscape and environment are present around the entire coastline; and
- There are examples of nationally and locally important land and seascapes, including an AONB and two Heritage Coasts.

F4.2.2 As mentioned in **Section F2.4** above, information and data was collected to provide a baseline against which the significant environmental effects of the plan could be measured and assessed; this included collating a large proportion of information from existing SMP material (see **Table 4.1**) and presenting it in the SEA Scoping Report (Royal Haskoning, 2010). The baseline data has assisted in identifying the key environmental issues and trends that characterise the area covered by the SMP; these are summarised in **Table 4.2**.

Table 4.2 Environmental Issues within the SMP area

SEA Receptor	Designations	Environmental Issue
Human population and communities	N/A	It is essential that there is safe, secure and social/physical well-being for occupants of properties within areas at coastal flood or erosion risk. Population and properties are concentrated within the towns of Newport, Cowes, Ryde, Sandown, Shanklin, Ventnor, Freshwater, Colwell, Totland and Yarmouth. Recreation and tourism on the Isle of Wight is largely centred on the coast, from coastal walking, cycling, birdwatching and water-based activities. The area also attracts visitors to the landscape of the rural environment and historic attractions.
Land Use, Material Assets and	N/A	Much of the land around the coast of the Island comprises a combination of urban areas, ports and harbours, industry, areas of nature conservation and

SEA Receptor	Designations	Environmental Issue
Infrastructure		good/moderate quality agricultural land. Coastal communities on the Isle of Wight are often dependent on key features located outside of the settlement areas. There is a need, therefore, to ensure that features which support communities are maintained, or the actual utility is maintained. The Isle of Wight is served by a network of ferries, roads, cycle and footpaths around the coast, linking coastal towns and communities and that all link to the centre of the Island to Newport. The maintenance of these roads, foot and cycle paths are important in regard to the utility it provides for the coastal economy and quality of life. The variety of infrastructure and material assets, as well as areas of commercial and community land has the potential to be at risk from policy decisions on how the coast is protected.
Water Quality and Resources	Coastal (3), Transitional (6), Freshwater (33) and Groundwater (4) bodies. These water bodies have been assessed separately under the Water Framework Directive (WFD) assessment (**Appendix J**).	There are a number of transitional and coastal (TraC), freshwater (FWB), and groundwater (GWB) bodies in the SMP area that have the potential to be affected by the SMP policies. Biological Quality Elements (BQEs) within the transitional and coastal water bodies such as saltmarsh, seagrass, infauna and fish could be affected by the SMP policies. Furthermore, there is a need to maintain water supply and the delivery of this supply has the potential to be threatened by intrusion of salt water into freshwater aquifers and from loss of boreholes at risk from erosion.
Geology and Soils	***Geological SSSIs*:** Bembridge Downs, Bonchurch Slips, Bouldnor and Hamstead Cliffs, Compton Chine to Steephill Cove, Headon Warren and West High Down, Thorness Bay, Colwell Bay, Brading Marshes to St. Helen's Ledges, and Compton Down.	There are a number of geologically important areas around the Isle of Wight; these range in their level of importance from national to local. Along the coast there are also areas of good/moderate quality soil that are of agricultural importance. The SMP policies could have an affect on the integrity of the geologically important areas, as well as soil quality.
Landscape	***Area of Outstanding Natural Beauty:*** Isle of Wight (5 locations) ***Heritage Coasts:*** Tennyson (Ventnor to Totland) and Hamstead (Bouldnor to Thorness Bay) ***Landscape Character Areas:*** Chalk Downs, Harbours & Creeks, Intensive Agricultural Land, Northern Coastal Cliffs, Northern Woodlands, Osborne Coast, Sandstone Hills & Gravel Ridges, Southern Coastal Farmland, The Undercliff, Traditional Enclosed Pasture Land, and Settlement.	The Isle of Wight coast contains a range of nationally and locally important landscapes, including historic landscapes, with much of the coast being designated for its landscape characteristics. A key issue is the potential for change in the landscape in response to shifts in coastal habitat composition as a result of the SMP policies, as well as the potential of defence raising to obscure landscape and seascape views.

SEA Receptor	Designations	Environmental Issue
Biodiversity, Habitats and Species	***SPA/Ramsar:*** Solent and Southampton Water. ***SAC:*** Solent Maritime, Briddlesford Copses, Solent and Isle of Wight Lagoons, South Wight Maritime, and Isle of Wight Downs. ***National Nature Reserves:*** Newtown Harbour ***SSSIs:*** Bembridge Downs, Bonchurch Slips, Bouldnor and Hamstead Cliffs, Brading Marshes to St. Helen's Ledges, Briddlesford Copses, Colwell Bay, Compton Down, Compton Chine to Steephill Cove, Headon Warren and West High Down, King's Quay Shore, Newtown Harbour, Ryde Sands and Wootton Creek, Thorness Bay, Whitecliff Bay and Bembridge Ledges, and Yar Estuary. ***Habitat Action Plans :*** Maritime Cliffs and Slopes, Solent Coastal, Wetland, Woodland, Heathland and Acid Grassland, and Lowland Meadows. The SPA/Ramsar and SACs have also been assessed separately within the Habitats Regulations Assessment (HRA) (**Appendix I**).	The study area supports a variety of coastal and marine habitats. The key habitats and interest features described in citations include the following: Estuaries, intertidal saltmarsh, intertidal mudflats, sandflats, brackish / freshwater grazing marsh, saline lagoons, rocky reefs, seagrass beds, maritime cliffs, coastal woodland, dry grasslands, sand dunes, Chalk cliffs, vegetated shingle, Annex I species – Mediterranean gull, Bechstein's bat, internationally important numbers of wintering waterfowl; The quality of these habitats and their associated species are reflected in the number of international, national and local designations; these include five SACs, one SPA and Ramsar site and numerous SSSIs. The choice of SMP policy can affect the integrity of these designated sites through coastal squeeze, changes to coastal processes, SSSIs falling into unfavourable condition, and loss of EU Annex I priority habitats and UK Biodiversity Action Plan (BAP) habitats and species. Alternative sites for habitat creation would be required to help offset the possible future man-induced losses. Targets exist for the creation of UKBAP habitat at a local (LBAP) and national level (UKBAP). There are opportunities to create coastal habitat in low-lying parts of the SMP study area.
Historic Environment	There are 120 Scheduled Monument (SM), 1971 Listed Buildings (LBs), of which 29 are Grade I Listed (major national importance) and 60 are Grade II* Listed, 32 Built Conservation Areas, eight Registered Parks and Gardens (one Grade II*, seven Grade II) and two Protected Wrecks: Needles (1753-1811) and Yarmouth Roads (1567).	The Isle of Wight coast contains a range of historic sites, structures and landscapes that are of international, national and local importance. These archaeological features may be at risk from loss/damage from erosion or inundation within the timeline of the SMP.

F5 ESTABLISHING SEA ENVIRONMENTAL OBJECTIVES

F5.1.1 SEA objectives for the SMP have been developed following the identification of the key environmental features (or assets) and an understanding of the strategic environmental issues along the coastline. SEA objectives were identified for the SMP to appraise the preferred policy options during the assessment process. Where possible, suitable assessment criteria and indicators have been identified, as these provide the objective and quantifiable assessment of the policies and would also be used for monitoring of the SMP2 policies. Some indicators provide information and "judgement" on the success or lack of for a number of objectives.

F5.1.2 The SEA environmental objectives differ a little from both the high-level SMP objectives that are described in **Section F1** and the appraisal objectives developed for each PDZ. The differences however, are only because of different SMP/SEA terminology, but are compatible. The SEA objectives are based on the SEA receptors described in the EU SEA Directive (2001/42/EC). The SEA objectives, assessment criteria and indicators are given for each SEA receptor in **Table 5.1**.

Table 5.1 SEA Objectives, Assessment Criteria, Indicators and Targets for the Isle of Wight SMP2

ID	SEA Objectives	Assessment Criteria	Indicators	Targets
POPULATION, COMMUNITIES AND HUMAN HEALTH				
A	**To prevent or minimise loss / damage to residential properties from coastal erosion and flooding.**	• Will the SMP policy maintain key coastal settlements in a sustainable manner, where the impact of coastal flooding and erosion is minimised and time given for adaptation, where required?	• Number of new developments located in unsustainable coastal locations.	• Reduce the number of residential properties within the coastal flood zone and in close proximity to coastal cliffs. • Maintenance and provision of appropriate standard of protection for key coastal communities.
B	**To prevent or minimise coastal erosion and flooding to key community assets (doctors, hospitals) and recreation and tourism assets (leisure areas, beaches).**	• Will the SMP policy maintain key recreational and tourism areas and assets, which are essential to the economy and quality of life of key coastal settlement?	• Number of key community assets (that maintain the function or utility of the communities) that are at risk from coastal flooding and erosion. • Number of key recreation and tourism areas at risk from coastal flooding and erosion.	• Reduce the number of community, recreation and tourism assets within the coastal flood zone and in close proximity to coastal cliffs.
C	**To prevent or minimise the loss / disruption to public footpaths and cycle routes.**	• Will SMP policy maintain or enhance levels of access along or to the coast and estuaries for walking and cycling?	• Loss of any rights of way on the coast and around estuaries of the Island.	• Relocate rights of way at risk from coastal erosion that could be a health and safety risk.

ID	SEA Objectives	Assessment Criteria	Indicators	Targets
LAND USE, MATERIAL ASSETS / INFRASTRUCTURE				
D	**To prevent or minimise the loss / damage / disruption to commercial properties and industrial sites.**	• Will the SMP policy protect commercial properties / industry, ports and harbours?	• Number of commercial properties / industry, ports and harbours within the coastal plain and at risk of coastal flooding and erosion.	• Reduce the number of commercial / industrial businesses within the coastal flood zone.
E	**To prevent or minimise the loss / damage / disruption to agricultural land.**	• Will the SMP policy maintain the form of land use?	• Loss / damage / reduced potential of land for agriculture.	• Reduce the extent of agricultural land whose management is reliant on coastal protection schemes.
F	**Prevent the loss / damage / disruption to transport and service infrastructure.**	• Will the SMP policy protect the access points for ferry links across the Solent? • Will the SMP policy maintain road based transport connectivity between settlements around the Island?	• Loss of ports that are the links to the mainland. • The number of major routes to coastal settlements on the coast affected by coastal flooding or erosion. • The number of infrastructure and service assets within the flood zone or in close proximity to coastal cliffs.	• Sustainably maintain links with the mainland. • Reduce disruption to transport links. • Reduce infrastructure and service assets within the coastal flood zone and close proximity to coastal cliffs.
WATER QUALITY AND RESOURCES				
G	**To achieve the Environmental Objectives of the EC Water Framework Directive.**	• Will the SMP policy adversely affect the water quality of the TraC, FWB and GWBs? • Will the SMP policy adversely affect abstraction infrastructure? • Will the SMP policy protect landfill sites and hazardous waste sites along the coast?	• Adverse changes in water quality of designated water bodies (to be established in the WFD assessment of the Isle of Wight SMP2). • Contamination of freshwater aquifers from saltwater. • Spread of pollutants from landfill sites and hazardous waste sites.	• The continuity of the five estuaries/creeks on the Isle of Wight is not disturbed / detrimented by anthropogenic activities and allows undisturbed migration of aquatic organisms and sediment transport. • The level of diversity and abundance of phytoplankton, macroalgae, angiosperms, benthic invertebrates and fish is improved in transitional and coastal waterbodies. • No deterioration of groundwater and freshwater bodies resulting from saline intrusion.

ID	SEA Objectives	Assessment Criteria	Indicators	Targets
GEOLOGY & SOILS				
H	**To prevent or minimise coastal erosion / flood management works that cause the loss / damage to designated geomorphological or geological interest features or significantly interrupt the supply of sediment to other areas around the island.**	• Will the SMP policy maintain appropriate erosion of designated geological sites? • Will the SMP policy maintain the quality of the soils used for agricultural importance?	• Loss/damage to designated geological sites or areas by preventing erosion. • Reduction in soil quality or contamination from diffuse pollution or saline intrusion.	• Reduce the number of sites of geomorphological or geological importance where condition is adversely affected by inappropriate management of coastal processes.
LANDSCAPE				
I	**To protect and enhance the character and quality of the landscape and visual amenity from flooding and flood risk management works.**	• Will the SMP policy maintain a range of key natural, cultural and social features critical to the integrity of the Island coastal landscape?	• Within the context of naturally evolving coastline, the maintenance of relative proportions and diversity of the key features (social, historical and natural) in the Isle of Wight coastal landscape.	• No decrease in the quality of the landscape character or visual amenity attributed to natural coastal processes or the management thereof.
BIODIVERSITY, HABITATS AND SPECIES				
J	**Identify and promote biodiversity opportunities to maintain, improve and avoid net loss of internationally and nationally important sites and habitats by sustainably managing coastal erosion and flood risk.**	• Will the SMP policy have an adverse effect on the integrity of any international sites? • Will the SMP policy have an adverse effect on the integrity of any Annex I Priority Habitat? • Will SMP policy contribute to further SSSIs falling into unfavourable condition • Will there be no net loss of UK BAP habitat within the SMP timeline up to 2100 or will the SMP contribute towards the creation of UKBAP habitat?	• Due to coastal erosion and / or flooding management works the: – Number of international sites and Annex I Priority Habitat features recorded as not meeting conservation objectives for the sites. – Number of SSSI units in unfavourable declining condition as a result of coastal management. – Area of UK BAP habitat lost.	• Reduce the number of designated sites and habitats where condition is adversely affected by inappropriate management of coastal processes.

ID	SEA Objectives	Assessment Criteria	Indicators	Targets
K	**Promote a balanced approach when maintaining, improving and avoiding net loss of terrestrial, freshwater and coastal habitats.**	• Will SMP provide a balanced approach to providing terrestrial, freshwater and coastal habitats when addressing habitat loss and gain?	• Number of schemes which address the potential loss or change of terrestrial, freshwater and coastal habitat adjacent to defences or maintained structures.	• Inequality in the loss or gain of terrestrial, freshwater and coastal habitats resulting from coastal erosion / flooding management works.
HISTORIC ENVIRONMENT				
L	**To prevent heritage assets (e.g. Scheduled Monuments, Historic Parks and Gardens, Listed Buildings and Conservation Areas) from being lost / damaged by coastal erosion or flooding without implementing appropriate mitigation measures or preservation of evidence by record.**	• Will SMP policy maintain key historic features and areas along the coastline? • Will SMP policy provide sustainable protection of archaeological features (where possible) and ensure the provision of adequate time for the survey of archaeological sites where loss is expected?	• Number of historic buildings or historic features at risk from coastal erosion or flooding. • Number of historic environment features that could be lost to erosion or inundation, without time being allowed for adaptation or survey prior to loss.	• No decrease in the condition of heritage assets within the coastal flood zone and in close proximity to coastal cliffs. • No deterioration in Scheduled Monuments and Listed Buildings in the coastal flood zone and in close proximity to coastal cliffs without preservation of evidence by record.

F6 CONSULTATION

F6.1 Approach to Consultation

F6.1.1 Stakeholder engagement has been an imperative and integral process throughout the development of the draft SMP2. It has been critical to enabling the SMP2 to be acceptable to as many parties as possible and to engage those parties in the process. In addition, effective external stakeholder and public engagement has been essential for data collection, identification of key issues, definition of SMP objectives, development of policy scenarios and the selection of the preferred SMP. Full details of this consultation activity are presented in **Appendix B 'Stakeholder Engagement'** together with the responses received to date.

F6.1.2 Consultation has also been central to the development of the SEA. The main purpose of communicating with stakeholders throughout the development of the SEA is to:

- Contribute to the success of the SMP and improve decision-making in the coastal zone by:
    - raising awareness of environmental management issues relating to tidal flooding and coastal erosion;
    - allowing stakeholder input into the environmental decision-making in the context of the SMP;
    - informing the development of the SEA by identifying, and where appropriate, addressing the concerns of external parties;
    - giving stakeholders an opportunity to comment on the environmental appraisal of options;
    - allowing representations made by stakeholders to be taken into account throughout the SEA process, particularly in the selection and environmental assessment of policy options;
    - giving the public an opportunity to comment on the preferred policies; and
    - ensuring that the completed SMP influences coastal management decisions, plans and strategies (e.g. development planning).
- Meet regulatory requirements for consultation under the EU SEA Directive.

F6.1.3 The consultation process has been active from the inception stage and has continued throughout the development of the SMP. The main activities have comprised: -

- Circulation of draft documents for comment and invitations to provide data and comments on key concerns; and
- Stakeholder meetings and workshops.

F6.2 Stakeholders

F6.2.1 Three groups have been driving the SMP2 and SEA. Each group has had different but important interests in the coast and its management. These groups are:

- The **Client Steering Group (CSG)** includes representatives of the operating authorities, neighbouring SMPs, statutory authorities, and key interest organisations including: IWCCE, Isle of Wight Council, the Environment Agency; also providing a link to the North Solent SMP, Defra, Natural England (NE), Planning Services (IoW

Council), Countryside Section (IoW Council), Estuaries Officer (IoW Council), Isle of Wight Archaeology and Historic Environment Service (IoW Council), Area of Outstanding Natural Beauty (IoW Council), and the National Trust. The group meets regularly and is responsible for the management, development and adoption of the Isle of Wight SMP2.

- The **Key Stakeholder Group (KSG)** comprises representatives from all parties with an interest in the long-term management of the coastline. The group has acted as a focal point for discussion and consultation at key stages of the development of the SMP with opportunities to provide direct feedback and information.
- The **Elected Members Group (EMG)** comprises Elected Members from each of the operating authorities together with the Environment Agency Regional Flood Defence Committees, and has been supported with observer representatives from Defra and NE. This group has been presented with analytical conclusions to enable each authority to make informed strategic policy decisions.

F6.2.2 There are also '**Operating Authorities'**, which consist of maritime local authorities and the Environment Agency. The maritime local authority (the Isle of Wight Council) has certain permissive powers under the Coast Protection Act 1949 to undertake works to defend the coastline from erosion by the sea (coast protection). Since April 2008, the Environment Agency has the strategic overview for all tidal flooding and coastal erosion risk management. This includes an overview on the development and implementation of the SMPs, together with the SEA, the HRA (refer to **Appendix I**) and the WFD assessment (refer to **Appendix J**) associated with SMPs.

F6.3 Stages of Consultation

F6.3.1 The SEA Scoping Report established the environmental baseline (including key environmental issues) and developed a suite of *assessment criteria* and *indicators*, which have been used within this report to create *SEA objectives* and *targets* for the assessment of the SMP policy (see **Table 5.1**).

F6.3.2 The Scoping Report was used as a basis for a five week consultation period (as agreed with the National Environmental Assessment Service (NEAS)) between the 1st March and 5th April 2010. The consultees invited to provide comments on the environmental baseline and assessment methodology were:

- Isle of Wight Council (Planning Services, Biodiversity Officer, Estuaries Officer, Isle of Wight Archaeology and Historic Service, Heritage Service, AONB department, and the Conservation and Design Team);
- The Environment Agency;
- Natural England;
- English Heritage;
- National Trust;
- North Solent SMP;
- Royal Society for the Protection of Birds (RSPB);
- Hampshire and Wight Trust for Maritime Archaeology;
- Government Office for the South East (GOSE); and
- Wight Wildlife.

F6.3.3 There were a number of questions posed within the Scoping Report to aid constructive consultation responses; these were:

Q1: *Are there any other strategic documents you consider should be reviewed for the SEA?*

Q2: *Is there any environmental information missing that could relate to a significant negative or positive impact?*

Q3: *Are there any specific current or future risks you feel are not identified?*

Q4: *Are there any significant environmental issues not listed in Section 4?*

Q5: *Are all the relevant parameters scoped into the SEA in Section 4?*

Q6: *Are there any additional or specific consultees to whom the Environmental Report should be sent for comment?*

F6.3.4 Feedback was obtained from the Environment Agency, Natural England, Isle of Wight AONB Officer, the Isle of Wight Historic Environment Officer and the RSPB. The feedback provided detailed comments which focussed on ensuring that the assessment criteria and indicators were clear and concise to enable the creation of the SEA objectives, in order that the SEA was correctly adhering to the EU SEA Directive (see **Annex FII** for details of the Scoping Comments).

F7 SMP POLICY OPTIONS APPRAISAL

F7.1 Identification and Review of the Alternative SMP Policy Options

F7.1.1 Four generic SMP policy options were considered as part of the policy plan, Hold the Line (HTL), Advance the Line (ATL), Managed Realignment (MR) and No Active Intervention (NAI). The description of these policies as defined by Defra (2006) is given in **Table 1.1** (**Section F1.2**). Furthermore, two baseline scenarios were assessed during the development of the SMP:

- A 'With Present Management (WPM)' scenario (which will comprise a combination of one or more of the four generic SMP policy options), which assumes that the present management practices will be continued indefinitely, regardless of economic or technical constraints; and
- A 'NAI' scenario which assumes that defences are no longer maintained and will fail over time.

F7.1.2 A discussion of how the policies have been developed is provided in **Appendix A 'SMP Development'**, whilst the key policy drivers for each of the PDZs and the identification of the preferred scenarios are detailed in **Section 4** of the main SMP document.

F7.2 Environmental Appraisal of the Alternative SMP Policy Options

F7.2.1 The SEA options appraisal methodology followed is set out above in **Section F2.5**. A summary of the generic environmental impacts associated with the four alternative SMP policy options is presented in **Table 7.1**, which indicates how environmental considerations have played a role in the selection of the preferred policy options.

F7.2.2 The primary environmental analysis was carried out on the four alternative SMP policy options and recorded against the SEA receptors for each of the PDZs and associated policy units with regard to the SEA objectives, assessment criteria, indicators and targets (assessment criteria) presented in **Table 5.1**; this is provided in **Annex FIII of this appendix**. The preferred option(s) for each PU are shown in blue font.

Table 7.1 Generic Options Appraisal

SMP option	Potential Positive Impacts	Potential Negative Impacts
Hold the Line	• Protection of communities (residential, industrial, agricultural and commercial assets) and infrastructure; • Protection of habitat landward of defences (such as freshwater marshes, saline lagoons and terrestrial habitats); • Protection of freshwater resources such as abstraction points; • Protection of economic assets located behind defences; and • Protection of recreational, cultural and historical assets landward of the defences • Prevention of pollution from contaminated land.	• Coastal squeeze (loss of intertidal habitat); • Interruption of coastal processes; • Promotion of unsustainable land use practices; • Reduced visual amenity and views of sea in some areas through raising of defences; • Prevention of natural coastal erosion exposing geological features within Geological SSSIs, thereby resulting in the sites being in unfavourable condition; and • Loss or damage of heritage assets on the foreshore with sea level rise.

SMP option	Potential Positive Impacts	Potential Negative Impacts
Advance the Line	**As Hold The Line** (see above) **plus**: • Provision of additional space for communities. • Protection of buried heritage assets in the foreshore;	**As Hold The Line** (see above) **plus:** • Immediate reduction in extent of intertidal habitat; • Immediate landscape and visual amenity impacts; • Change in function of the existing coastal habitats; • Increased coastal squeeze; • Interruption of coastal processes; • Potential for a deterioration in the Ecological Status / Potential of the water body involved (i.e. transitional or coastal); • Change in coastal geomorphology, with potential increase in rate of coastal erosion either side of the advanced line; • Disturbance to heritage assets in the foreshore; • Uncertainty of effects.
Managed Realignment	• Landward migration of coastal habitat under rising sea levels to realigned defence; • Creation of wetland habitat in line with UKBAP and local BAP targets; • Creation of habitat for feeding birds, juvenile fish and other aquatic organisms; • Reduction of flood/erosion risk to some areas; • Improvement of Ecological Status / Potential of the surrounding water body; • Promotion of natural coastal processes and contribution towards a more sustainable management of the coast.	• Increased flooding/erosion of realigned area; • Change in condition or reduction of terrestrial/freshwater habitat landward of defences; • Impact upon aquifers and abstractions; • Loss of some assets in hinterland of defences (e.g. residential, industrial, agricultural and commercial assets); • Loss of recreational, heritage asset assets; • Contamination of water bodies if around contaminated land.
No Active Intervention	• Opportunities for landward migration of intertidal habitats under rising sea levels; • Works with natural coastal processes; • Contribution towards a more sustainable and natural management of the coast; • Development of a more natural coastal landscape; • Maintenance of favourable condition of Geological SSSIs.	• Uncontrolled flood/erosion risk to residential and commercial properties; • Uncertainty of effects and time for adaptation; • Loss of freshwater and terrestrial habitats, and changes to saline lagoons when defences fail; • Impact upon aquifers and abstractions; • Loss / damage of economic, community and infrastructure assets; • Loss of heritage assets; • Uncontrolled flooding/erosion, and pollution from contaminated areas; • Deterioration of landscape with declining defences; and • Damage / loss of agricultural land. • Uncertainty of effects

F8 ENVIRONMENTAL EFFECTS OF THE PREFERRED POLICY OPTIONS

F8.1 The Preferred Policy Options

F8.1.1 The SEA Directive requires that an SEA Environmental Report provide the rationale behind the choice of the preferred policy options for a plan or programme. The preferred plan should best achieve the defined SEA objectives and be the most sustainable, technically feasible, environmentally acceptable and socio-economically viable. Therefore, the environmentally-preferred option for an element of a plan or programme is not always that finally chosen, for reasons of technical or economic (infrastructure and community) viability, or because a particular plan objective does not coincide with SEA objectives.

F8.1.2 In order for the SMP to be compliant with the EU SEA Directive there needs to be a staged approach to the appraisal of the policy options for the plan, both against SMP and SEA objectives, and through stakeholder consultion. The five-staged approach is as follows:

- **Stage 1** Initial policy appraisal;
- **Stage 2** Shoreline response assessment against policy scenarios;
- **Stage 3** Policy appraisal against agreed environmental, social, technical objectives leading to proposed policies;
- **Stage 4** Stakeholder group consultation; and
- **Stage 5** Public consultation leading to preferred policies.

F8.1.3 The draft preferred policies that have emerged from Stage 3, have been chosen based on the Issues and Objectives Evaluation (**Appendix E**) and preliminary SEA analysis (**Annex FIII of this report**). The preferred policy scenarios are presented in detail in **Chapter 4 of the main SMP report**, with their justification, which includes the social and environmental implication of the policies and how they can be achieved over the 100 year period.

F8.2 Environmental Assessment of the Preferred Plan

F8.2.1 The previous sections (**F7.2** and **F8.1**) have outlined the process followed in the SMP to arrive at preferred policy scenarios for each policy unit. This section now details the environmental assessment of the *preferred plan*, against the SEA receptors. This assessment adds to that presented in **Section 5 of the main SMP report**, which gives a high level summary of the implications of preferred policies, as well as **Appendix G 'Scenario Testing'**.

F8.2.2 **Annex FIV** of this report provides detailed assessment matrices by policy unit and epoch, using the significance criteria in **Table 2.2** to give an indication of the significance of environmental impacts. Mitigation measures have been given where negative effects have been identified, as well as potential enhancement opportunities.

F8.2.3 **Table 8.1** summarises the key positive and negative environmental effects for each Management Unit (MAN) resulting from the preferred SMP2 policies. For more detail refer to **Annex FIV**, which presents the detailed assessment for each Policy Unit, along with the suggested mitigation measures and monitoring. **Table 8.2** then summarises whether the SEA objectives have been met or not for each of the PDZs.

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Table 8.1 **Significant Environmental Effects of the Preferred Plan on each Management Unit** (for a more detailed summary refer to Annex FV)

Management Unit	Policy Summary	Environmental Effects	Mitigation Measures / Opportunities
MAN 1A Gurnard Luck, Gurnard Cliff, Gurnard to Cowes Parade, West Cowes, East Cowes, and East Cowes Outer Esplanade	• HTL at Gurnurd Luck in the short – medium term (allow small scale private defences to be maintained, moving to NAI in the long term increasing risks and need for increasing adaptation (NAI would not preclude maintenance of private defences) (A.1). • NAI for all three epochs along Gurnard Cliff to allow natural evolution of the coast (A.2). • HTL all three epochs for the rest of the MU to protect the community from coastal erosion and landslide activation. Recognised that HTL may be difficult to achieve with sea level rise for Cowes and East Cowes and the community may need to consider coastal adaptation. This will be examined further in the Strategy Study. • East Cowes Outer Esplanade - HTL by maintenance of the existing seawall until the end of its effective life, gradually removing the influence of management.	**Positive Effects:** • Allowing the majority of the estuary to function naturally will help ensure the integrity of the SAC, SPA, Ramsar and SSSI are maintained. **Negative Effects:** • The existing defences at Cowes and East Cowes will not provide full protection from coastal flooding. A small number of properties to the west of the ferry terminal, as well as around Cowes and East Cowes may be impacted by inundation if defences are not significantly upgraded to an adequate standard to protect from a 1 in 50 year flood. • Poor quality intertidal sediments will be lost through coastal squeeze in the long term; however there will be no impacts on the Solent Maritime SAC conservation objectives. • Partial loss of Norris Castle through erosion, which is a Registered Park and Garden.	• Monitor and record all historic assets – it will not be possible to develop an exit plan since it is the gardens that will be lost.
MAN 1B Central Medina NW, West Medina Mills, Central SW and East, and Newport Harbour	• NAI would not preclude maintenance of private defences for the majority of the estuary, except HTL through private and public defences at Medina Mills and Newport Harbour.	**Positive Effects:** • NAI would allow the natural evolution of features (e.g. mudflat and saltmarsh) of international nature conservation importance (Solent Maritime SAC, Solent and Southampton Water SPA and Ramsar site), which would support internationally important bird populations, particularly wader roost sites. • A large number of Listing Buildings would be protected by holding the line. **Negative Effects:** • Loss of small pockets of internationally designated intertidal habitats as a result of coastal squeeze caused by sea level rise and being constrained by maintained defences. • Tidal inundation of Dodnor Cottages and properties at Riverview Park are likely to occur in the long-term, deeming relocation likely. In the short-term maintaining the defences will result in small areas of internationally designated intertidal mudflats being lost through coastal squeeze. • There is one Listed Building (Medina House) that is subject to damage / loss as a result of tidal flooding in the medium – long term.	• Opportunities for creation of small areas of important intertidal habitat along creeks from northern boundary down to Little Werrar Wood. • Where compensation habitat is required for habitat losses this will need to be secured through the Southern Region RHCP. • Opportunities for habitat creation under the Viaduct near Dodnor Cottages – needs to be researched further. • Monitor and record all features of the Listed Building; will need to develop exit plan for any historic contents of the building.
MAN 2A Osborne Bay and Woodside	• NAI for all three epochs	**Positive Effects:** • Benefits for the sand and muflats, saltmarsh and vegetated shingle (and associated bird populations) within King's Quay Shore SSSI, Solent Maritime SAC and Solent and Southampton Water SPA and Ramsar sites, in that they can continue to evolve naturally with sea level rise and not be constrained by defences. • Potential for small amount of habitat gain in King's Quay Shore SSSI when the private defence across Palmer's Brook completely fails – though loss of terrestrial habitat (Broadleaved woodland). **Negative Effects:** • Partial loss of the gardens of both Norris Castle (Grade II Registered Park and Garden) and Osborne (Grade II* Registered Park and Garden) through erosion in the long term, with some loss/damage of the associated Listed Buildings.	• Potential for small amount of habitat gain (ca. 9 ha) up Palmer's Brook for saltmarsh and grazing habitat.
MAN 2B Wootton Creek and Old Mill Pond, Quarr and Binstead	• Central area of Wootton Creek to be allowed to act naturally (though NAI would not preclude maintenance of private waterside access structures and minor defences fronting the narrow individual properties and gardens, subject to normal approvals (B.1 and B.5). • HTL policy of private and public defences for the community around Wootton Bridge (B.2 and B.4), the ferry terminal (B.6) and to the east of the ferry	**Positive Effects:** • NAI would allow for the natural evolution of internationally and nationally important mudflats and saltmarsh of conservation interest (Solent and Southampton Water SPA and Ramsar, Ryde Sands and Wootton Creek SSSI, BAP intertidal mudflats). • Tidal flooding already affects assets (minor roads, jetties) near Wootton Bridge and would occur more frequently if defences are maintained solely at their current levels. HTL would protect the community and assets of Wootton Bridge, particularly three Grade II Listed Buildings. • Gradual return to more natural conditions within the Old Mill Pond, with significant benefits for nature conservation. Gradual and controlled saline intrusion and exposure of the muflats of the Old Mill Pond will ensure the adaptation of	• Compensation for the habitat losses will be needed. Will need to secure opportunities through the RHCP. • Research required into the control of the saline intrusion into the Old Mill Pond. • Opportunity for habitat re-creation site as identified in the Isle of Wight Mitigation Strategy (2006). • Need to further asses the condition of the coastal grazing marsh and vegetated shingle spit within Ryde Sands and Wootton Creek SSSI at Quarr.

Management Unit	Policy Summary	Environmental Effects	Mitigation Measures / Opportunities
	terminal to assist protection of the ferry terminal at the mouth of Wootton Creek (B.7) gradually realigning in the third epoch. • Undertake no specific defence within the Mill Pond and accept increased saline intrusion. Continue to maintain use of the road (B.3). • Quarr and Binstead frontage to evolve naturally (NAI for all three epochs) (B.8).	more natural conditions, with overall benefits by increasing biodiversity and create a range of habitats of conservation interest. More regular exposure of the mudflats south of Wootton Bridge would attract greater numbers of wetland birds. There will be changes in the species of the saltmarshes within the Mill Pond over time - gain of more brackish species (middle and lower communities). **Negative Effects:** • Coastal squeeze and loss of relatively small areas of intertidal mudflats (a feature of the Solent and Southampton Water SPA and Ramsar sites and BAP habitat) in central Wootton Creek. • Area around Wootton Bridge will continue to be prevented from evolving naturally, with continued loss of saltmarsh and intertidal habitat from coastal squeeze. • In the medium term NAI will allow erosion that would cause the slumping of the soft cliffs surrounding the shingle bank in front of Quarr Abbey, leaving the coastal grazing marsh in the narrow low lying vally to be vulnerable to saline inundation, with the likelihood of saline lagoons forming. There would be an effect on the condition of the Ryde Sands & Wootton Creek SSSI. However, since the coastline is presently undefended this would be due to natural processes. • Loss and damage to the north of Quarr Abbey Scheduled Monument through flooding in the medium to long term (i.e. second and third epochs).	• Monitor and record all features of the Scheduled Monument; will need to develop exit plan for specific features. • Habitat losses will need to be compensated for through the Southern RHCP
MAN 2C Ryde, Appley and Puckpool, Springvale to Seaview and Seagrove Bay	• Along the majority of frontage HTL by seawall encasement and revetment. • Opportunity along the central section of Seagrove Bay to investigate offshore breakwaters.	**Positive Effects:** • Ensuring that the present defences are maintained to a suitable standard will protect the important residential, commercial (i.e. tourism) and heritage assets from Ryde to Seagrove Bay from coastal flooding. • Regionally important infrastructure will also be protected (e.g. ferry link to the mainland) as will many tourism assets. • Appley Park sewage works would be protected, as well as heritage assets such as Appley Tower LB and Puckpool Mortar Battery SM. **Negative Effects:** • The coastline will be unable to naturally erode back over time, which could affect the sediment supply of the surrounding sandflats. Furthermore, there will be narrowing of the existing beach through coastal squeeze, which would affect the integrity of the internationally designated sandflats. • Intertidal reefs (a designated feature of the Solent and Southampton SPA and Ramsar sites) off of Seagrove Bay may experience erosion and coastal squeeze under rising sea level and increasing storminess.	• May need to re-route the coastal road.
MAN 3A Priory Bay, St Helens Duver, St Helens, Embankment Road, Bembridge Point	• NAI along Priory Bay (A.1). • HTL for The Duver with the view to realign in the third epoch in line with the plan for the management of the harbour entrance (A.2). • HTL for St Helens and Embankment Road (A.3 and A.4). • NAI around Bembridge Point (A.5).	**Positive Effects:** • Natural evolution of coastline at Priory Bay so that the limestone rocky ledges and seagrass areas will be maintained (features of the Brading Marshes to St Helen's Ledges SSSI (rocky ledges) and Solent and Southampton Water Ramsar site (seagrass beds)) and erosion of Priory Woods SSSI would maintain the geological features (Pleistocene gravels) and thus the SSSI in favourable condition. • Maintaining Embankment Road means that the landward designated saline lagoons and saltmarsh (SAC, SPA, Ramsar and SSSI) will continue to be protected, even if they are not sustainable. **Negative Effects:** • There is potential for there to be small losses (due to coastal squeeze) and changes in the morphology of the mudflats and saltmarshes at St. Helens and seaward of The Embankment in the long term, however, these will not have an adverse impact on the International designations.	• Monitor and record geological changes • The changes due to MR of St Helen's Duver need to be researched further to ensure the chosen actions are the most sustainable.
MAN 3B Bembridge, Lane End, Foreland, Foreland Fields and Whitecliff Bay	• The majority of the coastline is being left to evolve naturally (B.1 and B.5). • HTL policies in the short to medium term for Land End and Foreland Fields (B.2 and B.4) with MR in the long term. • Foreland is to have a policy of MR for all three epochs.	**Positive Effects:** • Allowing large sections of the coast in this Management Unit to be eroded naturally (i.e. NAI) ensures the paleoenvironmental deposits, a geological feature of the Whitecliff Bay and Bembridge Ledges SSSI are maintained in favourable condition and biodiversity features such as the limestone bedrock ledges (a feature of the South Wight Maritime SAC) evolve naturally. **Negative Effects:** • No significant effects	• None applicable – as there are no significant impacts
MAN 3C Culver Cliff & Red Cliff, Yaverland and Eastern Yar Valley, Sandown and Shanklin, and Luccombe	• The majority of this management unit is to be held for the duration of the plan - Yaverland and Eastern Yar Valley, Sandown and Shanklin (C.2 and C.3). • The boundaries of the MU are to be allowed to evolve naturally (NAI for all three epochs) for Culver Cliff, Red Cliff and Luccombe (C.1 and	**Positive Effects:** • Allowing the continued natural erosion of Culver and Red Cliff ensures the nature conservation features (e.g. paleoenvironmental deposits) are maintained within the Whitecliff Bay and Bembridge Ledges SSSI, the natural landscape is retained and for the source of the sediment supply for Sandown Bay to continue. • HLT policies will ensure that historic assets are protected - Sandown Barrack Battery SM and two Grade LB's - the Hot Brine Bath and the Chalet Café.	• Survey, monitor and record all historic features

Management Unit	Policy Summary	Environmental Effects	Mitigation Measures / Opportunities
	C.4).	**Negative Effects:** • NAI policy along Culver Cliff and Red Cliff will result in the loss and damage to Yaverland Fort Battery SM in the second and third epochs from coastal erosion.	
MAN 4A Dunnose, Ventnor & Bonchurch	• NAI for all three epochs along Dunnose (A.1) • HTL all epochs for Ventnor & Bonchurch (A.2)	**Positive Effects:** • Where the policy is HTL for Ventnor and Bonchurch this will ensure the residential and commercial properties, infrastructure (roads), community assets (e.g. restaurants along the Esplanade, Bonchurch Pottery, The Beach Café at Bonchurch and The Breakwaters) and one heritage asset (The Beach Hotel Listed Building) are maintained. **Negative Effects:** • No significant effects.	• None applicable – as there are no significant impacts
MAN 4B St Lawrence Undercliff, Castlehaven, St. Catherines & Blackgang	• HTL at Castlehaven for first two epochs and in epoch three it will be dependent on the slope stability conditions in the area at the time and whether the cliff retreat can be minimised through MR (B.2). • NAI all three epochs along the rest of the coast in this MU (B.1 & B.3).	**Positive Effects:** • The community and heritage assets (the gatepiers to Reith Lodge Grade II LB and Puckaster Grade II LB) of Castlehaven will be protected by maintaining and improving the existing defences, though there will be some slope failure and retreat around the boundaries of the policy unit, with no significant effects on the internationally important subtidal marine habitats in short term. • NAI policies will result in the natural evolution of the coastline i.e. cliff erosion and slumping, which will ensure a continued supply of sediment for the island, including Castlehaven beach and eroding back of cliffs for exposure of rocky reefs. Continued maintenance of the features of South Wight SAC and Compton Chine to Steephill Cove SSSI (includes being designated for its geological importance), as well as the formidable landscape. • No loss of properties and infrastructure assets in the short to medium term along the rest of the MU. No changes in landscape character. **Negative Effects:** • Damage / loss of heritage assets due to erosion - Ventnor Botanical Garden (a Registered Park and Garden) and five Grade II Listed Buildings - the gatepiers to Reith Lodge, Puckaster, St Catherine's Lighthouse, Lighthouse Keepers Quarters and Shakespeare Memorial in the grounds of South View. • At Blackgang, the main coastal road will be at risk of being lost in the medium to long term.	• Monitor and record all historic features. Will need to develop an exit plan for historic assets within any Listed Buildings in the long term. • Will need to re-route the coastal road.
MAN 5 Central Chale Bay to Compton Bay	• Allow cliff erosion, support the geological designation, abandon current A3055 and re-route.	**Positive Effects:** • Nature conservation features (reefs and cliffs) of the South Wight Maritime SAC, Compton Chine to Steephill Cove SSSI and Compton Down SSSI to respond naturally to erosion and sea level rise. **Negative Effects:** • Coastal erosion in all epochs to result in loss of sections of Military road.	• Need to consider options for relocation of transport infrastructure where necessary.
MAN 6A Freshwater Bay, Tennyson Down, Alum Bay and Headon Warren	• Short section of HTL at Freshwater Bay provides flood defence for the West Yar Valley (A.1 with PU6C.3). Maintain the road and support or enhance the protective beach. NAI for all three epochs for the rest of the MU (A.2).	**Positive Effects:** • There are no features of the South Wight Maritime SAC infront of the defended area of the bay. • Natural evolution of internationally designated reefs, sea caves and vegetated cliffs (South Wight Maritime SAC and Headon Warren & West High Down SSSI) to continue, with limited change expected. **Negative Effects:** • Loss/damage of designated heritage assets from erosion, such as damage to Mortuary Enclosure on Tennyson Down SM by 2100, loss and damage to Lower Needles Point Battery SM (1st/2nd epochs), Round Barrows SM and Tennyson's Beacon a Grade II Listed Building.	• Monitor and record all historic features. Will need to develop an exit plan for historic assets within any Listed Buildings in the long term.
MAN 6B Totland and Colwell, Central Colwell Bay, Fort Albert, Fort Victoria Country Park, Fort Victoria and Norton	• HTL for Totland and Colwell for all three epochs (B.1) and Fort Albert in the short and medium term. • NAI for Central Colwell Bay (B.2) and Fort Victoria Park (B.4) • Maintain existing structures along Fort Victoria and Norton in the short to medium term and NAI in the long term	**Positive Effects:** • Maintaining the defences along Totland and Colwell will prevent erosion at the toe of the cliffs but cannot guarantee some localised slumping. The majority of properties, infrastructure (residential roads and access to the beach) and assets (e.g. Captains Cabin Café and coastal path) in Totland and Colwell will be protected. • Natural evolution of the soft cliffs will occur where the toe is not protected from erosion – this will ensure the parts of the geological SSSI (Colwell Bay) that are in favourable condition remain that way. • Allowing the cliffs from Sconce Point to Norton to erode ensures the beach (designated feature of the Solent Maritime SAC) is built up at the toe of the cliffs, which has since narrowed with the defences – thus improving the international designation over time. **Negative Effects:** • Natural erosion of the cliffs will be prevented at Totland and Colwell, which could result in Colwell Bay geological SSSI being adversely affected which would keep it in unfavourable condition due to inappropriate coastal management – occasional slumping of the cliffs will ensure that the features of the designation remain visible. • Fort Albert (Grade II* Listed Building) and Fort Victoria (Grade II Listed Building) will be at risk of damage/loss in the 3rd	• Monitor the condition of Colwell Bay SSSI to ensure that the condition is not made worse because of maintaining the defences at the toe of the cliffs. • Survey, monitor and record heritage assets - develop an exit plan for specific features.

Management Unit	Policy Summary	Environmental Effects	Mitigation Measures / Opportunities
		epoch when the existing defences begin to fail.	
MAN 6C Norton Spit, Western Yar Estuary – west, The Causeway, Western Yar Estuary – east, Thorley Brook and Barnfields Stream, Yarmouth to Port la Salle	• HTL for Norton Spit, The Causeway and Yarmouth to Port la Salle for all three epochs. • NAI for the western and eastern sides of the 'Western Yar Estuary' • HTL in first epoch at Thorley Brook and Barnfields Stream, followed by MR to allow time for habitat adaptation, then NAI in the third epoch.	**Positive Effects:** • The mudflat and saltmarsh habitats landward of Norton Spit will be maintained, and the sand dunes and vegetated shingle will be held static with a HTL policy – this would mean the conservation objectives of the Solent Maritime SAC, Yar Estuary SSSI, and Solent and Southampton Water SPA and Ramsar site will not be significantly compromised. • Potential for habitat gain of saltmarsh and intertidal mudflats in restricted locations – South of Mill Copse and Barnfields Stream • HTL policy at The Causeway will maintain the freshwater habitats that are nationally important (Freshwater Marshes SSSI), as well as prevent a tidal breach between Yarmouth and Freshwater. • Habitat evolution in the medium to long term at Thorley Brook enabling expansion of intertidal habitats. • Improving and maintaining defences around Yarmouth ensure that the numerous Listed Buildings within Yarmouth and Yarmouth Castle Scheduled Monument will be protected from loss and damage by coastal flooding. • HTL at Yarmouth with ensure the ferry link with the mainland is sustained. **Negative Effects:** • Coastal squeeze of the internationally and nationally designated mudflats and saltmarshes that occur in front of the old Western Yar railway embankment and The Causeway, as this will act as a barrier to landward inundation and migration, so in combination with sea level rise there will be some loss of habitats (10% mudflats, landward migration of lower and middle marshes and narrowing of upper marshes). • Five Grade II Listed Buildings could be lost or damaged due to flooding – Buddles Butt, The Old Sand House, Yarmouth Mill, the 'Former Stabling and Hayloft and Wall to South of Kings Manor Farm' and 'Stable to South of Kings Manor'. • Coastal grazing marsh (a designated feature of Yar Estuary SSSI and Solent and Southampton SPA and Ramsar sites) lost to inundation around Thorley Brook – however with increasing saline inundation there is potential for landward migration and thus gain of the lost coastal grazing marshes. • Short term coastal squeeze of internationally designated mudflats (designated feature of Yar Estuary SSSI, Solent Maritime SAC and Solent and Southampton SPA and Ramsar sites) seaward of the concrete defence at Thorley Brook.	• Survey, monitor and record all heritage assets (Manor House Farm) – will need to develop exit plan for the long term. • Will need to compensate for the 30.9 ha of habitat loss of coastal grazing marsh through saline inundation from the MR option at Thorley Brook and Barnsfields Stream. Habitat will need to be secured through the Southern RHCP alongside the North Solent SMP. • There is the potential opportunity for creation of further coastal grazing marsh in the medium to long term along the eastern upper reaches of the Western Yar estuary (Barnsfields Stream and south of this area).
MAN 7 Bouldnor Copse and Hamstead, Newtown Estuary, Thorness Bay and southern Gurnard Bay	Allow cliff erosion, supporting the natural habitats from Bouldnor Copse to Hampstead. At Newtown Estuary allow tidal flooding and erosion. This would not preclude local management by the landowner during the first epoch to maintain limited quay structures and access walkways. Thorness Bay and southern Gurnard Bay allow cliff erosion, supporting the natural habitats.	**Positive Effects:** • Allowing the natural evolution would maintain the features of nature conservation interest (Bouldnor & Hamstead Cliffs SSSI presently in 100% favourable condition, and Solent Maritime SAC), ensure continued sources of sediments for transport pathways, as well as maintain and improve the important coastal cliffs landscape and AONB features. • Continued natural evolution of Newtown estuary with overall nature conservation benefits for the Solent Maritime SAC, Solent and Southampton SPA and Ramsar sites and Newtown Harbour SSSI. There is potential for changes to grazing marsh, lagoons and shingle habitats as a result of inundation, though this would be natural change as the area has been undefended for some time. • Potential for gain of intertidal habitats within Thorness Bay (designated as Thorness Bay SSSI) where retreat will occur allowing more appropriate levels and thus improving the condition of the SSSI. **Negative Effects:** • Portion of settlement of Newtown (Scheduled Monument) and Newton Bridge Listed Building affected by inundation.	• Survey, monitor and record all heritage assets of the SM and LBs - will need to develop exit plan for specific features.

Table 8.2 Summary of the Achievement of the SEA Objectives for each PDZ (Y = yes achieved SEA objective, N = no did not achieve objective, P = partly achieved objective).

		Policy Development Zones						
SEA Receptors	**SEA Objectives**	**PDZ 1:** Cowes and the Medina Estuary	**PDZ 2:** Ryde and the North-east Coastline	**PDZ 3:** Bembridge and Sandown Bay	**PDZ 4:** Ventnor and the Undercliff	**PDZ 5:** South-west Coastline	**PDZ 6:** West Wight	**PDZ 7:** North-west Coastline
Population, Communities and Human Health	**A:** To prevent or minimise loss / damage to residential properties from coastal erosion and flooding.	P	P	P	Y	N	P	N
	B: To prevent or minimise coastal erosion and flooding to key community assets (doctors, hospitals) and recreation and tourism assets (leisure areas, beaches).	Y	Y	P	Y	P	P	n/a
	C: To prevent or minimise the loss / disruption to public footpaths and cycle routes.	P	P	P	P	N	N	P
Land Use, Material Assets / Infrastructure	**D:** To prevent or minimise the loss / damage / disruption to commercial properties and industrial sites.	Y	Y	Y	Y	n/a	Y	n/a
	E: To prevent or minimise the loss / damage / disruption to agricultural land.	P	P	Y	P	N	N	Y
	F: Prevent the loss / damage / disruption to transport and service infrastructure.	Y	P	Y	P	N	Y	n/a
Water Quality and Resources	**G:** To achieve the Environmental Objectives of the EC Water Framework Directive	P	P	P	Y	Y	P	Y
Geology & Soils	**H:** To prevent or minimise coastal erosion / flood management works that cause the loss / damage to designated geomorphological or geological interest features or significantly interrupt the supply of sediment to other areas of the Island.	P	Y	P	Y	Y	P	Y
Landscape	**I:** To protect and enhance the character and quality of the landscape and visual amenity from flooding and flood risk management works.	Y	Y	Y	Y	Y	Y	Y
Biodiveristy, Habitats and Species	**J:** Identify and promote biodiversity opportunities to maintain, improve and avoid net loss of internationally and nationally important sites and habitats by sustainably managing coastal erosion and flood risk.	P	P	Y	Y	Y	P	Y
	K: Promote a balanced approach when maintaining, improving and avoiding net loss of terrestrial, freshwater and coastal habitats.	Y	Y	P	Y	Y	P	Y
Cultural Heritage	**L:** To prevent heritage assets from being lost / damaged by coastal erosion or flooding without implementing appropriate mitigation measures or preservation of evidence by record.	P	P	P	P	Y	P	N

F8.3 Cumulative Impacts

F8.3.1 A key element of the consideration of environmental impacts at a strategic level is the potential for secondary, cumulative and synergistic effects on a particular environmental receptor to be assessed; both within the SMP and alongside other relevant plans or programmes (see **Annex I**). These impacts are often collectively termed cumulative impacts. This section sets out the significant environmental effects of the plan as a whole, which have been considered in relation to each of the environmental objectives. These findings are summarised in **Table 8.3**.

Table 8.3 Summary of Secondary, Cumulative and Synergistic Issues for each SEA Receptor

Cumulative effects identified (sum of Policy Unit impacts)	Interaction of relevant Plans and Programmes
Population and Community	
There are seven significant urban areas where the preferred SMP policy is to maintain existing defences, since they have been deemed economically viable in the long-term. This will result in a beneficial impact on people, their health and property by protecting the communities and their assets from flooding or erosion. Protection is predominantly focussed upon larger conurbations, where the highest level of benefit is achieved. The SMP has identified areas where a more naturally functioning coastline would be to the benefit of the natural environment and to estuarine processes. However, there would be potential changes to land and environmental assets should these policies be implemented. Cumulative impacts with respect to this receptor can be considered in terms of damages of residential and commercial assets that it cost for NAI and the preferred plan. For the proposed recommended plan, the maximum PV damages of built assets (residential and commercial) lost to erosion and flooding by year 2105 would potentially be £171 million. This compares to the No Active Intervention baseline where, erosion and coastal flooding losses throughout the SMP frontage could total £2.4 billion. Consequently the plan provides for protection from erosion and flooding to a significant amount of properties and assets. Under the recommended policies the great majority residential and commercial assets will be protected, although the NAI option for the entirety of PDZ 5 (South-west coast) and PDZ 7 (North-east coast) will result in increased erosion and flood risk to properties, infrastructure and assets. **SEA Objective A** – to prevent or minimise loss / damage to residential properties..." was not achieved in either of these PDZ 5 or 7. Furthermore, **SEA Objective C** – "to prevent or minimise the loss/disruption to public footpaths and cycle routes" was **not achieved for PDZ 5**. The area of coastline is not economically viable to defend, is presently undefended and is an internationally biodiverse and geologically important area.	This SMP document aim is to ensure that the coast and estuaries of the Isle of Wight is sustainably managed, the policies reflect this, particularly the long term view. Therefore, the implications of future development in either tidal floodplains or in coastal areas that are subject to erosion should be considered by the Isle of Wight Council, particularly since the South East Plan and Local Development Framework (Island Plan) must ensure that the requirements of PPS25 (Development and Flood Risk) are fully implemented. The South East Plan and other development plans will influence the nature and location of new infrastructure. The SMP therefore should help to influence and ensure that new infrastructure is located appropriately where the risks from coastal flooding or erosion can be managed appropriately.
Land Use, Infrastructure and Material Assets	
The SMP has aimed to protect major infrastructure, commercial and industrial areas and material assets (e.g. ports, harbours, ferry links,	This SMP document aim is to ensure that the coast and

Cumulative effects identified (sum of Policy Unit impacts)	Interaction of relevant Plans and Programmes
major roads, rail, sewage treatment works, industrial depots, etc) for the entire SMP period, where economically viable to do so. This is to minimise risk to commercial property (such as those landward of Embankment Road and along the Medina Estuary) and assets such as the sewage work at Appley, particularly where they are of great importance to the Island's economy, for example, the tourism industry in Sandown Bay (e.g. Esplanade Gardens Café, Carlton Hotel, Royal Hadleigh Hotel, Lake Cliff Gardens, museum and the Isle of Wight Zoo). Infrastructure affected by MR or NAI is not strategic and its loss can be relatively easily mitigated at a local level. The SMP period allows for long term thinking, such that plans for future infrastructure maintenance and investment can be made well in advance, considering the planned and likely natural development of the shoreline. The proposed SMP policies are unlikely to affect marine activities with the majority of policies protecting key port, marina and harbour facilities, such as at Yarmouth, Cowes, Ryde, Bembridge and Freshwater. However, where there is a change in management policy and a return to natural processes is considered beneficial for European sites through either MR or NAI or where a hold the line policy is no longer acceptable economically or technically, there is potential for some impacts on infrastructure such as Military Road and assets such as Island Harbour along the Medina Estuary. Some re-routing of infrastructure will be required in the medium and longer term under this SMP, though not many critical services are likely to be affected. While the preferred policy for the key urban areas is to HTL in the long term, there may be a detrimental impact on some infrastructure, where it will become increasingly technically difficult to retain coastal frontages, for example, at Cowes. Agriculture represents a relatively important part of the local economy with a strong agricultural heritage, including sheep and dairy farming and growing of arable crops. Various grades of agricultural farm land are found along many of the Island's coastal and estuarine shorelines. Though there are some areas of agricultural land (Grade 3 and 4) that will be exposed to coastal flooding and erosion under MR or NAI policies over the SMP period, the cumulative loss of agricultural land due to tidal flooding, saline intrusion and cliff slumping is moderate rather than significant. **SEA Objective E** – "to prevent or minimise the loss/damage/disruption to agricultural land" and **SEA Objective F** – "to prevent or minimise the loss/damage/ disruption to transport and service infrastructure" **not achieved for PDZ 5** because the area of coastline is not economically viable to defend, is presently undefended and is an internationally biodiverse and geologically important area.	estuaries of the Isle of Wight is sustainably managed, the policies reflect this, particularly the long term view. Therefore, the implications of future development in either tidal floodplains or in coastal areas that are subject to erosion should be considered by the Isle of Wight Council, particularly since the South East Plan and Local Development Framework (Island Plan) must ensure that the requirements of PPS25 (Development and Flood Risk) are fully implemented. The South East Plan and other development plans will influence the nature and location of new infrastructure. The SMP therefore should help to influence and ensure that new infrastructure is located appropriately where the risks from coastal flooding or erosion can be managed appropriately.
Biodiversity, Habitats and Species	
Along the majority of the SMP frontage, a variety of coastal habitats are designated under international legislation for their conservation	The SMP policies support the aims of the Isle of Wight Local

Cumulative effects identified (sum of Policy Unit impacts)	Interaction of relevant Plans and Programmes
interests. The SMP recommends adopting a NAI policy along an increasing area of coastal/estuarine frontage to provide accommodation space for the natural roll-back or increase in extent of these internationally designated intertidal habitats. Continuing this policy in many areas, as well as allowing presently maintained defences to fail once their life has exceeded will have beneficial impacts on the designations and their interest features. For example, NAI from Norris Castle to Woodside (PU2A) allows the natural roll-back of the coast and maintains the mudflats and sandflats, which are features of Solent and Southampton SPA and Ramsar sites, Kings Quay Shore SSSI and Solent Maritime SAC. There is also some potential of habitat re-creation (ca. 9 ha) along Palmer's Brook (though would need to balance coastal and terrestrial habitats) where there are old failing private defences. There is one MR policy that could affect internationally designated areas, which is at Thorley Brook and Barnfields Stream (PU6C.5) in the 2nd epoch, followed by NAI in the 3rd epoch. This will mean that **SEA Objective K** (Promote a balanced approach when maintaining, improving and avoiding net loss of terrestrial, freshwater and coastal habitats) is **only partly achieved** because it it will result in the gradual loss of freshwater and coastal grazing marsh habitat, which is protected by the same international designations (i.e. SPA and Ramsar) that protect the intertidal mudflats and saltmarsh within the Western Yar Estuary that would be lost through coastal squeeze if the defences were maintained. Where there are areas of undesignated terrestrial and freshwater habitat that could become saline, no compensation would need to be sought. In PDZ 2, this is the case as there is a policy to manage the sluices under the Wootton Bridge to the Old Mill Pond to allow a gradual change in saline intrusion and tidal exposure. This is possible because the Old Mill Pond is not part of an international designation, since it is in poor condition, so therefore, managed realignment will create more intertidal habitats that will increase the biodiversity of the area and increase feeding and roosting habitats for birds. The Habitats Regulations Assessment (HRA) has deemed the following **cumulative losses and gains** as a result of the SMP2 policies for each of the designated habitat groups as: • Coastal grazing marsh – **30.9 ha** There are no losses of intertidal mudflat, saltmarsh, saline lagoons, freshwater habitats, rocky shores and reefs and vegetated cliffs. The HRA has therefore deemed that **30.9 ha of compensatory habitat** will need to be sourced through the Southern RHCP to	Biodiversity Action Plan, for example, the aim is to maintain around 1050 ha of estuarine habitats (mudflats, saltmarsh, sand dune, vegetated shingle and saline lagoons) and ensure the long term well-being and survival of important intertidal and subtidal habitats against the background of sea level rise. The Isle of Wight CFMP has the potential to affect the designated nature conservation sites. Policies and actions in these documents will seek to ensure that there are no adverse effects. The South East Plan deems that natural resources and biodiversity must be protected and improved – which the SMP must ensure is incorporated within the aims.

Cumulative effects identified (sum of Policy Unit impacts)	Interaction of relevant Plans and Programmes
replace the lost coastal grazing marsh and freshwater habitat. *Further details on the effects on international designated sites are addressed in the Habitats Regulations Assessment (**Appendix I**).*	
Landscape	
Overall there is no plan to construct new defences in currently undefended areas, therefore most of the coastline and the character of the designations – one AONB and the two Heritage Coasts (which is divided into Landscape Character Types) will have negligible cumulative impacts as they will remain as today. The Heritage Coasts mostly span areas that are continuing to be undefended and that will allow a continued natural erosion of varied coastline (NAI areas of PDZ's 4, 5, 6 and 7). The long term aim of the SMP is to sustain the important coastal communities and allow as much of the island to evolve naturally, therefore there will be significant changes to the landscape due to allowing existing defences to fail and either weather down or be removed. As natural processes are to be allowed where possible, these are assessed as cumulative beneficial effects.	The SMP policies will be developed and implemented in accordance with the policies of the AONB Management Plan.
Geology and Soils	
The preferred policies of NAI or MR have been recommended in areas where there are limited human assets or along areas of undeveloped coastline, which amongst other things ensures the preservation of the geological interests and nationally designated geological sites. For example, NAI policies around the much of Bembridge headland will ensure that exposure of paleoenvironmental deposits, a feature of Whitecliff Bay and Bembridge Ledges SSSI continues. The cumulative impact on coastal geology of constraining coastal processes along the shoreline is of minor significance given that only small parts of two geological SSSIs (Colwell, and Compton Chine to Steephill Cove) and features of the South Wight Maritime SAC have been affected.	The SMP policies support the aims of the Isle of Wight Local Biodiversity Action Plans, for example, by 2015 to maintain around 50km of free functioning maritime cliffs and slopes.
Water	
In most areas around the Isle of Wight, the preferred SMP policy provides protection from flooding or erosion to the majority of potentially polluting features such as landfill sites. The separate WFD assessment addressed the impacts of proposed policies under the SMP on the four WFD Environmental Objectives for the freshwater, transitional, coastal and groundwater bodies. **Environmental Objective WFD 1 (high water status water bodies):** There are no applicable high water status water bodies around or on the Isle of Wight. Therefore, there is no potential of the SMP2 policies to meet or fail WFD 1. **Environmental Objective WFD 2 (TraC water bodies):** Four of the seven PDZs were identified as having the potential to contribute to a	Implementation of the SMP will try to ensure full adherence to legislation and recommendations (wherever possible) for maintenance and improvement of water quality and resources (e.g. Water Framework Directive, Bathing Water Directive, Shellfish Directive through coastal management activities. The Regional Spatial Strategy (South East Plan) and Local Development Documents must ensure that the requirements of

Cumulative effects identified (sum of Policy Unit impacts)	Interaction of relevant Plans and Programmes
failure to meet Environmental Objective WFD 2. There are two PDZs (PDZ 2 and 6) where the SMP2 policy of HTL could result in loss of intertidal rocky foreshores. There are five PDZs where there could be changes in the hydrodynamics and tidal elevation in estuaries, which could affect the Biological Quality Elements (BQEs; e.g. macroalgae, angiosperms, fish and benthic invertebrates). However, many of the SMP2 policy options will result in improving the overall water body through policy options of NAI and MR (e.g. PDZs 1, 2 and 6). **Environmental Objective WFD 3 (freshwater bodies):** There are no freshwater lakes, though there are a number of rivers. SMP2 policies could cause saline intrusion further upstream than is at present and thus cause the water body to fail Environmental Objective 3 of the WFD. There are two PDZs that have the potential to fail this objective, PDZ 1 with two freshwater bodies (FWBs; Dodnor Creek and Alverstone Stream), where NAI policies will allow for more natural systems than at present, which will enable greatly improved passage of migratory fish, though could affect some freshwater angiosperms (e.g. grazing marsh species) and PDZ 6 with two FWBs (Thorley Brook and Barnsfields Stream), where MR and NAI will result in the permanent flooding of a freshwater area – though again this will improve migratory fish passage, restore a more natural system. **Environmental Objective WFD 4 (groundwater bodies):** SMP2 policies for all seven PDZs meet Environmental Objective 4 of the WFD. All four of the groundwater bodies (GWBs) are in 'Good Status' and there is no evidence of present or future risk of saline intrusion. *Further details on the effects on designated water bodies are addressed in the Water Framework Directive Assessment (**Appendix J**).*	PPS25 are fully implemented to ensure no release of contaminants to coastal/estuarine waters.
Historic Environment	
Moderate cumulative adverse impacts on statutory heritage assets are likely, as all policy options cause some adverse impact. Although the impact on designated heritage assets is moderate, the impact on non-designated assets is likely to be more severe, with many sites located on NAI frontages being destroyed or damaged since the greater percentage of fragile and vulnerable sites are located in the in the intertidal zone and coastal margins. MR and NAI will result in flooding or erosion of identified and unknown asset sites and HTL and MR will result in disturbance of heritage sites as new defences are built. Highly sensitive heritage sites (e.g. Scheduled Monuments) are likely to remain protected. A changing shoreline (whether through flooding /erosion or defence building) is likely to produce a continuous stream of archaeological finds and this will contribute to awareness and appreciation of the history of this coast. There are a wide range of heritage sites and features around the	Policies within the Isle of Wight Local Development Framework (LDF; currently being drafted and replacing the Unitary Development Plan) and the aims of the Isle of Wight Historic Environment Action Plan (HEAP; which feed into the LDF) will provide and advise on the protection for the historic environment. Implementation of the SMP will try to ensure full adherence to these policies (wherever possible) through coastal management activities.

Cumulative effects identified (sum of Policy Unit impacts)	Interaction of relevant Plans and Programmes
coastline, with many of these being protected through the SMP policies than would survive under a NAI policy. Significant protected assets include the three SMs: Puckpool Mortar Battery, Sandown Barrack Battery and Yarmouth Castle and a large number of Listed Buildings (LBs). Many LBs and Conservation Areas within the urban areas will also be protected under the recommended plan. Quarr Abbey, a Scheduled Monument is landward of a NAI policy frontage but is not at risk of erosion or coastal flooding within the next 100 years. The Lower Needles Point Battery SM is at risk of being damaged and lost to erosion in the second epoch of this SMP, since it is also under an NAI policy. Furthermore, NAI policy along Culver Cliff and Red Cliff will result in the loss and damage to Yaverland Fort Battery SM in the second and third epochs from coastal erosion, and damage to Mortuary Enclosure on Tennyson Down SM by 2100. The medieval settlement and cultivation remains at Newtown, which is also an SM will continue to be damaged by coastal flooding because the estuary has been left to evolve naturally. This deemed that **Objective L** – "to prevent heritage assets from being lost / damaged by coastal erosion or flooding" was **not achieved in PDZ 7**. These increased risks under the recommended long term plan for this SMP, must be recognised and consideration should be given to an appropriate programme of survey, recording and investigation to record these important sites, and those potential features not yet identified.	

F9 MONITORING AND MITIGATION

F9.1 Introduction

F9.1.1 Of the minor adverse effects identified in this assessment (detailed in **Annex FIV**), some are addressed within the wider context of synergies and balance in relation to the effects of other management areas, whilst some require specific mitigation. SMP policy in some management areas work against natural processes, for example, in order to hold key areas of coast to protect other environmental values. It is the manner in which policy is applied across the whole SMP area, in order to provide balance, that is the important factor in such examples and therefore, mitigation is not appropriate or required.

F9.1.2 However, the SMP does require mitigation for singular effects, where a significant adverse effect has been identified. Detailed monitoring and mitigation requirements will be investigated in detail as part of future strategy studies and schemes, rather than the SMP. However, it is considered that in this context, the following approach to environmental monitoring activities or actions are required to support the SMP to avoid an adverse effect on the environmental values of Isle of Wight shoreline:

- Development of habitat management and monitoring plans, where appropriate;
- Compensation for the habitat losses identified within the HRA (Appendix I) – compensatory habitat will be sought and secured through the RHCP on approval from Natural England and the Environment Agency.
- Investigation of the specifics for habitat creation under MR and NAI policies (e.g. Old Mill Pond and Thorley Brook; see **Table 9.1** for more detail);
- Continuing to consult key stakeholders and the general public during strategy development; and
- Further studies at strategy or scheme level to investigate the potential impacts of flooding and erosion on important heritage features (known and unknown) at risk and to consider an appropriate programme of survey, recording and investigation to record these important sites, and those potential features not yet identified.

F9.1.3 Specific monitoring with an SEA focus will be undertaken to inform subsequent levels of assessment (e.g. environmental assessment at strategy and scheme level). The Action Plan in **Section 6 of the main SMP document** identifies estuary wide and local studies that will be required to inform the policies. These studies will be undertaken to inform future reviews of the Isle of Wight SMP.

F9.2 Habitat Monitoring and Management

Particular requirements relate to further (or ongoing) studies at various locations. **Table 9.1** has been developed for managed realignment and no active intervention policies, where opportunities for habitat creation have been identified; this was based on:

- The action plan that was agreed with the elected members and the CSG; and
- Knowledge of the necessary studies based on the remaining uncertainties associated with the implementation of the policies.

Table 9.1 Monitoring and further study requirements for policy units

Policy Unit		Requirements
PU1A.1	Gurnard Luck	Further studies to investigate Managed Realignment i.e. the viability of the policy; future morphology of the Gurnard Luck; the feasibility of regulated tidal exchange; flood risk of undertaking managed realignment; define the standard, and prepare a management plan for maintaining the sluices. Assessed as being a feasible site in the Isle of Wight Mitigation Strategy (Atkins, 2006).
PU1B.3	Central Medina – SW	Further studies to investigate the consequences of No Active Intervention policy i.e. the viability of the policy; future morphology of the reservoir and valley under the Viaduct; the feasibility of regulated tidal exchange; flood risk of undertaking managed realignment; define the standard, and prepare a management plan for maintaining the sluices. This site was not investigated in the Isle of Wight Mitigation Strategy but has been highlighted by the Solent CHaMP (Royal Haskoning, 2003).
PU2B.3	Old Mill Pond	Further studies to investigate Managed Realignment i.e. the viability of the policy; future morphology of the Old Mill Pond; the feasibility of regulated tidal exchange and intertidal habitat creation; saline consequences on Briddlesford Copse SAC of undertaking managed realignment; define the standard and prepare a management plan for maintaining the sluices. Recommended by the Isle of Wight Mitigation Strategy that this site present a good opportunity for creation of intertidal habitats.
PU3A.2	The Duver	Further studies to investigate the proposed Managed Realignment option at the Duver. It has not been recommended as a suitable site following investigation by the IW Mitigation Strategy, mainly due to the conservation value of the existing habitats. However, there is the possibility to manage the dune system. The viability of the policy; future morphology of The Duver and surrounding areas; the feasibility of undertaking managed realignment; flood and erosion risk; define the standard and aligned defences.
PU6C.5	Thorley Brook and Barnfields Stream	Further studies to investigate the proposed Managed Realignment and No Active Intervention option at Thorley Brook and Barnfields Stream. It has not been recommended as a suitable site following investigation by the IW Mitigation Strategy, due to the conservation value of the existing coastal grazing marsh. However, there is the possibility to manage the site to ensure the site stays in favourable condition with rising sea levels. A number of things will need to be investigated: the viability of the policy; future morphology of Thorley Bridge and surrounding areas; the feasibility of undertaking managed realignment; flood and erosion risk; define the standard and aligned defences.
PU6C.5 & PU6C.4	Thorley Bridge & Barnfields Stream; Western Yar Estuary – east	Further studies to investigate the proposed Managed Realignment and No Active Intervention policy that will affect the flat low lying area South of Mill Copse and Barnfields Stream that could be managed to create further saltmarsh and coastal grazing marsh. It was identified as a feasible site in the Isle of Wight Mitigation Strategy. Need to investigate the viability of the policy; future morphology of the area; the flood risk consequences and effect on the existing internationally important coastal grazing marshes; define the standard and alignment of defences.

Effects on the Integrity of International Sites

F9.2.1 The total effect on the integrity of International sites is the loss of **30.9 ha of coastal grazing marsh** to the Solent and Southampton Water Ramsar site. This means that there is a legal obligation under the Habitats Directive to find compensatory habitat to ensure the ecological coherence of the *Natura 2000* (and Ramsar sites) network is protected. Compensatory habitat will be secured through the Southern RHCP; this would be subject to approval by Natural England to a test of "no alternative solutions", and subsequently approval of "Imperative Reasons of Overriding Public Interest (IROPI)".

Impacts on SSSIs and BAP habitats

F9.2.2 The SMP has the potential to affect the condition of SSSIs through changes in habitat and coastal management (due to the number of SSSIs on the coast), with knock-on effects on the high level targets relating to SSSIs in favourable condition. A key tool, therefore, in managing and monitoring change for the Isle of Wight shoreline is the continued monitoring of SSSI units, which enables an early determination of where favourable condition may be threatened by inappropriate coastal management (SMP policy). It is considered that the existing monitoring programme undertaken by Natural England would be sufficient for this purpose, but there is a need to feed any initial findings into the SMP Action Plan and the development of subsequent SMP policy at the earliest stage.

F9.2.3 In addition, there is a need, to ensure that existing monitoring of BAP habitat in the plan area is provided in a manner which will highlight shifts in BAP habitat extent, and informs the BAP recording process. This mechanism is required to ensure that wider mechanisms exist for BAP habitat creation which addresses emerging requirements based on the effects of the SMP.

F9.2.4 The SMP provides policy direction which is indicative of expenditure required on the coast. Simply, where SMP policy relates to the provision, enhancement or replacement of defences, the SMP policy will be instrumental in securing funding for schemes, since it is a key consideration in the determination of applications for funding.

F9.2.5 It is not the intent or role of the SMP to secure funding, as a mechanism for policy. It therefore follows that in providing policy direction, the SMP fulfils its role in identifying the areas where funding will be required. To this end, it is considered outside of the scope of the SMP to provide funding as mitigation for policy.

Investigation of Historic Environment Sites

F9.2.6 SMP policy could lead to the loss of designated heritage assets which are important to the historic environment such as two Scheduled Monuments (SM; e.g. damage to the Long Mortuary Enclosure on Tennyson Down SM and damage to and loss of the Lower Needles Point Battery SM), Listed Buildings and three Registered Parks and Gardens (Norris Castle, Osborne and Ventnor Botanical Garden).

F9.2.7 Within the SMP Action Plan therefore, English Heritage will be instrumental in establishing what the specific nature of losses may be, and where losses are known, a figure for investigation established so that this funding can be sought from Government. The intent of addressing this matter within the SMP Action Plan will be to ensure that English Heritage are provided with funds, in advance to investigate threatened sites.

F10 THE NEXT STEPS IN THE SEA PROCESS

F10.1 Public Consultation

F10.1.1 This report is provided for public consultation simultaneously with the SMP itself. Comments should be provided either in writing or electronically to:

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c/o
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F10.2 The Purpose of Consultation

F10.2.1 The purpose of consultation for this report is to establish whether:

- the environmental issues been correctly identified;
- the report correctly identify the assessment criteria which should be used to assess the plan;
- the information provided correct; and
- issues or detail have been omitted which should be a key element of the assessment.

F10.2.2 Answers to these questions, or other issues relating to the environmental effects of the plan would be welcome as a component of consultation. Feedback received will shape the finalisation of this report and the evaluation of the environmental effects of the SMP. The final consideration and endorsement of the plan will be provided in response to these issues.

F10.3 Subsequent Documents

F10.3.1 Following the completion of this report, a *Post Adoption Statement* will be provided to notify that the SMP2 (including SEA, HRA and WFD) have been approved. A separate brief report known as the 'Statement of Particulars' will detail how the environmental considerations of the consultation process have been integrated into the SMP and how the consultation and response to consultation has been considered within the SEA process.

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F12 ABBREVIATIONS, ACRONYMS AND GLOSSARY OF TERMS[2]

Abbreviation	Definition
ACHWS	The Advisory Committee on Historic Wreck Sites
AOD	Above Ordnance Datum
AONB	Area of Outstanding Natural Beauty
ATL	Advance the Line
BAP	Biodiversity Action Plan
BMP	Beach Management Plan
BMP	Beach Management Plan
BQE	Biological Quality Element
CFMP	Catchment Flood Management Plan
CRoW	Countryside and Rights of Way
CSG	Client Steering Group
Defra	Department for the Environment, Food and Rural Affairs
EA	Environment Agency
EC	European Commission
EIA	Environmental Impact Assessment
EMP	Estuary Management Plan
EMS	European Marine Site
ER	Environmental Report
EU	European Union
FWB	Freshwater Body
GCR	Geological Conservation Review
GEP	Good Ecological Potential
GES	Good Ecological Status
GIS	Geographical Information Systems
GOSE	Government Office for the South East
GWB	Groundwater Body
Ha	Hectares
HAPS	Habitat Action Plans
HEAP	Historic Environment Action Plan
HER	Historic Environment Record
HLC	Historic Landscape Characterisation
HRA	Habitats Regulations Assessment
HTL	Hold the Line
IoW	Isle of Wight
IoW	Isle of Wight
IROPI	Imperative Reasons of Overriding Public Interest
IWCCE	Isle of Wight Centre of Coastal Environment
JNCC	Joint Nature Conservation Committee
km	Kilometre
km^2	Kilometre squared (or 100ha)
LB	Listed Building
LBAP	Local Biodiversity Action Plan

[2] **Adapted from:** http://www.environment-agency.gov.uk/commondata/acrobat/6_chapter_5_glossary__1388113.pdf

Abbreviation	Definition
LNRs	Local Nature Reserves
m	Metre
MAFF	Ministry of Agriculture, Fisheries and Food
MAN	Management Unit
MNR	Marine Nature Reserve
MR	Managed Realignment
NAI	No Active Intervention
NE	Natural England
NEAS	National Environmental Assessment Service
NNR	National Nature Reserve
NTS	Non-Technical Summary
°C	Degrees Celsius
PDZ	Policy Development Zone
PPPs	Plans, Programmes and Policies
PU	Policy Unit
R&D	Research and Development
RBD	River Basin District
RBMP	River Basin Management Plan
RDP	Rural Development Plan
RHCP	Regional Habitat Compensation Programme
RIGS	Regional Important Geodiversity Sites
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SEEDA	South East England Development Agency
SFRA	Strategic Flood Risk Assessment
SINCs	Site of Importance for Nature Conservation
SLA	Special Landscape Area
SM	Scheduled Monument
SMP	Shoreline Management Plan
SMP2	first review of the Shoreline Management Plan
SMs	Scheduled Monuments
SPA	Special Protection Area
SPR	Source Pathway Receptor Model
SR	Scoping Report
SSSI	Site of Special Scientific Interest
TraC	Transitional and Coastal water body
UK	United Kingdom
UKBAP	UK Biodiversity Action Plan
UKCP	UK Climate Projections
WFD	Water Framework Directive
WHS	World Heritage Site
WLMP	Water Level Management Plan
WPM	With Present Management
WWTP	Waste Water Treatment Plant

Isle of Wight Shoreline Management Plan 2
Strategic Environmental Assessment
Supporting Annexes

Isle of Wight Council

December 2010
Appendix F: SEA – Supporting Annexes
9V8288

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Drafted by	Dr Elizabeth Jolley and Sarah Wright	
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Date/initials check	ECJ	05/07/10
Approved by	Peter Thornton	
Date/initials approval	PT	07/07/10

ANNEX F-I: PLANS AND PROJECTS

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Annex F-I Table 1 The key plans, policies, programmes and guidance that are applicable for the SEA

Policy/Programme /Plan/Strategy	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issue (and Sections)
DRIVERS: INTERNATIONAL AND EUROPEAN LEGISLATION AND GUIDANCE				
Strategic Environmental Assessment (SEA) **Directive** 2000/42/EC	• This directive, seeks to ensure that environmental considerations are attached to preparation and adoption of certain plans and projects which are likely to have a significant effect on the environment. • The directive offers prescription on which plans and programmes should require the production of a formalised SEA. • Provision of a high level of protection for the environment and the integration of environmental considerations into the preparation and adoption of certain plans.	The objectives and policies of the Isle of Wight SMP2 should have regard for the sustainable solutions to shoreline management and the environment.	Ensure that the requirements of the Directive are reflected in the SEA approach / methodology undertaken for the Isle of Wight SMP2.	Impacts to the environment associated with shoreline management and natural coastal processes.
European Marine Strategy Framework (MSFD) **Directive** 2008/56/EC (derived from EU Thematic strategy for Protection and Conservation of the Marine Environment that was adopted 24/10/2005)	• The aim of the European Union's ambitious Marine Strategy Framework Directive (adopted in June 2008) is to protect more effectively the marine environment across Europe. • It aims to achieve good environmental status of the EU's marine waters by 2020 and to protect the resource base upon which marine-related economic and social activities depend. • The Marine Strategy Framework Directive constitutes the vital environmental component of the Union's future maritime policy, designed to achieve the full economic potential of oceans and seas in harmony with the marine environment. • The overall objective of the Strategy is to protect and restore Europe's oceans and seas and ensure that human activities are carried out in a sustainable manner so that current and future generations enjoy and benefit from biologically diverse and dynamic oceans and seas that are safe, clean, healthy and productive.	Objectives and policies of the Isle of Wight SMP2 should comply with the Strategy to achieve good environmental status for marine areas of the Isle of Wight. This approach should include protected areas and should address all human activities that have an impact on the marine environment.	Ensure the SEA reflects the requirements of achieving good environmental status for marine areas of the Isle of Wight.	The marine environment is currently subject to a variety of threats, ranging from the loss or degradation of biodiversity and changes in its structure, loss of habitats, contamination by dangerous substances and nutrients and possible future effects of climate change.
Habitats Directive 92/43/EEC (Conservation of Natural Habitats and Wild Fauna and Flora)	• Maintain or restore designated natural habitat types, and habitats of designated species. • Take appropriate steps to avoid degrading or destroying SACs. • Linear structures (rivers / streams / hedgerows / field boundaries etc) that enable movement and migration of species should be preserved.	Any plan or project likely to have a significant impact on a designated site should undergo an Appropriate Assessment of its implications for the conservation objectives of the site.	Ensure that the requirements of the Directive are reflected in the SEA.	Impacts or loss of designated natural habitat types due to changes in coastal management (e.g. managed realignment and loss of grazing marsh or mud flats) and natural coastal processes.
Birds Directive 2009/147/EC (Conservation of Wild Birds)	• Protection, management and control of all species of naturally occurring birds. • Take measures to preserve, maintain or re-establish a sufficient diversity and area of habitat.	Objectives and policies of the Isle of Wight SMP2 should comply with the Directive.	Ensure that the requirements of the Directive are reflected in the SEA.	Impacts to the bird habitat associated with shoreline management and natural coastal processes.
European Marine Management Schemes: • Solent European Marine Management Scheme • South Wight European Maritime Site	Approved in 2006, the aim of the EU SDS is to identify and develop actions to enable the EU to achieve continuous improvement of quality of life both for future and current generations, through the creation of sustainable communities able to manage and use resources efficiently and to tap the ecological and social innovation potential of the economy, ensuring prosperity, environmental protection and social cohesion. **The key themes are**: • Climate change and clean energy; • Sustainable transport; • Sustainable consumption and production; • Conservation and management of natural resources; • Public health; • Social inclusion, demography, migration; and • Global poverty and sustainable challenges. **The cross cutting policies are**: • Education and training; • Research and development; • Financing and Economic Instruments; and • Communication, mobilising actors and multiplying success.	Objectives and policies of the Isle of Wight SMP2 should take into the consideration the key themes and policies associated with the EU SDS.	Ensure the SEA reflects the requirements of the EU SDS.	**In general:** Impacts on the long-term sustainability of communities (e.g. settlements) and the natural environment. **Key points:** - To limit climate change and its costs and negative effects to society and the environment. - To ensure transport systems meet society's economic, social and environmental needs whilst minimising their undesirable impacts on the economy, society and the environment - Halting the loss of biodiversity and contributing to a significant reduction in the world wide rate of biodiversity loss by 2010. - Improving management and avoiding overexploitation of renewable natural resources such as fisheries, biodiversity, water, air, soil and atmosphere, restoring degraded marine ecosystems. - To create a socially inclusive society by taking into account solidarity between and within generations and to secure and increase the quality of life of citizens as a precondition for lasting individual well-being. - The Commission and Member States should work towards improving integrated water resources management, the marine environment and promoting integrated coastal zone management.

Policy/Programme /Plan/Strategy	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issue (and Sections)
EU Biodiversity Strategy	• On 4 February 1998, the European Commission adopted a Communication on a European Biodiversity Strategy. • This strategy aims to anticipate, prevent and attack the causes of significant reduction or loss of biodiversity at the source. This will help both to reverse present trends in biodiversity decline and to place species and ecosystems, including agro-ecosystems, at a satisfactory conservation status, both within and beyond the territory of the European Union (EU). • The Strategy is organised around four strategic themes and eight policy areas. There are also four thematic Action Plans developed for each of the following themes: - Conservation of Natural Resources; - Agriculture; - Fisheries; and - Economic Cooperation.	Objectives and policies of the Isle of Wight SMP2 should take into the consideration the key themes associated with the Biodiversity Strategy.	Ensure the SEA reflects the requirements of the Biodiversity Strategy.	**The overarching goals of the Biodiversity Strategy are described as:** "*to contribute to reverse present trends in biodiversity losses*", and "*to place species and ecosystems in a satisfactory conversation status both within and beyond the territory of the European Union*".
European Spatial Development Perspective (EDSP)	• The European Spatial Development Perspective (ESDP) is based on the EU aim of achieving a balanced and sustainable development, in particular by strengthening economic and social cohesion. • **Key polices of the Perspective include**: - Development of a polycentric and balanced urban system, and strengthening of the partnership between urban and rural areas, so as to create a new urban-rural relationship. - Promotion of integrated transport and communication concepts, which support the polycentric development of the EU territory, so that there is gradual progress towards parity of access to infrastructure and knowledge. - Wise management of the natural and cultural heritage, which will help conserve regional identities and cultural diversity in the face of globalisation.	Objectives and policies of the Isle of Wight SMP2 should take into the consideration the key policies of the Perspective, in particular policy 3.	Ensure the SEA reflects the requirements of the Perspective, in particular policy 3.	**Key policy options /issues:** - Preparation of integrated spatial development strategies for protected areas, environmentally sensitive areas and areas of high biodiversity such as coastal areas, and wetlands balancing protection and development on the basis of territorial and environmental impact assessments. - Protection of the soil as the basis of life for human beings, fauna and flora, through the reduction of erosion, soil destruction and overuse of open spaces. - Preservation and restoration of large wetlands which are endangered by excessive water extraction or by the diversion of inlets. - Concerted management of the seas, in particular preservation and restoration of threatened maritime ecosystems.
Water Framework Directive	• The Directive is intended to enhance waterways and wetlands throughout Europe, to make sure water is used in a sustainable way, to reduce water pollution and to lessen the effects of floods and droughts. • Directive will establish a strategic framework for managing the water environment and provides a common approach to protecting and setting environmental objectives for all coastal, transitional, ground and surface water bodies and the promotion of sustainable water use. • For surface water, the Directive requires that environmental objectives are based on the chemical and, more significantly, ecological status of the water body. For groundwater, quantitative and chemical objectives must be set. • The Directive also requires that statutory strategic management plans be produced for each River Basin District (RBD).	Knowledge of, and access to, new information of the Directive (e.g. basin wide data on surface runoff), should help improve the information inventories held by Coastal Groups and integrated into current and future SMPs. The Directive should not be viewed as an over-arching coastal or coastal risk management plan. Instead, the Directive's principles should be clearly and substantively integrated into the Isle of Wight SMP2.	The SEA can strengthen the content of spatial plans associated with the Directive (such as River Basin Management Plans) in terms of the link between water and coastal cliff face processes and impacts. The requirements of the Directive relating to such issues as increased surface runoff and pollution should be reflected in the SEA.	Impacts to coastal cliffs and associated landscapes including areas protected for their landscape importance and character.
Bathing Water Quality Directive	Sets binding standards for bathing water quality.	Where possible the Isle of Wight SMP2 policies should ensure that measures are prescribed to protect or restore the quality of bathing waters to BWD standards.	Ensure that the requirements of the Directive are reflected in the SEA.	Impacts to the bathing waters associated with shoreline management and natural coastal processes.

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DRIVERS: NATIONAL LEGISLATION AND GUIDANCE				
Marine and Coastal Access Act 2009	The Act or otherwise known as 'The Marine Bill' will ensure clean healthy, safe, productive and biologically diverse oceans and seas, by putting in place better systems for delivering sustainable development of marine and coastal environment. The Bill contains a variety of measures designed to improve the long term, strategic decisions about the management of the marine environment, and to simplify the systems used to manage marine resources. **The measures cover the following**: • Creation of the Marine Management Organisation; • Marine planning; • Better marine licensing decisions; • Marine nature conservation; • Fisheries management and marine enforcement; • Migratory and freshwater fisheries; • Environmental data and information; • Coastal and estuary management; • Access to coastal land; and • Administrative penalties.	The key measures to improve the management of marine, freshwater and migratory fisheries, in line with the principles of sustainable development need to be taken into consideration in the Isle of Wight SMP2. In addition, the measures to deliver increased coastal access under the Marine Bill needs to be taken into consideration when developing the policy options for the Isle of Wight SMP2.	Ensure that the key measures of the Marine Bill are reflected in the SEA, in particular the protection of coastal access.	- Climate change altering marine habitats; - Coastal erosion, flood risk, and habitat loss are all increasing (the coast is eroding at more than 25% of monitored sites in England and Wales); - Stocks of marine and migratory fish are low. The number of elvers returning to England and Wales has declined by 70% since the early 1980s (in Europe, this decline is >95%); - Modern fishing methods may damage seabed habitats; - One in three people live near the sea and the coast is a popular and growing destination for holidays; and - National "coastal access corridors", providing secure and consistent rights for people to enjoy the whole English coast with confidence and certainty.
Conservation of Dynamic Coasts: A Framework for managing Natura 2000	The framework focuses on some issues affecting coastal Natura 2000 sites in the United Kingdom, especially flood management and the need to build on current approaches to coastal policy and management. **The outcomes of the framework include**: • A better understanding of the role of flood defence measures in delivering the aim of the Habitats; • Directive on the coast of the UK; • A better appreciation of the application of the Habitats Directive amongst other Member States; • Actions to promote management of coastal Natura 2000 sites to deliver favourable conservation status, taking forward the overall results of the project in the context of the issues of site boundary designation and promoting the development of a clear understanding of the concept of a coherent network in UK.	This report / framework promotes a more strategic approach to site management and the response to dynamic change. The proposed actions of the report will help to implement the Habitats and Birds Directives in the United Kingdom. The Isle of Wight SMP2 (as stated under European Context) should include the identification of appropriate compensation / mitigation sites in an adjacent to protected areas, as at present it is unlikely to deliver such a framework.	The SEA will incorporate strategic directions towards the management of Natura 2000 sites associate with the Isle of Wight SMP2.	Management of the natural environment regarding Natura 2000 sites associated with the coastal environment (e.g. impacts to designated sites due to natural coastal processes and management thereof example, coastal breaching, cliff erosion, cliff stabilisation, coastal squeeze, interruption of sediment supplies etc.).
Flood and Water Management Act 2010	The Flood and Water Management Bill will provide better, more comprehensive management of flood risk for people, homes and businesses. It will also help tackle bad debt in the water industry, improve the affordability of water bills for certain groups and individuals, and help ensure continuity of water supplies to the consumer. The draft Flood and Water Management Bill will: • deliver improved security, service and sustainability for people and their communities; • it will be clear who is responsible for managing flood risk; • protect essential water supplies; • modernise the law for managing flood risk and reservoir safety; • encourage more sustainable forms of drainage; • enable water companies to control more non-essential uses of water during droughts; and • make it easier to resolve misconnections to sewers. • The bill will create a more comprehensive and risk based regime for managing the risk of flood and coastal erosion, which for the first time embraces all sources of flooding.	The Isle of Wight SMP2 policies should ensure that the policies chosen for the SMP2 are sustainable, whilst reducing the effect of local biodiversity and the water cycle.	Ensure that the key measures of the draft Flood and Water Management Bill are reflected in the SEA, in particular sustainability, biodiversity and the whole water cycle. This should not be a problem since they are the similar to that required for the SEA.	Ensures that those managing the risk of flood and coastal erosion will take account of other concerns such as sustainability, biodiversity and the whole water cycle.

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Landscape Character Assessment: Guidance for England and Scotland. Topic Paper 9: Climate change and natural forces – the consequences for landscape character	The paper outlines the process of understanding the potential interactions between climate change and landscape character of the UK. Direct impacts looked at include landscape character changes such as flooding events, longer growing seasons, low river flows and losses to whole landscapes in response to sea level rises.	The impact of climate change such as sea level rises needs to be taken into consideration in the Isle of Wight SMP2 along with increased fluvial and tidal flooding on the chosen shoreline management policies (e.g. managed realignment).	Ensure that the key issues associated with the impacts of climate change on landscape character discussed in the topic paper are reflected in the SEA.	Impacts of climate change on the three themes identified including the natural environment, land use and cultural heritage. For example, sea level rises and impacts on habitats/species, tourism and recreation or impacts of increased fluvial and tidal flooding on pollution runoff, cultural heritage and habitats.
UK Biodiversity Action Plan (UK BAP; 1994)	Published in response to Article 6 of the United Nations Convention on Biological Diversity agreed at Rio in 1992, the Plan commits the Government to conserve and, where possible, enhance biodiversity within the UK.	Potential conflict. It is important that the LBAP is integrated into the work of initiatives that have an influence on biodiversity conservation including SMPs.	see Local BAP	see local BAP
Policy Statement: Appraisal of flood and coastal erosion risk management (2009). Includes Project Appraisal Guidance FCDAG 5 (Environment)	Contains guidance for operating authorities and others involved in managing flood and coastal erosion risk. The intended benefits include: • A greater focus on **early engagement** with the community and social factors; including better assessment of impacts on health, community well-being and social justice. It seeks to support the development of options that attract other sources of funding, to leverage Government investment and increase local and regional benefit. • A more **thorough and balanced** appraisal of a wider range of possible approaches including adaptation where it is not feasible to reduce the probability of flooding and erosion from occurring. • ·A greater emphasis on flexibility for the future, such as being able to adapt solutions over time as the climate changes. This supports Defra's coastal change policy which is open to consultation.	Follow the guidance for the SMP2 to ensure that a sufficient environmental appraisal has been conducted to take account of environmental objectives and sustainability of the plan.	Provides guidance on carrying out sufficient environmental and sustainability appraisals of the SMP2.	
LAND-USE PLANNING: Regional Spatial Strategies				
Regional Planning Guidance and Regional Spatial Strategies • Regional Spatial Strategy for the South East of England 2006 – 2026); • South East Plan (2009); • Regional Economic Strategy for South East England (RES) 2006 – 2016; • Regional Transport Strategy for the South East 2004; • South East Regional Housing Strategy 2008 – 2011; and • Planning Policy Guidance and Statements (including PPG25 and PPS25).	These high level strategy plans set out a strategy for the future development and use of land throughout the county. They are less detailed and cover a larger geographic area than local plans. The SMP will help regional and sub-regional government authorities to inform spatial planning, sustainability appraisal and strategic environmental assessment. The structure plans highlight significant growth (up to 2026) on the Isle of Wight. Major projects or proposed projects that could be affect by the SMP policies include proposed expansion of the existing urban areas within Cowes and East Cowes, Newport, Ryde and Sandown and Shanklin. The recently published plan by SEERA (2006) proposes the development of 10,400 new homes on the Island. Specific **South East Plan** planning principles for the IW: • The quality and character of the rural environment must be maintained and enhanced; • Natural resources and biodiversity must be protected and improved; • Local communities must be sustained through sensitive development of market and affordable housing to help maintain rural vitality and improve access to local services and employment; • Opportunities to support, improve and diversify local economies must be identified and developed; • Accessibility and rural public and community based transport must be improved; and • The importance of the countryside as a resource to attract visitors and provide a healthy recreational environment must be recognised and strengthened.	The SMP2 will need to take account the impacts of the selected shoreline management policies for the SMP2 on the key relevant issues associated with the Regional Spatial Strategies and County Structure Plans.	No major influences on the SEA as the Core Strategy will complement the objectives of the SEA for the SMP2.	Key issues for the Isle of Wight in the South East Regional Strategy include nature conservation and economic development. Natural resources and biodiversity must be protected and improved. National, regional and other relevant agencies and authorities will give increased priority to investment decisions and other direct support for the island to help realize a step-change in the Isle of Wight's economic performance, to actively support economic regeneration and renewal, an improved quality tourism product and inward investment. Key relevant measures include: • The development of infrastructure and inward investment opportunities in the Medina Valley • Support for inward investment and development to regenerate key areas identified in Ryde, Sandown Bay, Ventnor and West Wight, subject to minimal environmental impact • The need to improve the tourism offer to one that focuses on a higher quality, higher value product.

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LAND-USE PLANNING: Local Planning				
• Isle of Wight Unitary Development Plan 1996 – 2011 (Isle of Wight Council) to be replaced by a Local Development Framework (LDF – known as the The Island Plan – draft); • Isle of Wight Corporate Plan 2009	The **Unitary Development Plan (UDP)** sets out Isle of Wight Council's strategy for the future planning of the area for the period up to 2011. The Government has however, set in motion changes to the planning policy process, which will see the Isle of Wight UDP replaced by a Local Development Framework (LDF). The new system came into force (under the Planning and Compulsory Purchase Act 2004), as of 28 September 2004. The existing UDP, will be replaced by a framework of documents including: • Core Strategy • Development Plan Documents (DPDs) • Site specific policies and proposals map • Statement of Community Involvement • Supplementary Planning Documents The LDF will be called the *Island Plan*. The Island Plan will provide the essential framework for making decisions for proposals for development, change of use and new development. The Island Plan also includes a *Strategic Flood Risk Assessment* (see **R8**) for the Isle of Wight. **The Core Strategy** will consider how the island will develop over the next 15-20 years. The strategy has been subject to a Sustainability Appraisal (SA). There are x strategic objectives that will provide the framework for the policies within the Core Strategy: 1. To support sustainable and thriving communities that enable people to enjoy quality of life, without compromising the quality of environment. 2. To ensure that all development supports the principles of sustainable development. 3. To protect, conserve and enhance the Island's built, historic and natural environments. 4. To ensure that all development is designed to a high quality, creating buildings and a sense of place that reflects and enhances local character and distinctiveness. 5. To provide opportunities to diversify and strengthen the local economy and increasing the range of higher skilled jobs available locally. 6. To ensure that housing is provided to meet the needs of Island residents. 7. To reduce the need to travel and improve accessibility through the Island and accommodate development which minimise the need to travel. 8. To ensure public, private and community sectors focus on implementation.	Local Plans, together with the Structure Plan form the Development Plan for the local areas. The local plans describe current Council planning policies; set out development opportunities; make recommendations and identify constraints. The SMP will help the Isle of Wight Council to inform spatial planning, sustainability appraisal/strategic environmental assessment and emergency planning along the coastlines and estuaries. The local plans and LDFs highlight the exact locations of the proposed development targets outlined in the regional and sub-regional development plans (see **R2**).	The SEA should incorporate any issues related to the shoreline of the Island assessed in the SEA undertaken for the LDP. The SEA should also ensure that the key issues associated with the environment addressed in LDP and associated plans are also reflected in the SEA.	The relevant key issues and problems that the LDF aim to address are: • Natural and built environment – sustaining an attractive environment; how to achieve sustainable development with the high value environment. • Population – increasing and has significant impacts for economic growth, house provision and service delivery. • Housing – achieve affordable housing. • Transport – improve more sustainable options of travel. As well as the key issues are associated with objectives 1, 2 and 3 of the Core Strategy there are relevant outcomes associated with Objective 3, these include: • To distribute development so that it avoid impacts upon Natura 2000 sites. • To protect special habitats and species important to the Island. • To provide opportunities to enhance biodiversity on the Island. • To safeguard and enhance the local landscape and character of smaller towns and villages. • To make the best use of buildings in the urban areas.
• Provisional Local Transport Plan 2006 – 2011;	**The Local Transport Plan 2 (LTP2)** sets out the five year framework for the development of a sustainable transport strategy on the Isle of Wight, from 2006 to 2011. The LTP sets out the transport issues for the IW, as well as the Council's long-term transport vision and five-year strategy. It explains what measures it proposes to put in place, how much measures will cost and how success in delivering these measures will be monitored over the period of the Plan.			The five year strategy for the **LTP2** will be delivered in line with the LDF (Island Plan) and within the Area Investment Framework derived regeneration areas. These areas include Cowes waterfront, Pan Urban extension, Sandown Bay, and Ryde and its urban areas. The local transport issues and opportunities are: • Accessibility; • Cross Solent issues; • Tourism and transport; • Deterioration in highway infrastructure; • Environmental impact; and • Road safety issues.
• Isle of Wight Economic Strategy; •	The **Isle of Wight Economic Strategy** sets out the vision for the Island's economic wellbeing. It provides a framework for the Council and its partner agencies to take forward economic projects that will increase the prosperity and competitiveness of the Island. The Economic Strategy shares its vision with Eco Island and this Core Strategy, and to achieve this vision, for economic objectives have been identified: • Smart Growth; • Sustainable prosperity; • A more Mixed Economy; and • Increase the value of Tourism to the economy.			

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	Priorities have been established and the Economy and Environment Key Delivery Partnership is developing a Delivery Plan which will ensure the four objectives are met.			
• Isle of Wight Tourism Development Plan – 2020 Vision;	The **IW Tourism Development Plan (TDP)** is one of the key areas in the Island Plan. The impact of tourism on the Isle of Wight is extensive. The island's economic, environmental and social well being is fundamentally influenced by the way in which the tourism industry operates. The TDP seeks to ensure that the IW maximises the potential of the tourism industry and enables it to grow in a way that is economically, socially and environmentally sustainable. It sets the foundation for a long term vision to 2020 and is encompassed within the wider Island Plan. There are three primary challenges in the development of tourism on the island :- • Meeting customer needs; • Building confidence; and Ensuring Sustainability.			The relevant **tourism objectives** are: Enhancing and protecting the environment – ensuring that key assets are not spoiled by over development or excessive use.
FLOOD AND COASTAL EROSION RISK MANAGEMENT PLANNING				
Shoreline Management Plans (SMP) • **Isle of Wight SMP** (Isle of Wight Council, 1997); and • North Solent SMP.	These plans will identify long-term policies for managing flood risks from fluvial, groundwater, and coastal sources. SMPs provide a framework for the development of sustainable coastal defence policies. In accordance with the SMP guidelines issued by DEFRA, the main objectives to be fulfilled through the development of this plan are: • To improve the statutory planning process and related coastal zone planning. • To ensure that future policies for coastal defence do not adversely interfere with the behaviour of natural processes within the Plan or across Plan boundaries. • To determine sustainable policies for shoreline management sub-cells based on a thorough evaluation of the processes and interactions affecting the shoreline in accordance with MAFF strategies for flood and coastal defence. • To ensure compatibility with national and local biodiversity targets by protecting and where possible enhancing nature conservation interest and in particular to safeguard the integrity of sites of regional, national or international importance. • To determine, when required, appropriate standards and forms of sustainable coastal defence for existing and/ or new works that are environmentally acceptable, including the maintenance and management of man-made and natural coastal defences. • To promote co-ordinated monitoring of coastal processes and regular shoreline surveys throughout the sub-cell to improve knowledge and understanding of the coastal environment, including identifying gaps in knowledge and proposing future research. • To develop an improved public awareness of the behaviour of the coast and the influences they and others have on it.	The SMP2 will need to incorporate or build upon the first round SMP taking into account of information collected or changing circumstance.	There are no major influences as the SEA will ensure the environment is taken into consideration in regards to the impacts of the selected shoreline management policies.	Impacts regarding the policy options chosen for the management of coastal process units (CPU) on coastal processes, natural environment and human and built environment.

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Catchment Flood Management Plans (CFMP) • Isle of Wight CFMP (EA, current)	The main aim of the CFMP is to develop policies for flood risk management for the combined catchments (two large catchments -Medina and Western Yar, and several sub-catchments) of the Isle of Wight now and in the future. **Objectives for the catchment include:** <u>Social objectives</u> • Reduce current flood risk to people considering climate change and sustainability; • Enhance recreation and general amenity; and • Raise awareness and understanding of flooding and flood risk management; <u>Economic objectives</u> • Promote sustainable planning and ensure that further development does not increase flood risk; and • Reduce current flood risk to property taking account of climate change and sustainability. <u>Environmental objectives</u> • Increase the length of the naturally functioning river and the river connected to the flood plain; • Encourage habitat creation as part of flood risk management practices; and • Protect and enhance significant historic environment assets and their settings.	Polices chosen for Isle of Wight in the CFMP need to be taken into consideration for the SMP2 policies. The CFMP polices include the following: • **P2** Reduce existing food risk management actions (accepting that flood risk will increase over time); and • **P5** Take further action to reduce flood risk (now and/or in the future); and • The SMP2 should compliment the CFMP, as the SMP2 takes into consideration coastal flooding from the sea.	The SEA will take into account the impact of floods on the environment thus no influence on the SEA.	• More properties can expect to be flooded more frequently because of the impact of climate change. • The pressures for urban development will infill existing urban areas at Newport, Freshwater and Ryde. The existing drainage network will become under increasing pressure to cope with runoff. • Existing fluvial flood risk management and coastal strategies may constrain future management. • Impact of increased surface water flows on coastal geomorphology. • Loss of habitat, biodiversity and cultural; heritage. • Impacts of increased erosion and sediment transport along rivers.
Strategic Flood Risk Assessment (SFRA) for the Isle of Wight (Isle of Wight Council, 2007)	Planning Policy Statement 25 (PPS25): Development and Flood Risk emphasises the links between the SFRA and the Core Strategy Sustainability Appraisal. The Island's SFRA was completed at the end of 2007. Strategic Flood Risk Assessment (SFRA) has been undertaken to assess flood risks on the Isle of Wight, and in particular the flood risks and flood risk zones associated with areas being considered for future development as part of the emerging Local Development Framework (LDF). There are four main areas of flood risk on the Island (from 2000/01 data): • **Ryde** (Monkton Mead Brook); • **Newport** (River Medina); • **Freshwater** (Western Yar); and • Several small locations associated with **Eastern Yar**. There are a number of flood alleviation schemes on the tidal reaches of the rivers (e.g. 4km stretch of River Medina through Newport).	The results identified in the Isle of Wight SFRA need to be taken into consideration for the SMP2 policies.	The SEA will take into account the flood risk areas thus there is no influence on the SEA.	More properties can expect to be flooded more frequently because of the impact of climate change. The SFRA identified 9% of the potential development sites face flood risks sufficient to restrict the use of the land. At a site specific level only a small portion of these sites is affected. Of the 14 identified key development areas in the Core Strategy, there were four that had no significant restrictions; these were Brading, St Helens, Ventnor and Wootton. The key development areas affected and the reasons for potential restrictions for development are: • **Bembridge** - Embankment Road; • **Brighstone** - Fluvial flooding in the Brighstone Brook and Shorewell Stream confluence area; • **Cowes and East Cowes** - Tidal flooding along both sides of the Medina Estuary • **Newport** - All sites adjacent to watercourses have partial restrictions, but no significant areas of restriction. Tidal flooding in the Seaclose area represents a significant restriction to planning; • **Ryde** - Significant restrictions identified in the tidally influenced area and adjacent to Monks Brook; • Seaview - Two sites with potentially significant restrictions; • **The Bay** - Significant restrictions in the north east of the area and in the Culver Parade area; • **Wroxall** - Significant restrictions to portions of two sites owing to presence of fluvial flood zones; • **West Wight** - Significant restrictions in the Freshwater area along the banks of the Western Yar; and • **Yarmouth** - Significant restrictions owing to the large tidal flood zone extents which encircle the town. The study reported that the potential impacts of climate change were already within the current Flood Zones. There are variations in impact depending on the coastline, areas of steep land gradients in the coastal regions exhibit smaller impacts than areas of gentle topography.
Coastal Defence Strategy Studies (Isle of Wight Council) • North-East Coastal Defence	Whilst the Shoreline Management Plan provides the risk framework for management of the coast, Coastal Defence Strategy Studies provide a more detailed assessment of particular frontages in order to identify the most suitable type of coastal defence			

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Strategy Study (Isle of Wight Council, 2005); • West Wight Coastal Defence Strategy Study (Isle of Wight Council, current); • Sandown Bay and Undercliff Coastal Defence Strategy Study (Isle of Wight Council, current); and • East Yar Fluvial and Coastal Strategy (Isle of Wight; Environment Agency, current).	schemes that may be required to fulfil the agreed shoreline management policy, or to develop other coastal defence options along the length of coast concerned.			
OTHER MANAGEMENT PLANNING				
Area of Outstanding Natural Beauty (AONB) Management Plans Isle of Wight AONB Management Plan 2009 - 2014	The overall aim of the AONB Management Plan is to ensure continuity and consistency of management over time and to conserve and enhance the natural beauty of the landscape for the use and enjoyment of future generations. A large part of the Island is a designated Area of Outstanding Natural Beauty (AONB). **Eight main objectives cover:** Landscape Character, Earth Heritage, Wildlife, Historic Environment, Living and Working, Traffic and Transport, Farming and Forestry and Visiting and Enjoying.	The Isle of Wight AONB Management Plan ensures the integrity of the AONB is maintained as a national interest. As such, this Plan should be used to guide and inform all other plans such as the Isle of Wight SMP2 and activities developed by public bodies that may affect the AONB such as coastal defences.	Ensure that the key issues associated with the management of the Isle of Wight AONB are reflected in the SEA.	
Biodiversity Action Plans Isle of Wight Local Biodiversity Action Plan	The Isle of Wight Local Biodiversity Action Plan (LBAP) covers the entire Island, including the inshore waters and seabed to 12 miles offshore. The LBAP provides a framework for local biodiversity action that will contribute to the delivery of national targets for key habitats and species, and the raising and awareness and understanding of the relevance of the biodiversity to the people of the Isle of Wight. **Priority habitats**: • Maritime cliffs and slopes • Saltmarsh • Mudflats • Coastal vegetated shingle • Coastal sand dune • Reedbed • Sheltered muddy gravels • Sand flats • Seagrass beds • Saline lagoons • wet woodland • lowland beech and yew woodland • lowland wood-pasture and parkland • Heathland • Acid grassland • Lowland meadows	It is important that the LBAP is integrated into the work of initiatives that have an influence on biodiversity conservation including SMPs to ensure that any potential impacts on biodiversity are avoided.	No major influences on the SEA as the LBAP and SEA both complement each others objectives regarding the protection of local biodiversity.	By 2015 the aim is to maintain around 50km of free-functioning maritime cliffs & slopes; To restore 1km of currently constrained maritime cliffs & slopes; By 2015 the aim is to maintain around 1050ha of estuarine habitats (mudflats, saltmarsh, sand dune, vegetated shingle and coastal lagoons); By 2015 where possible, recreate estuarine habitats by coastal re-alignment; Ensure the long term well-being and survival of important intertidal and subtidal habitats against the background of sea level rise; and Aim to maintain and restore the existing rivers and wetland habitats and re-instate additional wetland habitats from suitable flood-plain land.

Policy/Programme /Plan/Strategy	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issue (and Sections)
Estuary and Harbour Management Plans The Western Yar Estuary Management Plan (2004); and Medina Estuary Management Plan (2000).	The **Western Yar EMP** has been developed to secure the long term future, health and special value of the estuary, adjacent land and sea. Objectives relevant to the SMP are summarised as follows: • Ensure that the landscape, cultural and nature conservation resources of the estuary are maintained in line with the requirements of relevant legislation. • Maintaining the character of the area. • The natural and physical processes within the Western Yar should continue with the minimum of human modification. This should allow present and future activities and processes of the estuary to co-exist or restore more natural coastline or processes. • Protect, as appropriate, the urban and commercial development (people, property and businesses) in the core area and area of wider influence from erosion and flooding by the sea. • Maintain, as appropriate, the existing defences to protect people and property from flooding. • Hold the defence line by maintaining the level of coast protection afforded by the breakwater whilst minimising the adverse impacts to the natural processes of sediment transport, especially those which sustain sensitive habitats. • Any improvements to the level of coastal defences take into consideration or, if possible, enhance the nature conservation resources of the estuary. • Any future coastal defence works will be encouraged to comprise soft engineering solutions which minimise any disruption or adverse impact to natural physical processes and which are in accord with the policies of the SMP. • Where appropriate, encourage habitat creation / restoration. The overall aim of the **Medina EMP** is to manage and restrict development in the Medina estuary so that it does not conflict with the existing environment. Objectives relevant to the SMP are summarised as follows: • To maintain access channels and wharves, subject to technical and environmental considerations. • To promote a better understanding of the man made heritage resource. • To maintain and enhance the estuarine landscape. • To preserve and enhance the open rural landscape. • To promote a high standard of maintenance of the estuary landscape. • To minimise the adverse impact of development on the nature conservation resource. • To maximise opportunities to conserve and enhance the nature conservation resource. • To ensure that appropriate protection is given to designated areas of the estuary. • To minimise disturbance to estuarine habitats and wildlife in recognition of international obligations. • To monitor and conserve the saltmarsh • Habitat and where appropriate encourage opportunities for re-creation. • To achieve co-ordinated, comprehensive information about the nature conservation resource. • To ensure the co-ordination of appropriate coastal protection and flood relief. • To provide adequate and appropriate access onto the water. • To improve the quality and provision of footpaths and cyclepaths. • To improve the water quality of the estuary.	The SMP needs to ensure that it is consistent with both the Management Strategies, though there may be conflict with ensuring protection of the estuary from coastal erosion, which is covered by European designations and locating development in the area.	No major influences on the SEA as the LBAP and SEA both complement each others objectives regarding the protection of local biodiversity.	
Catchment Abstraction Management Strategy (CAMS) Isle of Wight CAMS	The overall objective of the CAMS which is to ensure that abstraction of water is carried out in a sustainable way. The vision for the CAMS is a shared strategy for the sustainable management of water resources within the Isle of Wight. This will be achieved by making more information of water resources and licensing practice publicly available and allow the balance between the needs of abstractors, other water users and the aquatic environment to be considered in consultation with the local community and interested parties. The Isle of Wight has **nine Water Resource Management Units (WMRUs)**. There are **5 Surface WMRUs** associated with the Isle of Wight: 1 – Eastern Yar (overabstracted) 2 – Medina (over licensed)	Changes in water regime could potentially affect the designated sites and it is unclear how these changes in water level would impact upon the chosen policies for shoreline management.	The SEA should ensure that water dependent sites are identified and policy assessment is focussed on the potential impact. Also potential opportunities for enhancement of sites and expansion of sites. Key SSSIs that are water dependent: **WMRU1** – Brading Marshes (part of which is a candidate SAC, SPA and Ramsar sites). Water levels in the marshes need to be raised to reach favourable condition. **WMRU2** – Cridmore Bog, The	Although coastal situations usually fall outside the CAMS processes, there may be the issue of decrease in ground water or surface water recharge for designated sites or impact upon the structural geology of coastal cliffs. The unit with boundaries closest to the shoreline are: **WMRU 1** – along the length of The Bay. **WMRU 4** - two points along The Undercliff. **WMRU 5** - at Atherfield Point. **WMRU 6** - along coast of Freshwater Bay. **WMRU 7** – at undefended Culver Cliff. **WMRU 9** – along The Bay coastline and from Blackgang to Atherfield Point.

Policy/Programme /Plan/Strategy	Aims (and Objectives)	Influences on the SMP2	Influences on the SEA	Key Relevant Issue (and Sections)
	3 – Lukelly Brook (over abstracted) 4 – Brightstone Stream (water available) 5 – Atherfield Brook (over abstracted) There are 4 Ground WMRUs associated with the Isle of Wight: 6 – Central Chalk West (over abstracted) 7 – Central Chalk East (over licensed) 8 – Southern Downs Chalk (no water available) 9 – Lower Greensand (over licensed)		Wilderness and Shide Quarry and potentially Medina Estuary. **WMRU4 & 5** – Compton Chine to Steephill Cove. **WMRU6** – Grange Chine, Medina Estuary and Newtown Estuary. **WMRU7** – potentially Shide Quarry. **WMRU8** – South Wight SAC through Bonchurch Landslips and Compton Chine to Steephill Cove. **WMRU9** – contributes significantly to flow of Eastern Yar, Medina, Shorwell and Brightstone Streams and Atherfield Brook. **WMRU4 & 5** – Compton Chine to Steephill Cove. **WMRU6** – Grange Chine, Medina Estuary and Newtown Estuary. **WMRU7** – potentially Shide Quarry. **WMRU8** – South Wight SAC through Bonchurch Landslips and Compton Chine to Steephill Cove **WMRU9** – contributes significantly to flow of Eastern Yar, Medina, Shorwell and Brightstone Streams and Atherfield Brook.	Potential to enhance Brading Marshes SSSI. Climate change will affect availability of water both groundwater and surface water for abstraction.
Historic Environment Action Plan (HEAP) Isle of Wight (2008)	The Isle of Wight Historic Environment Action Plan draws on the programme of Historic Landscape Characterisation (HLC). The Isle of Wight HEAP has identified 15 HEAP areas and defined 13 HEAP types of importance for archaeology, the historic landscape and the historic built environment and sets out strategies for their local management. A key aim of the Isle of Wight HEAP is to promote community understanding, conservation, and management of the historic environment. The work of the HEAP also included the promotion and support of specific community action projects connected with the historic environment. The HEAP will feed into the Local Development Framework (The Island Plan). The Coastal HEAP is still to be written. **Significant Island Features:** • Significant visible archaeological features of the Island's archaeology include large numbers of Bronze Age round barrows; two well preserved Roman villas at Brading and Newport; the defences of Carisbrooke Castle, Yarmouth Castle and Palmerstonian forts; and the medieval planned towns. Coastal and maritime sites, buried sites and metal detected finds offer significant potential for improved understanding of the Island's historic environment. • Most significant features of built environment are the distinctive vernacular rural buildings and the predominantly 18th and 19th buildings of the Island's small towns which reflect the varied origins and development of these towns.	It is important that the Isle of Wight HEAP is integrated into the work of initiatives that have an influence on historic environment conservation including SMPs to ensure that any potential impacts are avoided.	The SEA will take into account the impact of floods on the historic environment thus no influence on the SEA.	• Erosion of coastal cliffs, leading to loss of historic landscape features and archaeological material e.g. The Undercliff is an unusual geomorphological feature with only a few mainland parallels but is at risk of coastal erosion. Human settlement within the Undercliff has led to the development of an equally unusual historic landscape. • Need for resources to ensure the effective archaeological monitoring of eroding cliffs on a regular basis with due regard to health and safety. Such a monitoring programme would require professional input and resources to deal with artefacts and environmental samples. • Need to maintain coastal archaeological monitoring, including further research into the relationship between archaeological features and earth movements in the Undercliff. • Ground instability and coastal erosion, whilst it has exposed many archaeological sites, also causes the continuing loss of these sites, often unrecorded. Several properties of historic significance have been lost to ground instability. • Rising sea levels and climate change will lead to increased coastal erosion and flooding and will affect the coasta and reclaimed grazing marshes and may affect semi-natural habitats such as Headon Warren. • Sea level rise and increase in number of storms may lead to more rapid erosion of coastal chalk cliffs and slumping of earthworks. • Actions taken in response to rising sea levels may have an impact on historic environment. For example earthmoving and excavation could damage palaeo-environmental deposits in valley floor peats.

ANNEX F-II: STAKEHOLDER SCOPING COMMENTS AND CSG REVIEW COMMENTS

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Natural England – 19th March 2010

Client Steering Group and Interested Parties Document Review

Document Title:	SEA scoping report	Project No.:	IWSMP2	To be returned to:	jenny.jakeways@iow.gov.uk
General Comments:		Reviewer:	T Schindl	Organisation:	Natural England

Useful document: PPS 25 Supplement: development and coastal change. http://www.communities.gov.uk/publications/planningandbuilding/coastalchange. From the report it is unclear as to what exactly will be assessed and what the final output will consist of/be. The report could already scope out issues/areas that will not be impacted on by the SMP, for example there are some SSSI sites that are very terrestrial which could be scoped out and not considered. This would help shorten the length of the scoping report and focus the assessment and subsequent output on what is relevant. Suggest that Section 14 is placed near the start of the report as part of efforts to clarify the objectives and methods for the SEA, as it would be useful to have these issues along with identifying what is to be assessed clarified in the beginning of the report - currently the details of this are lost in the report. Do need to focus/identify better the receptors/issues/impacts regarding coastal squeeze, increased erosion and impact on designated habitats - international, national, local?, AONB, as well as species (flora and flora), habitats, geology and people. The end report will need to tease out and assess the impact on these 'receptors' - which currently is not very clear in the scoping report. Similar issues with the scoping report have been picked up by the Environment Agency which Natural England feels are relevant in ensuring the final SEA report proves to be of use and value.

Page No.	Paragraph	Line	Comment	Name	Date	IWCCE Response	Name	Date
13	3.3.11		specify/clarify as to what adaptation is for. I.e. Sea level rise and climate change. With regards to the blue boxes for each PDZ, these boxes are vague. It is important to draw out and focus attention to 'adapting to climate change and sea level rise' as well as mentioning 'making/providing opportunities for nature conservation/environmental enhancements where opportunities arise.	T Schindl	19th March 2010	Acknowledged and taken on board	E. Jolley	29th March 2010
50	7.3.6		The comment that '*The Isle of Wight does not have any International Protected Sites'* is a little misleading perhaps? Does the South Wight Maritime SAC not extend onto the cliffs at some points?	T Schindl	19th March 2010	Acknowledged and corrected	E. Jolley	29th March 2010

Page No.	Paragraph	Line	Comment	Name	Date	IWCCE Response	Name	Date
			Figure 7.1 - no mention of Bonchurch Landslips SSSI	T Schindl	19th March 2010	Acknowledged and corrected	E. Jolley	29th March 2010
	9.3.10		Maybe mention that RAMSAR sites are also treated the same as European sites and have the same level of protection. The following sentence is difficult to understand - '*Any development within the meaning of the Conservation (Natural Habitats etc) Regulations 1994, which is likely to affect....'* Also need to add that mention compensation being required when referring to IROPI.	T Schindl	19th March 2010	Acknowledged and changed	E. Jolley	29th March 2010
	9.3.12		As mentioned in section 9.3.12 regarding SACs, SPA's also form important networks i.e. Natura2000 site	T Schindl	19th March 2010	Changed	E. Jolley	29th March 2010
	14.4.1		Might be worth while to consider scoping out SSSI sites that are not going to be impacted. Tighten the SEA so as to focus on sites and habitats that are coastal and likely to be affected. For table 14.1 - why are designated sites not included?	T Schindl	19th March 2010	Agreed and implemented suggestion	E. Jolley	29th March 2010
95			mix-up regarding Figure vs. Table in text	T Schindl	19th March 2010	Changed	E. Jolley	29th March 2010
109			Confusion regarding 'referring to Figure 14.1 when the pictured figure is 14.3	T Schindl	19th March 2010	Changed	E. Jolley	29th March 2010

Client Steering Group and Interested Parties Document Review

Document Title:	Scoping Report for SEA	Project No.:	IWSMP2	To be returned to:	jenny.jakeways@iow.gov.uk
General Comments:		Reviewer:	O Sykes	Organisation:	Environment Agency

Report far too long - much information superfluous - SR should be <50 pages (plus appendices). Inappropriate level of detail for SMP SEA (too detailed), yet not comprehensive coverage of issues /receptors, or of SEA methodology. Unclear report structure and lack of written clarity. Apparent lack of understanding of SEA - author possibly more EIA. SEA Directive receptors not used. SEA Directive requirements not adhered to. Objective /criteria /indicator inconsistency. Key SEA scoping outputs not provided - e.g. assessment criteria. Report does provide some useful information but this is not structured in such a way as to be easily used in SEA next steps. Possible re-work.

Page No.	Paragraph	Line	Comment	Name	Date	RH Response	Name	Date
2	1.2.2		Sustainability objectives - no - this is not a Sustainability Appraisal but a Strategic Environmental Assessment. There is no consistency in the document with respect to the criteria to be used for appraisal /assessment of policies /scenarios - terms used include SEA indicators, SEA objectives, assessment criteria, sustainability objectives. Most importantly, these objectives are not clarified in the document (as is suggested in this para), or even suggested.	O Sykes	12-Mar-10	We have taken your comment on board and have changed Sustainability objectives' to 'SEA objectives and indicators'. The objectives of the SEA Directive are to include the promotion of sustainable development, however, the terminology was confusing in this document. The issue of consistency with terminology has been taken on board, and for the preferred SEA Directive Guidance (ODPM, 2005) language to be used throughout the document. Chapter 13 deals with the 'SEA objectives' though were named 'Sustainability issues' in Figure 13.2 (which was supposed to be Table 13.2) - this table will be reformed to clearly state the SEA objectives and indicators (details below)	E.Jolley	31-Mar-10

Page No.	Paragraph	Line	Comment	Name	Date	RH Response	Name	Date
2	1.2.3		Shows little understanding of SEA. Unclear what guidance this is based on. Stage 1 describes Scoping but is entitled Screening. If describing as a linear process, should refer to recognised stages such as those set out in ODPM's Practical Guide. Stage 1 includes initial development of SEA criteria for assessment, but these are not evident in the document.	O Sykes	12-Mar-10	We will simplify and correct the stages of the SEA so they more clearly demonstrate the steps in the SEA process. Further detail of the methodology will be given later on the report and these will be clear and concise.	E.Jolley	31-Mar-10
3	1		Figure 1.1 - not clear what this figure means and there is no text referring to it - all areas inputting into the SEA Objectives - no outputs. No iteration. No proposed SEA Objectives are in fact presented in this Scoping Report	O Sykes	12-Mar-10	This figure will be referred to in the text and explained. The figure will be amended to demonstrate the purposed of the SEA objectives.		
5	2.1		Mention hierarchy of coastal management planning - SMP/strategy /scheme, parallel with CFMP /strategy /scheme. Relation to SEA /EIA tiering from Plan to scheme.		12-Mar-10	We agree with your comment, this will be addressed within the report.	E.Jolley	31-Mar-10
5	2.1.6		Tables entitled as Figures	O Sykes	12-Mar-10	These have been changed - a fault in the automatic formatting.	E.Jolley	31-Mar-10
7	blue box		Precision - the EA has the strategic overview for all sea flooding and coastal erosion risk management (from April 2008). Need for SEA and AA is a given	O Sykes	12-Mar-10	Text changed to include suggestion.	E.Jolley	31-Mar-10
9	chapter 3		Confusing chapter in an SEA - more for substantive SMP doc - contains PPPs, summary (incomplete) environmental baseline information, summary of PDZs and their objectives. PPPs are referred to additionally elsewhere, and more detailed environmental baseline info is elsewhere. No reference to scoping in /out of receptors. Not clear what the purpose of this chapter is		12-Mar-10	We take your comment on board. This chapter was so that it could be a stand-alone document. The majority of this chapter can be removed with any relevant information embedded elsewhere in the document.	E.Jolley	31-Mar-10

Page No.	Paragraph	Line	Comment	Name	Date	RH Response	Name	Date
9	3.2		Purpose of PPP review in SEA is to (a) identify relevant env protection objectives, targets (to help assessment) (b) generate efficiencies by sharing analysis (c) identify sources of proxy information (d) identify environmental trends as a result of other PPPs - helps identifiy cumulative impacts. Unclear whether these aims have been adhered to - danger is that lots of plans are listed, little info used /analysed	O Sykes	15-Mar-10	Agree with point and these aims have been adhered to for the revised Scoping and ER where there were weaknesses.	E.Jolley	31-Mar-10
9	3.3		baseline environment - no mention of SEA Directive receptors		15-Mar-10	This section has been removed and the baseline environment has been renamed according to ODPM guidance. Discussion of the SEA Directive receptors have been clearly added into Section 1 of the report.	E.Jolley	31-Mar-10
10	3.3.2		Loose language - 'mainly a rural community' - 'most residents live in towns'. Would expect to see more, different summary info on the human environment receptor. Does not follow SEA Directive receptors (population, human health). What is the purpose of these summaries?	O Sykes	15-Mar-10	This comment is not that relevant, particularly since this section will be removed.	E.Jolley	31-Mar-10
11	3.3.4		Relevance? What does the SE Plan say about the SMP study area?	O Sykes	15-Mar-10	This is no longer relevant as removing this chapter.	E.Jolley	31-Mar-10
11	3.3.5		nartural environment - does not follow or refer to relevant SEA Directive receptors (flora, fauna, biodiversity, soils, etc etc). Does not prioritise by sensitivity of receptors (i.e. international sites)	O Sykes	15-Mar-10	The SEA Directive receptor names (i.e. flora, fauna, biodiversity etc) will be used appropriately throughout the rest of the document but this section will be removed. The sensitivity of the receptors is discussed in the baseline section.	E.Jolley	31-Mar-10

Page No.	Paragraph	Line	Comment	Name	Date	RH Response	Name	Date
12	3.3.9		Historic environment - no reference to SEA Directive terms. Listed buildings and conservation areas? Need to consider what scoped in and out at SMP level. No mention of SAMs.	O Sykes	15-Mar-10	As above. Will take on board that the baseline needs to be clear about what is scoped in or out at this scoping stage.	E.Jolley	31-Mar-10
13	3.3.10		PDZs - not clear how derived? How do PDZs relate to Process Units and Management Units, both mentioned elsewhere in the report (2.1.5, 2.2.2)? Why are PDZs under baseline environment? Poor report structure. PDZs and their objectives are relevant in SEA and it will be important to test the compatbility of plan objectives (to which these contribute) with SEA objectives /assessment criteria, but this is not done	O Sykes	15-Mar-10	This section will be removed but the relationship of PDZs, MUs and PUs will be discussed in Section 1. The methodology will elaborate on how the SMP objectives (will be put in an appendices) are compatible with the SEA objectives / assessment criteria.	E.Jolley	31-Mar-10
19	s4		Human environment - section contains material on relevant plans, population, land use, Marine and Coastal Access Bill, Water Framework Directive, community demographics, infrastructure. Not clear why MCA bill and WFD are here. No reference to SEA D receptors - material relevant to population, material assets, water. Covers whole island - would be better to focus on coastal zone? Human health not mentioned or scoped out. Little on env issues, trends.	O Sykes	15-Mar-10	Wording will be changed to ensure that SEA Directive receptors are more clearly signposted than they are at present. We take on board the comment re: MCA Act and WFD - these will be removed and placed in a more relevant location. The report does not intentionally cover the whole island - only the coastal areas and those that are connected to estuaries (e.g. Newport) or where changes to the coast will impact upon areas inland e.g. transport links. The section will however be refined to ensure that there is superfluous information this will be removed.	E.Jolley	31-Mar-10
31	s5		Descriptive - little on key environmental issues, trends		15-Mar-10	The environmental issues are discussed in Section 12 - it may be considered more appropriate to put these in the individual sections but this will be determined during the redrafting.	E.Jolley	31-Mar-10

Page No.	Paragraph	Line	Comment	Name	Date	RH Response	Name	Date
32	5.3.8		mention RBMP approval, Dec09	O Sykes	15-Mar-10	This will be included.	E.Jolley	31-Mar-10
39	s6		This section is more relevant as background to substantive SMP2 development and does not describe relevant environmental issues, trends that may be affected by policies to be pursued under the SMP2 (with the possible exception of sediment transport, which could fit more concisely under soils, geology?).	O Sykes	15-Mar-10	This section is within the baseline environment and therefore explains what the environment is like with regards to the coastal process and sediment transport. *A subsection in each SEA receptor will be added to discuss the environmental issues and trends that could be affected and which issues can be scoped out.*	E.Jolley	31-Mar-10
49	s7		Focus on coastal study area? Section OK but again limited insight into issues, trends. No indication of whether to be scoped in /out and why. Over long with much superfluous info - eg s73.1.3 below??	O Sykes	15-Mar-10	See above for subsection to be added in.	E.Jolley	31-Mar-10
52	7.3.13		Information on extent of recycling etc and the problem of lack of landfill space is not of relevance to the SMP SEA - what is of relevance is location, content of landfill sites that may be affected by SMP policies. This is partly covered earlier	O Sykes	15-Mar-10	This is part of the baseline however the point that is not relevant should be stated more clearly i.e. scoped out and should enable the baseline to be shortened where necessary.	E.Jolley	31-Mar-10
65	s9		Biodiversity - OK but could argue that the sole focus at SMP level should be to consider international designations, and possible national. Ie - tier consideration of local designations to strategy, scheme level assessment and save space. Little consideration of issues, trends.	O Sykes	15-Mar-10	Take this comment on board and make it clearer that only international and nationally important designations (e.g. SSSIs, NNRs and BAP habitats) are really relevant for SMP and other for scheme or project level. Again clearly state what is scoped in or out of for the SEA assessment. *See above for addition of issues and trends here.*	E.Jolley	31-Mar-10

Page No.	Paragraph	Line	Comment	Name	Date	RH Response	Name	Date
83	s11		Climate change - much superfluous information - key info is sea level rise predictions. Rainfall etc of less interest in an SMP, possibly apart from specific issue of fluvial flooding /tide locking, and landslip complexes. Section could be significantly reduced.	O Sykes	15-Mar-10	Will take this comment on board and aim to reduce.	E.Jolley	31-Mar-10
87	s12		Unclear of relevance of this section in SEA, although some of the material could be used as part of trend /issue analysis in a baseline environment section. Section confuses risks from flooding /erosion (which should be addressed, described in the substantive SMP analysis) and env risks, issues aside from flooding /erosion (which are of relevance in SEA). Not clear what the section adds to SEA scoping - does not refer to SEA D receptors and does not make an argument for scopign in /out individual receptors.	O Sykes	15-Mar-10	This section will be integrated into the baseline and ensure that the issues to be scoped in and out will be identified and related to the SEA receptors and indicators.	E.Jolley	31-Mar-10
91	s13		Not clear why the RSS is quoted in detail here. Core objectives of the RSS may be of relevance to the substantive SMP. Environmental objectives of the RSS and assessment objectives set for the sustainability appraisal of the RSS may be of use in developing assessment criteria for the SMP SEA but this is not pursued. Confusion here between sustainability objectives and env objectives.	O Sykes	15-Mar-10	Ensure that confusion over SEA and sustainability is clear and that the purpose of quoting RSS is clear.	E.Jolley	31-Mar-10

Page No.	Paragraph	Line	Comment	Name	Date	RH Response	Name	Date
92	figure 13.1		Not a figure but a table. Confused, does not follow SEA D receptors, unsure what this adds. Is the intention to work towards assessment /appraisal criteria for SEA? This is not stated. Confusion and mixup in description of 'natural resources' as a receptor, in relation to which objectives are stated to include 'to create.... a range of tourist accommodation and facilities'! Natural resources appear in two lines - with similar objectives - why? In SEA /EIA the term Natural Resources is accepted as referring to renewable or non-renewable materials such as wood, cement, fuel etc (as it is used in this report, figure 14.1) - not biodiversity designations, as implied here, or landscape.	O Sykes	15-Mar-10	Amended Figures/Tables - Mistake. Changed the format of the Scoping Report so that it more strictly adheres to the SEA Directive and Guidance. Ensured that correct SEA terminology has been used.	E.Jolley	31-Mar-10
93	figure 13.2		Not a figure but a table. Some of this material is of use in analysing issues, trends emerging from baseline environmental information (and should be presented alongside the relevant info). However again there is basic confusion and misunderstanding, for example between environmental issues and sustainability issues. This is SEA, not SA or EIA. SEA D receptors are not used or referred to. Why are coastal and flood defences described as an env /sustainability issue? To describe defences as a material asset in SEA that may be affected by SMP policies including the construction of coastal defences is confused. To include under this header possible impacts of coastal defences on biodiversity etc is even more confused - inappropriate and covered elsewhere. Having said this, this table comes closest to possibly describing assessment criteria /objectives, unfortunately without stating this.	O Sykes	15-Mar-10	Changed to Table. Format of Scoping Report completely amended to ensure that it is clear that it is a Strategic Environmental Assessment and not a Sustainability Assessment.	E.Jolley	31-Mar-10

Page No.	Paragraph	Line	Comment	Name	Date	RH Response	Name	Date
95	14.1.1		Environmental assessment /appraisal criteria (where are they?) will be used alongside technical and economic appraisal of policy options	O Sykes	15-Mar-10	Revised Scoping Report and Environmental Report contained SEA objectives.	E.Jolley	31-Mar-10
95	14.1.3		Reference to monitoring not strictly correct in SEA terms - monitoring is more than this	O Sykes	15-Mar-10	Acknowledged	E.Jolley	31-Mar-10
95	14.2.1		SEA process - this describes some of the SEA outputs, but not the process. It misses the key element of SEA which is iteration of policy development and environmental assessment, to arrive at the environmentally preferred option	O Sykes	15-Mar-10	Acknowledged and revised	E.Jolley	31-Mar-10
95	14.4		basic confusion between SEA and EIA - terms referred to are not 'EIA parameters' but SEA receptors - use the accepted terms.	O Sykes	15-Mar-10	Acknowledged and revised so that the SEA terms are clearly used.	E.Jolley	31-Mar-10
95	14.4.1		"….which of these parameters will be scoped in and out of the SEA with regards to their relevance to coastal and flood defence implications." this is expressed the wrong way round - in SMP SEA scoping we are looking at environmental receptors to see which may be significantly affected by coastal and flood defence policies.	O Sykes	15-Mar-10	Revised Scoping Report so that clear what is scoped in and out.	E.Jolley	31-Mar-10
96	Figure 14.1		Not figure but table. No reference to the basic list of receptors required as a starting point in the SEA Directive (biodiversity, population, human health, flora, fauna, water, air, soil, climatic factors, material assets, cultural heritage, landscape). Most of these are covered implicitly, with the exception of human health. Expect a reference to nature conservation designations and what is scoped in /out. Material assets as a separate receptor. Traffic and transport, and natural resources, are not SEA issues but EIA issues.	O Sykes	15-Mar-10	Changed to Table. Format of Scoping Report completely amended to ensure that it is clear that it is a Strategic Environmental Assessment and not a Sustainability Assessment - so correct terms are used.	E.Jolley	31-Mar-10

Page No.	Paragraph	Line	Comment	Name	Date	RH Response	Name	Date
97	14.5		SEA methodology. This section is more about the ER than SEA methodology /process. Why two SEA process sections.	O Sykes	15-Mar-10	Changed	E.Jolley	31-Mar-10
97	14.5.5		Meaning? No explanation of meaning in SEA of the term 'significance' - which is key. Significance is the key threshold for action, following evaluation of a predicted impact	O Sykes	15-Mar-10	Acknowledged and amended in revised Scoping Report and Environmental Report	E.Jolley	31-Mar-10
98	figure 14.2		Not figure but table. Use of term 'sustainability objective' is incorrect - this is not sustainability appraisal. Also inconsistent with other terms used to mean the same thing elsewhere in the report (environmental objectives, assessment criteria etc). Little mention of the relevance of impact magnitude, and no mention of the relationship between magnitude and significance (standard magnitude v sensitivity matrix). Reference to cumulative impacts is incorrect - it does not necessarily follow from a major impact that a cumulative impact will follow, for any particular receptor.	O Sykes	15-Mar-10	SEA objectives used - not sustainability. Acknowledge points and taken on board.	E.Jolley	31-Mar-10
99	14.6.3		what about impact magnitude?	O Sykes	15-Mar-10	Acknowledged and included	E.Jolley	31-Mar-10
100	figure 14.4		Not figure but table. Don't understand the format. Standard impact assessment /appraisal matrix would have headers such as: SEA receptor /assessment criteria /source of impact /environmental effect /mitigation /residual effect.	O Sykes	15-Mar-10	Acknowledged and changed for revised SEA Scoping and ER.	E.Jolley	31-Mar-10
100	14.6.6		SMP policies are not abstract but high-level	O Sykes	15-Mar-10	Acknowledged	E.Jolley	31-Mar-10

Page No.	Paragraph	Line	Comment	Name	Date	RH Response	Name	Date
101	14.7 figure 14.5		SEA indicators. Again, serious inconsistency with respect to previously-mentioned assessment objectives, sustainability objectives, assessment criteria etc. Not clear what these are. Referred to as "monitoring indicators" - monitoring of what - SEA? SMP? No reference to standard SEA receptors. The 'indicators' themselves are a mixture of precise measurements (e.g. "recorded injuries /deaths from coastal flood events", targets ("no reduction in the number or quality of Bathing Waters") and vague judgements ("changes in sediment source"). There is relevant material here but its hard to get at	O Sykes	15-Mar-10	Acknowledged	E.Jolley	31-Mar-10
102	14.8.2		Note includes Ramsar sites	O Sykes	15-Mar-10	Acknowledged	E.Jolley	31-Mar-10
102	14.9.1		Non-technical summary needs to be publicly accessible (in terms of readability), rest of report may need to be technical	O Sykes	15-Mar-10	Acknowledged	E.Jolley	31-Mar-10
102	14.9.2		follow SEA ER contents laid out in the Directive	O Sykes	15-Mar-10	Acknowledged and followed	E.Jolley	31-Mar-10
103	15.1		No mention of legal requirements for consultation - public and statutory bodies		15-Mar-10	Ackowledged and included in revised SEA Scoping and ER.	E.Jolley	31-Mar-10
103	15.1.1		be clear that ER needs to be consulted on in parallel to the draft SMP2	O Sykes	15-Mar-10	Acknowledged and included	E.Jolley	31-Mar-10
104	15.1.6		SEA objectives - what are they, where are they	O Sykes	15-Mar-10	Not clearly included - amended in revised SEA scoping and ER.	E.Jolley	31-Mar-10
104	15.1.7		If final plan includes options not considered previously and not assessed in SEA, need to do new SEA ER (unliklely). If minor changes in plan following consultation, may need to do SEA addendum. Most likely is that plan will be approved with some minor changes and these can be addressed in a post adoption statement (short advert) and statement of environmental particulars (the SEA Statement) (short report).	O Sykes	15-Mar-10	Acknowledged and made more apparent that this is the process in the revised SEA Scoping and ER.	E.Jolley	31-Mar-10
105	s16		References - no mention of the SEA Directive	O Sykes	15-Mar-10	Included	E.Jolley	31-Mar-10
143	table B.1		Unclear why individual features (including SINCs, listed buildings) are mentioned here - too much detail - keep it at high level	O Sykes	15-Mar-10	Agreed and done.	E.Jolley	31-Mar-10

Page No.	Paragraph	Line	Comment	Name	Date	RH Response	Name	Date
10	3.3.1		Should the following be included in the tables:Eastern Yar Strategy, Other (unfinished) coastal strategies, East and West Solent SMP1, or draft North Solent SMP2, Habitats creation programme, South eastern River Basin Management Plan	T Kermode	31-Mar-10	Agree with the comment - these will be added.	E. Jolley	3-Apr-10
19	4.2.3		I don't think that we should continue to refer to the "Marine Bill" if shortened it should be Maraine Act 2009	T Kermode	31-Mar-10	Agree with the comment.	E. Jolley	3-Apr-10
20	4.2.6		Should we mention River Basin Management Plans in connection with WFD.	T Kermode	31-Mar-10	Agree with the comment.	E. Jolley	3-Apr-10
21	4.3.8		Add after "coastal flooding", cosatal erosion or land instability.	T Kermode	31-Mar-10	Added into the text.	E. Jolley	3-Apr-10
39	6.2.1		As 3.3.1 should the above plans be added	T Kermode	31-Mar-10	Agree with the comment.	E. Jolley	3-Apr-10
40	6.3.8		Add a comment on bi-modal waves - emerging evidence that they may cause greater than predicted damage.	T Kermode	31-Mar-10	Acknowledged.	E. Jolley	3-Apr-10
43	6.4.2		Change to "the environment agency currently has powers to do Flood Defence works only, but when the Flood Bill becomes law this will extend to Coastal Erosion works under the Coast Protection Act	T Kermode	31-Mar-10	Acknowledged and added	E. Jolley	3-Apr-10

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ISLE of WIGHT COUNCIL

Chief Executive
Steve Beynon

From
Rebecca Loader
Isle of Wight County Archaeology and Historic Environment Service
61 Clatterford Road
Newport
Isle of Wight
PO30 1NZ

Tel (01983) 823810
Fax (01983) 823810
Email *rebecca.loader@iow.gov.uk*
DX 56361 Newport (Isle of Wight)
Web www.iwight.com/living_here/ Archaeology

Our Ref: [type our ref]
Your Ref: 9V8288/01/L260210/Hayw

23 March 2010

Dear Dr Jolley,

Isle of Wight Shoreline Management Plan 2: Strategic Environmental Assessment – Consultation

Thank you for inviting us to comment on the 'Draft SEA Scoping Report for Consultation'. Please find below my comments relating to the Historic Environment.

Historic Environment comments

Question 1:
National guidance with regard to the historic environment should include 'Coastal Defence and the Historic Environment: English Heritage Guidance' (2003), and 'Shoreline Management Plan Review and the Historic Environment: English Heritage Guidance' (2006).

The main local strategic document dealing with the historic environment is the Isle of Wight Historic Environment Action Plan, which is reviewed in Appendix A, but needs to be added to the Local Plans box on figure 3.1, page 10

Question 2:
I think the baseline information relating to the historic environment described in Section 10 should include a paragraph on non-designated heritage assets, including the HEAP, the Isle of Wight Historic Environment Record (HER), the List of Buildings, Structures, Parks and Gardens of Local Importance, and Historic Landscape Characterisation (HLC).

Question 3:
12.6 very broadly covers the key current and future risks to the historic environment. More detailed issues are listed below under the HEAP key relevant issues to be added to Table A.1.

Question 4:
No additional comments.

Question 5:
No additional comments

Cont …

Question 6:
No additional comments

General comments
p.12 paragraph 3.3.9 There is some consistency about the number of Conservation Areas and Listed buildings. Here it states there are 28 Conservation Areas and over 2000 LBs but p.79 paragraph 10.3.8 identifies 1910 LBs, paragraph 10.3.10 says there are almost 2500 LBs, and paragraph 10.3.11 says there are 26 Conservation Areas.
There are now 32 Conservation Areas (four have been added very recently).

p.14 Add 'To sustain the historic landscape and environment' to draft overarching objectives for PDZ 5

p.15 Add 'To sustain the historic landscape and environment' to draft overarching objectives for PDZ 7

p.59 paragraph 8.3.5 and p.61 paragraph 8.3.19 I am unclear what is meant by the designation 'Historic Landscape'

p.61 paragraph 8.3.19 Osborne is not a Historic National Park. It is included on the English Heritage Register of Parks and Gardens of Special Historic Interest, where it is Grade II* listed. There are two other Isle of Wight coastal sites on the Register; Norris Castle, and Ventnor Botanic Garden, both of which are Grade II listed.

Section 10 The Historic Environment

10.2 Relevant Plans should include the Isle of Wight Historic Environment Action Plan (HEAP)

10.3.3 I don't think that this range of sites is representative of the Isle of Wight's coastal historic environment.

The Isle of Wight's coastal historic environment comprises a wide range of sites, structures and landscapes. These include:

- Undisturbed Palaeolithic occupation deposits and palaeoenvironmental remains.
- Mesolithic and Neolithic lithic scatters and intertidal wooden structures such as trackways and possible fish traps.
- Significant palaeoenvironmental deposits survive on the north coast of the island in the intertidal and marine zone, and within the eroding cliffs on the south west coast.
- Neolithic and Bronze Age funerary monuments.
- Coastal Roman villas.
- Salterns of Roman to post medieval date.
- Large coastal fishtraps dating from the early medieval through to the later medieval period.
- Military sites ranging from Henrician forts to World War II defences.
- Post medieval and modern marine industry such as shipbuilding, seaplanes and hovercraft.
- Coastal structures and buildings including lighthouses and coastguard stations.
- Seaside heritage.

10.3.4 *all* landscapes are the product of human land use and planning...

10.3.5 paragraph 4 HLC. I suggest this is moved to a new section at the end of the chapter which covers non-designated heritage assets.

10.3.8 There are 120 Scheduled Monuments in the Isle of Wight, and no ancient monuments. According to our records there are 1951 Listed Buildings, 28 of which are designated Grade I, but for the most current information it would be best to check with the IW Council Conservation Team.

Cont …

Paragraph 10.3.8 last line typo – should read Scheduled Monument Consent

10.3.9 There are seven Grade II Registered Parks and Gardens and one Grade II*.

10.3.10 see above (10.3.8) for comment on Listed Buildings.
Figure 10.1 details Protected Wrecks, not Listed Buildings.

10.3.11 There are 32 Conservation Areas.

Possibly add a paragraph describing the local non-designated heritage assets and initiatives, e.g. the HEAP, the Historic Environment Record (HER), the List of Buildings, Structures, Parks and Gardens of Local Importance, and Historic Landscape Characterisation (HLC).

Section 12 Current and future risks

12.6.1
1st bullet point. I'm not sure why the Needles Protected Wreck, Thorness Bay and St Helens Church in particular have been highlighted as being at risk

4th bullet point. Remove unscheduled.

Section 14 Scoping and SEA methodology

Figure 14.1
Historic environment EIA parameters are rather ambiguous and both really mean the same thing, i.e. non-designated archaeological sites. I think you need to include the designated heritage assets and non-designated sites, monuments and landscapes.

Section 17 Abbreviations and Acronyms
Remove SMs Scheduled Monuments

Section 18 Glossary of Terms
p. 114 Scheduled Ancient Monument – should be Scheduled Monument

Table A.1
p.138 HEAP key relevant issues:

Erosion of coastal cliffs, leading to loss of historic landscape features and archaeological material.

Need for resources to ensure the effective archaeological monitoring of eroding cliffs on a regular basis with due regard to health and safety. Such a monitoring programme would require professional input and resources to deal with artefacts and environmental samples.

Need to maintain coastal archaeological monitoring, including further research into the relationship between archaeological features and earth movements in the Undercliff.

Ground instability and coastal erosion, whilst it has exposed many archaeological sites, also causes the continuing loss of these sites, often unrecorded. Several properties of historic significance have been lost to ground instability.

Sea level rise associated with climate change will affect coast and reclaimed grazing marshes.

Cont …

Rising sea levels and climate change will lead to increased coastal erosion and flooding and may affect semi-natural habitats such as Headon Warren.

Sea level rise and increase in number of storms may lead to more rapid erosion of coastal chalk cliffs.

Actions taken in response to rising sea levels may have an impact on historic environment. For example earthmoving and excavation could damage palaeo-environmental deposits in valley floor peats.

N.B. The Coastal HEAP is still to be written

Appendix B Table B1 Heritage column

PDZ2 - Ryde and the North-East coastline

Add Fishbourne archaeological sites
Add Springvale archaeological sites
p.151 Puckpool Battery – Importance of Feature should be Scheduled Monument
p.151 Quarr Abbey – Importance of Feature should be Scheduled Monument

PDZ3 - Bembridge and Sandown Bay

Remove HLC/HEAP Brading Haven and Bembridge Harbour
Remove HLC/HEAP Brading Haven and Freshwater Isle
Remove HLC/HEAP Brading Haven & Bembridge Isle Character Assessment
Remove HLC/HEAP East Wight Chalk Ridge Character Assessment
Add Priory Bay Palaeolithic site
p.157 Bembridge Fort
p.158 Culver Down Bronze Age round barrow – Importance of Feature should be Scheduled Monument
p.161 Sandown Barrack Battery – Importance of Feature should be Scheduled Monument

PDZ4 – Ventnor and the Undercliff

Add St Catherine's Point/Rocken End archaeological sites

PDZ6 - West Wight

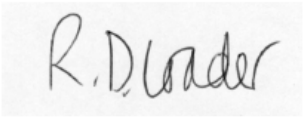
Remove HEAP Freshwater Isle

PDZ7 – North-West coastline

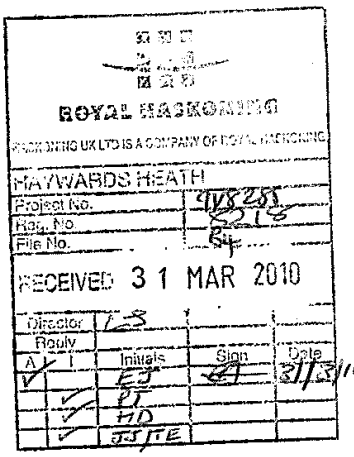
Add Bouldnor Underwater Cliff

Please do not hesitate to contact me if any of these comments require further clarification.

Yours Sincerely



Rebecca Loader
HER/Archaeological Projects Officer



Isle of Wight
area of outstanding
natural beauty

Dr Lizzie Jolley
SEA Project Manager
Royal Haskoning
Burns House
Harlands Road
Haywards Heath
West Sussex
RH16 1PG

Your ref: 9V8288/01/L260210/Hayw
Our ref: cs01-29/smp2

29th March 2010

Dear Dr Jolley

Re: Isle of Wight Shoreline Management Plan 2: Strategic Envionmental Assessment – Scoping Report Consultation

Thank you for your recent letter and electronic copy of the above document.

The Isle of Wight Area of Outstanding Natural Beauty (AONB) Partnership is an independent organisation funded by Natural England and the Isle of Wight Council to oversee the conservation and enhancement of the land covered by the AONB designation (half the land area of the Isle of Wight including the two areas defined as Heritage Coast). Part IV of the Countryside and Rights of Way Act 2000 has increased the profile, protection and management of AONBs. It has conferred a duty on all local authorities with land designated as AONB within their administrative area to produce, adopt and review an AONB Management Plan setting out their policies in relation to their functions in the area. Additionally the Act places a 'duty of regard' on all local authorities, other public bodies and statutory undertakers to consider the impact of their policies, decisions and activities on the purposes of designation.

The Isle of Wight AONB Partnership aims to ensure the conservation and enhancement of the area in line with the statutory purpose of the designation and the Management Plan. We also work to increase the understanding and enjoyment of the special qualities of this nationally treasured landscape by those who live in, work in or visit the area.

We welcome the opportunity to provide our early thoughts to you on this draft document and would like to compliment you on producing a clear yet comprehensive document.

As requested our comments to the consultation questions are set out below.

Q1: Are there any other strategic documents you consider should be reviewed for the SEA?

It would appear that all relevant strategic documents have been included in your review.

Contd.

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THE ISLE OF WIGHT AONB PARTNERSHIP IS JOINTLY SUPPORTED BY NATURAL ENGLAND AND THE ISLE OF WIGHT COUNCIL

Q2: Is there any environmental information missing that could relate to a significant negative or positive impact?

We are pleased to note the detailed acknowledgement and reference made to Isle of Wight protected Landscapes and the Isle of Wight AONB Management Plan.

We note that reference is made to Part IV, Section 89 of the Countryside Rights of Way Act 2000, and the requirement to produce and review AONB Management Plans. We consider that mention also needs to be made of Part IV, Section 85 of the Act which places a duty on all public bodies and statutory undertakers to 'have regard' to the purposes of AONBs.

8.3.14 Heritage Coast should be referenced as a 'Definition' not a 'Designation'.

Q3: Are there any specific current or future risks you feel are not identified?

Good general coverage of risks identified.

Question 4: Are there any significant environmental issues not listed in Tables 13.1 and 13.2?

There are no obvious issues not listed.

Question 5: Are all the relevant parameters scoped into the SEA in Section 14?

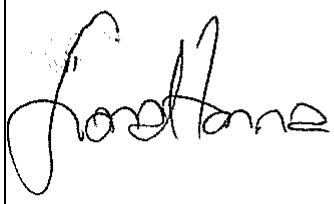
No further parameters to add.

Question 6: Are these any additional or specific consultees to whom the Environmental Report should be sent for comment?

No additional consultees proposed.

Thank you once again for contacting us for our comments and I hope you find our responses helpful.

Yours sincerely



Fiona Hanna
AONB Lead Officer
On behalf of the Isle of Wight AONB Partnership

RSPB – 1st April 2010

From: Temple, Carrie [carrie.temple@rspb.org.uk]

Sent: 01 April 2010 17:33

To: Jolley, E (Lizzie)

Subject: RE: Isle of Wight SMP2 - Strategic Environmental Assessment Scoping [Filed 16 Apr 2010 16:15]

Follow Up Flag: Follow up

Flag Status: Red

Attachments: birdflyer_update1 (3).pdf

Dear Lizzie

Many thanks for consulting the RSPB on the SEA scoping. Unfortunately, time has only allowed a brief review of the scoping report. On the whole, it appears to be a comprehensive account of the relevant information and issues to inform the SEA. I have a few small comments for you to consider in the preparation of the final SEA, however.

I did not find any reference to the Solent Brent Goose and Waders Spatial Analysis that Hampshire and Isle of Wight Wildlife Trust (HIOWT) has undertaken (currently in draft). This information may be useful in strengthening the evidence base for the SEA. Debbie King at HIOWT will be able to advise on the use of this work.

You may also wish to consider whether the Solent Disturbance and Mitigation Project contains any information relevant to the SMP SEA. I have attached a leaflet setting out the aims of this work. As you may know, this study is also still underway, but data is available from Phase 1 of the project. The results of the second phase of this study should be available later this year.

Finally, you may be aware that, as of today, The Conservation of Habitats and Species Regulations 2010 have replaced The Conservation (Natural Habitats &c) Regulations 1994 (as amended). There are at least 20 new regulations and significant changes to the numbering of the regulations; however, as I understand, it is largely a consolidation of the various amendments to the Habitats Regulations and should not materially affect the HRA of the SMP. Nevertheless, I recommend that you review the new Regs for any relevant changes. There is an explanatory memorandum on the updated Regs on the OPSI's website: http://www.opsi.gov.uk/si/si2010/em/uksiem_20100490_en.pdf

I hope that these comments are helpful and look forward to receiving the final SEA in due course. We will provide comments on the SMP HRA separately.

Kind regards
Carrie

Carrie Temple
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RSPB South East Office
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Client Steering Group and Interested Parties Document Review

Document Title:	Appendix F - Strategic Environmental Assessment	Project No.:	IWSMP2	To be returned to:	jenny.jakeways@iow.gov.uk
General Comments:		Reviewer:	All	Organisation:	Environment Agency

Environment Agency: good report, reads easily, well structured, bit weak on env trends emerging from baseline, issue of different SEA objectives to SMP objectives gives rise to potential compatibility problem - need to mention briefly. Biggest issues might be the lack of ownership of mitgation measures folllowing identification of adverse impacts - this has been an issue for QRP for other SMP SEAs. Also need to summarise separate assessments with respect to biodiveristy (ie HRA) and water (WFD assessment), not just refer to.

Cultural Heritage (Rebecca Loader): I would like to see the term 'features' replaced with 'designated heritage assets, because there are many significant sites that are undesignated so therefore scoped out of this report; e.g., rather than 'No Change to heritage features' I would prefer 'No change to designated heritage assets'; 'No noted features' - 'No designated heritage assets'; 'Features protected' - 'Designated heritage assets protected'; 'No impacts on features expected' - 'No impact on designated heritage assets expected'; 'No loss of important features'/ 'No loss of features'- No loss of designated heritage assets'; 'No effect on features' - 'No effect on designated heritage assets'

Page No.	Paragraph	Line	Comment	Name	Date	Organisation	IWCCE Response	Name	Date
iii	2	3	replace historical with historic	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
iii	3	2	"almost two-thirds is coastal and over a third is within the five main estuaries." Consider "almost two-thirds is open coast and the remainder within the five main estuaries."	Uwe D		Environment Agency	changed	Claire Earlie	17-Jun-10
iii	5	1	Capital 'R' for Environment Report	Emily Allison	03-Jun-10	Environment Agency	changed	Claire Earlie	17-Jun-10
iv	Bidiversity, habitats and species	final	Sites of Importance for Nature Conservation	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010

Page No.	Paragraph	Line	Comment	Name	Date	Organisation	IWCCE Response	Name	Date
iv	Land use, infrastructure...	1	comprises, not comprises of	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
iv	Land use, infrastructure...	8	has, not have	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
iv	Landscape		final sentence is incomplete	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
v	Cultural Heritage	4	**R**egistered	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
v	Cultural Heritage	final	assessed in	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
v	table	geology and soils	revise "interrupt the supply and downdrift of sediment."	Uwe D		Environment Agency	Changed	LJolley	1-Jul-10
vi	1		These definitions are in contrast to the definitions used in the main document (section 1 page 6)	Uwe D		Environment Agency	These were the Defra definitions, which have now been used in SMP document	LJolley	30-Jun-10
vi	No Active Intervention		remove comma	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
vii	1	final 2 sentences	join with a comma	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
vii	5	3	change "invention" to "intervention"	Uwe D		Environment Agency	changed	Claire Earlie	17-Jun-10
viii	Historic Environment	10	I think 'Grade II' should be removed - there are also Grade I and II* LBs (some of which will be unprotected)	Rloader	09-Jun-10	IWCAHES	added in Grade I as well	LJolley	30-Jun-10
viii	Historic Environment		Although the adverse impacts on statutory heritage assets may be moderate, the impact on non-designated assets is likely to be more severe, with many sites being destroyed or damaged	Rloader	09-Jun-10	IWCAHES	Taken note of point	LJolley	30-Jun-10

Page No.	Paragraph	Line	Comment	Name	Date	Organisation	IWCCE Response	Name	Date
viii	Historic Environment		Highly sensitive heritage sites (e.g. Scheduled Monuments) - I'm not sure what this means or whether 'highly sensitive' is the right term to use here. Some of the more ephemeral, but non-designated sites are likely to be more sensitive to coastal change and coastal management issues.	Rloader	09-Jun-10	IWCAHES	Changed to: "nationally designated" instead of "highly sensitive"	LJolley	30-Jun-10
viii	Historic Environment		There **is** a wide range... with many (more?) of these being protected...	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
viii	Historic Environment		typo Sandown Barrack Battery.	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17-Jun-10
viii	Historic Environment		Quarr Abbey SM not at risk within next 100 years - this is in contradiction to Appendix G p.48 Up to 2105 - 'North of SM site will be affected by flooding	Rloader	09-Jun-10	IWCAHES	Changed in accordance with Appendix D and G. Missing some data in previous assessment	LJolley	1-Jul-10
viii	Historic Environment		Yaverland Battery is now also a Scheduled Monument on a no active intervention policy frontage	Rloader	09-Jun-10	IWCAHES	Added in text	LJolley	1-Jul-10
1	F1.2.2		please check with page iii as there seems to be a decrepancy "of which 60% iscoastal and 40% is within the five main estuaries"	Uwe D		Environment Agency	added in exact values on page ii	LJolley	30-Jun-10
3	Fig1.1		Could the font for the management units be bigger, as not very clear on an A4 printout	Emily Allison	03-Jun-10	Environment Agency	Made the Figure A3	LJolley	30-Jun-10
4	F1.2.8		Table 1.1 definitions aren't the same as those on page vi. Might be worth using the same table for each	Emily Allison	03-Jun-10	Environment Agency	Amended so they are the same	LJolley	01/07/10
5	F1.3.5		Previous internal guidance on SEA of internal plans and programmes referred to - refer to Jan 2009 version	Oliver Sykes	27-May-10	Environment Agency	changed	LJolley	30-Jun-10
7	SEA stage 1	4th bullet point	typo ' performance'	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
7	SEA stage 3		typo 'alternatives	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010

Page No.	Paragraph	Line	Comment	Name	Date	Organisation	IWCCE Response	Name	Date
8	F2.2.3		Table 2.1	Oliver Sykes	27-May-10	Environment Agency			
8	F2.2.3		replace 'places of historic interest' with 'heritage assets'	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
10	Water quality		some unfinished words in the scoped out section	Uwe D		Environment Agency	Removed incorrect words	LJolley	30-Jun-10
11	Historical Environment	Scoped out	Change to 'heritage assets'	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
11	Historical Environment		Change to Historic Environment	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
11	Table 2.1		Climatic factors - agree that climate change mitigation cannot be considered at SMP level, but could mention that climate change adaptation has been considered in the SMP through defra's recommended allowances for sea level rise etc	Oliver Sykes	27-May-10	Environment Agency	Added	LJolley	30-Jun-10
11			Biodiversity, 4th row down, should sentence just say '...affected by the SMP policies?'	Emily Allison	03-Jun-10	Environment Agency	changed	LJolley	30-Jun-10
13	F2.5.7	3	Should this reference table 2.2 (and not 2.1)?	Emily Allison	03-Jun-10	Environment Agency	changed	LJolley	30-Jun-10
18	Table 3.1		Could BMP be written in full (or added to acronyms in F12) as I don't think this is explanded elsewhere in the report.	Emily Allison	03-Jun-10	Environment Agency	Added to Aconyms	LJolley	30-Jun-10
17	F3.1.3	3	Sentence about SMPs and CFMPs doesn't read very well.	Emily Allison	03-Jun-10	Environment Agency	Changed	LJolley	30-Jun-10
17	F3.1.3	5	Should only 'Appendix D' be in bold?	Emily Allison	03-Jun-10	Environment Agency	changed	Claire Earlie	17-Jun-10
19	F4.1.3	6	replace 'quantified' with 'described' - this SEA does not quantify impacts	Oliver Sykes	27-May-10	Environment Agency	changed	Claire Earlie	17-Jun-10
20	3rd bullet point		Add East Cowes	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010

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20	5th bullet point		geomorphological and biological	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
20	6th bullet point		historic	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
20	F4.2.1	3	What are 'fundamental' economic centres?? Use different term - major or key?	Oliver Sykes	27-May-10	Environment Agency	changed	LJolley	30-Jun-10
20	F4.2.1	12	Add seagrass to discription of north coast. "coastal grazing marsh, saltmarsh, seagrass and intertidal mud and sandflat habitats"	SRJ		Environment Agency	changed	Claire Earlie	17-Jun-10
20	F4.2.1	5th bullet	Change to 'geological, geomorphological, biological divesity'	Emily Allison	03-Jun-10	Environment Agency	changed	LJolley	30-Jun-10
20	F4.2.1	7th bullet	No need to capitalise 'chalk'	Emily Allison	03-Jun-10	Environment Agency	changed	Claire Earlie	17-Jun-10
20	Table 4.2 Human polulation and communities	Environmental Issue	remove (e.g. Roman salterns, coastal roman villas)	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
20	Table 4.2 Land Use, Material Assets and Infrastructure	Environmental Issue, 2nd line	comprises, not comprises of	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
21	Table 4.2	landscape	what about potential for defence raising to impact on landscape	Oliver Sykes	27-May-10	Environment Agency	this point has been added	Ljolley	30-Jun-10
21	Table 4.2	water	OK to refer to WFD assessment but need to be able to summarise issues in the SEA	Oliver Sykes	27-May-10	Environment Agency	This table is not the location for a summary; however this will be put later in the document.	LJolley	30-Jun-10
21	Table 4.2 Geology and Soils	Geological SSSIs	Bouldn**o**r	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
21	Table 4.2 Landscape	Heritage Coasts	Bouldn**o**r	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010

Page No.	Paragraph	Line	Comment	Name	Date	Organisation	IWCCE Response	Name	Date
21	Table 4.2 Landscape	Landscape Character Areas	Osborne Coast	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
22	Table 4.2 Biodiversity, Habitats and Species	SSSIs	Bouldnor	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
22	Table 4.2 Historic Environment		Best to check with the Conservation & Design Team but I think there are 1971 Listed Buildings, of which 29 are Grade I Listed and 60 are Grade II* listed	Rloader	09-Jun-10	IWCAHES	Checked with Conservation and Design Team	LJolley	1-Jul-10
22	Table 4.2 Historic Environment		There are 8 English Heritage Registered Parks and Gardens (one Grade II*, 7 Grade II)	Rloader	09-Jun-10	IWCAHES	Checked with Conservation and Design Team	LJolley	1-Jul-10
23	F5		If plan appraisal objectives are different to SEA objectives, strictly you should assess the compatiblity between the objectives. May be worth brief mention that the objectives vary only because of different SMP /SEA terminology and are compatible	Oliver Sykes	27-May-10	Environment Agency	changed text to incorporate comment	LJolley	1-Jul-10
24	Table 5.1 Water Quality and Resources	Targets	The continuity... **is** not disturbed	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
25	Table 5.1	J	Assessment criteria: '...SSSIs falling into unfavourable condition'	Emily Allison	03-Jun-10	Environment Agency	changed	Claire Earlie	17-Jun-10
27	F6.2.1	1st bullet	What is IWCCE?	Emily Allison	03-Jun-10	Environment Agency	The Isle of Wight Council for the Coastal Environment - this is given in full on page 5.	LJolley	1-Jul-10

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28	F.6.3.2	8th Bullet Point	I think these should be two separate consultees - the Hampshire and Isle of Wight Wildlife Trust and the Hampshire and Wight Trust for Maritime Archaeology	Rloader	09-Jun-10	IWCAHES	changed - though Hampshire and Isle of Wight Wildlife Trust	LJolley	01/07/2010
28	F6.3.2	2	Environmental	Oliver Sykes	27-May-10	Environment Agency	changed	Claire Earlie	17-Jun-10
28	F6.3.2	8th bullet	It's Hampshire and Isle of Wight Wildlife Trust	Emily Allison	03-Jun-10	Environment Agency	changed	Claire Earlie	17-Jun-10
30	F7.2.2	5	'These options … presented in Table 2.2'. Not clear what this means	Oliver Sykes	27-May-10	Environment Agency	Amended	LJolley	1-Jul-10
30	Hold the Line	Potential Negative Impacts	Loss of heritage assets on the foreshore	Rloader	09-Jun-10	IWCAHES	Amended	LJolley	01/07/2010
30	Table 7.1		Need to fill in the ... in the 6th bullet point of the Potential Negative Impacts Column	Emily Allison	03-Jun-10	Environment Agency	Amended	LJolley	1-Jul-10
30	Table 7.1		Ongoing commitment to future investment…' etc - not SEA impact	Oliver Sykes	27-May-10	Environment Agency	Removed	LJolley	1-Jul-10
30	Table7.1	15	Unfinished sentence "assets in the …… shore"	SRJ		Environment Agency	Amended	Ljolley	1-Jul-10
31	Managed Realignment	Potential Negative Impacts	Loss of or damage to heritage assets	Rloader	09-Jun-10	IWCAHES	Added	LJolley	01/07/2010
32	F8.2.3	1	Remove 'is' after 'Management Unit that are'	Emily Allison	03-Jun-10	Environment Agency	changed	Claire Earlie	17-Jun-10
32	F8.2.3	1,2	sense /clarity problem	Oliver Sykes	27-May-10	Environment Agency	changed	LJolley	1-Jul-10
33	PU1A	Environmental Effects	1st bullet point - comma betwwen road and whilst - remove comma after whilst	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
33	PU1B	Environmental Effects	1st bullet point - support (of) internationally	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010

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33	Table 8.1		Big table - could focus /make shorter by summarising only significant impacts?	Oliver Sykes	27-May-10	Environment Agency	Table removed and been put in Annex FV and instead only those significant impacts are given.	LJolley	1-Jul-10
33	Table 8.1		Not enough ownership of mitigation - for example where coastal squeeze is assessed, need to commit to compensatory habitat through RHCP	Oliver Sykes	27-May-10	Environment Agency	Changed text and given more commitment	LJolley	1-Jul-10
33	Table part PU1B	3	positive effects: add "Medina" estuary	SRJ		Environment Agency	changed	Claire Earlie	17-Jun-10
33	Table part PU1B	8	replace "Newtown" Harbour with "Newport"	SRJ		Environment Agency	changed	Claire Earlie	17-Jun-10
33	Table part PU1B	20	What are the "Folly works". Does this refer to Fairlee Sewage Treatment Works?	SRJ		Environment Agency	No it's the Folly Lane Industrial Works	LJolley	1-Jul-10
34	PU2A	Environmental Effects	Negative Effects: Partial loss of Osborne (Grade II* Registered Park & Garden) and loss of associated Listed Buildings on coast	Rloader	09-Jun-10	IWCAHES	Added	LJolley	01/07/2010
34	PU2B	Environmental Effects	Negative Effects: Impact on Quarr Abbey (Scheduled Monument)	Rloader	09-Jun-10	IWCAHES	Changed in accordance with Appendix D and G. Missing some data in previous assessment	LJolley	01/07/10
34	Table part PU2B		Negative effects: Add name of yacht club in Wooton creek for clarity.	SRJ		Environment Agency	Added in Royal Victoria Yacht Club	LJolley	1-Jul-10
35	PU3A	Environmental Effects	Positive effects - 'erosion of Priory Woods SSSI would maintain the geological features (Pleistocene gravels) and thus the SSS in favourable condition' - but at the same time, we don't know the extent of the gravels, particularly the deposits containing Palaeolithic artefacts, some of which are in mint condition suggesting an *in situ* flint-working site, potentially of national or international importance. THis site may be lost to coastal erosion.	Rloader	09-Jun-10	IWCAHES	Added comment into negative effect (though not significant)	LJolley	1-Jul-10

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35	Table part PU3A		Revise Environmental effects for Policy Unit PU3A: Rocky ledges are not features of the Solent and Southampton Water Ramsar site, although seagrass is. Rocky outcrops, limestone rocks are featutes of the Brading marshes to St Helens ledges SSI	SRJ		Environment Agency	Consulted with Natural England who also disagree with this comment. Refer to Reg 33 (Solent European Maritime Site) package- page 45 states: "Intertidal reefs - These are present in the Solent and Southampton Water Ramsar site at Bembridge ledges."	LJolley	01-Jul-10
36	PU3C	Environmental Effects	Negative Effects: Impact on Yaverland Fort (Scheduled Monument)	Rloader	09-Jun-10	IWCAHES	Been added into Table 8.1, Annex FIII - FV as was not on the GIS layers.	LJolley	01/07/2010
37	PU6A	Environmental Effects	Negative Effects: damage to Long Mortuary Enclosure - delete long. Also impact on round barrows (Scheduled Monuments)	Rloader	09-Jun-10	IWCAHES	deleted long	Claire Earlie	17/06/2010
37	PU6B	Environmental Effects	Negative Effects: Loss of Fort Victoria (Grade II Listed Building)	Rloader	09-Jun-10	IWCAHES			
39	PU7	Environmental Effects	Negative Effects: Portion of the medieval settlement of Newtown (Scheduled Monument) and Newtown Bridge...	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
41	Cultural Heritage	PDZ 2	I would say that the SEA 0bjective is partlially met because there will be impact on Registered Parks & Gardens and Listed Buildings at Norris and Osborne, and also risks to the Quarr Abbey Scheduled Monument	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
42	Table 8.3	all	what about mitigation for cumulative impacts? Should mention	Oliver Sykes	27-May-10	Environment Agency			
44	Cumulative effects	Para 2 line 11	maintain**s** the mudflats	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010

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44	table 8.3	biodiversity	no mention of cumulative impacts by habitat - should get overall picture of habitat loss /gain (ie summarise HRA), then refer to mitigation /compensatory habitat (eg through regional habitat creation programme)	Oliver Sykes	27-May-10	Environment Agency	Amended – summary of the findings of the HRA have been inserted	LJolley	01/07/10
45	Heritage Environment		Change to Historic Environment	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
45	Table 8.3	water	Need to summarise results of WFD assessment not just refer	Oliver Sykes	27-May-10	Environment Agency	Amended – summary of the findings of the WFD Assessment have been inserted	LJolley	01/07/10
45-6	Heritage Environment		Although the adverse impacts on statutory heritage assets may be moderate, the impact on non-designated assets is likely to be more severe, with many sites being destroyed or damaged	Rloader	09-Jun-10	IWCAHES	Added	LJolley	01/07/2010
46	1	5	See comment above, p.viii	Rloader	09-Jun-10	IWCAHES	Taken into consideration	LJolley	01/07/2010
46	2		See comments above, p.viii re Sandown Barrack Battery, Grade II Listed Buildings, and Quarr Abbey. I don't think it is particularly necessary to give examples of the Listed Buildings	Rloader	09-Jun-10	IWCAHES	Removed LB examples as suggested	LJolley	01/07/2010
46	2		I think it's a bit misleading to say that there are many unscheduled sites that will be protected under the recommended plan. Whilst there are certainly undesignated sites, including historic buildings that will be protected within the urban areas, the greater percentage of fragile and vulnerable sites are located in the intertidal zone or on frontages with a No Active Intervention management option.	Rloader	09-Jun-10	IWCAHES	Added text to make clearer that will be an effect on non designated features.	LJolley	01/07/2010
46	2		Doesn't mention the Neolithic Mortuary Enclosure on Tennyson Down (SM), which is included in the sites under threat on p.49	Rloader	09-Jun-10	IWCAHES	Added	Ljolley	01/07/2009

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47	F9		Previous QRP comment on SMP SEAs has indicated that mitigation measures need to be owned by the SEA, not simply tiered to lower level assessment. This SEA needs to own mitigation better - eg through mention of compensatory habitat via RHCP	Oliver Sykes	27-May-10	Environment Agency	Greater ownership given and reference to the RHCP as this is where compensation for losses will be sought through approval with Natural England	LJolley	01/07/10
48	The Duver	2	It **has** notbeen recommended	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
48	The Duver	3	mainly in part' is rather contradictory	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
48	Thorley Brook and Barnfields Stream	3	mainly in part' is rather contradictory	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
49	F9.2.1		Where there are adverse impacts on international sites, there is a legal obligation to find compensatory habitat (after no alternatives, IROPI etc)	Oliver Sykes	27-May-10	Environment Agency	Amended text to take account of this	LJolley	1-Jul-10
49	F9.2.5	1	I would prefer 'SMP policy could lead to the loss of designated heritage assets' because there are many sites which are equally important which are undesignated.	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
49	F9.2.5	3	damage to and loss of	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
49	F9.2.5		I don't think you need to list the Listed Buildings which may be threatened - I don't think all of them are included here.	Rloader	09-Jun-10	IWCAHES	Removed	LJolley	01/07/2010
49	F9.2.5		The Osborne House Historic Park/Garden is also threatened.	Rloader	09-Jun-10	IWCAHES	Added	LJolley	01/07/2010
50	F10.3.1		the post adoption statement is a brief advert notifying of plan /SEA approval /adoption - details of how env considerations were incorporated into the final SMP will be in a separate (brief) report - the Statement of Environmental Particulars	Oliver Sykes	27-May-10	Environment Agency	Added	LJolley	1-Jul-10
52	SMs		Schedule**d** Monuments	Rloader	09-Jun-	IWCAHES	changed	Claire	17/06/2010

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					10			Earlie	
63	Historic Envioronment Action Plan	1	typo - programme, not programme**s**	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
89	PU1A1.1 Cutural Heritage Key features		Should read '1 Listed Building - 37 Lower Church Road	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
89	PU1A1.2 Cultural Heritage		No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	LJolley	01/07/2010
90	PU1A1.3 Cultural Heritage		The sea wall along Cowes Parade is also a Grade II Listed Building which potentially would be impacted by all options	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
90	PU1A1.3 HTL		There is some contradiction here - The Royal Yacht Squadron /West Cowes Castle are the same building, therefore, if 'there is potential for the Royal Yacht Squadron to be adversely affected', it is not correct that 'Historic buildings would be maintained'.	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
91	PU1A1.5 Cultural Heritage		In addition to the **former** Congregation**al** Church, the Clare Lallow Grid Iron Works (former sea plane factory) is right on the waterfront, and the coastguard cottages on the sea front are less than 100m from the coast and are at risk from erosion and flooding	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
92	PU1A1.6 Cultural Heritage		Norris Castle Registered Park and Garden	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
92	PU1B.1 Cultural Heritage		No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
93	PU1B.2 Cultural Heritage		No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
94	PU1B.3 Cultural Heritage		No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010

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94	PU1B.4 Cultural Heritage		Large number of Listed Buildings in Newport Town Centre, including parts of the quay wall.	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
96	PU2A.1 Cultural Heritage	NAI	Norris Castle (Listed Building Grade I)	Rloader	09-Jun-10	IWCAHES	Added	LJolley	01/07/2010
96	PU2A.1 Cultural Heritage		Two registered Parks and Gardens - Osborne (Grade II*) and Norris Castle (Grade II), and associated Listed Buildings	Rloader	09-Jun-10	IWCAHES	Added	LJolley	01/07/2010
97	PU2A.2 Cultural Heritage		No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
97	PU2B.1 Cultural Heritage		No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
99	PU2B.4 Cultural Heritage		No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
100	PU2B.5 Cultural Heritage		No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
100	PU2B.6 Cultural Heritage		No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
101	PU2B.7 Cultural Heritage		No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
102	PU2B.8 Cultural Heritage ATL		I think that this offers some opportunities for protection of sites rather than wholesale protection of cultural heritage features	Rloader	09-Jun-10	IWCAHES	Taken note	LJolley	01/07/2010
104	PU2C.3 Cultural Heritage		Vale House at Springvale is also a Listed Building	Rloader	09-Jun-10	IWCAHES	Added	LJolley	01/07/2010
104	PU2C.3 Cultural Heritage		loss of Listed Building**s**	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
105	PU2C.3 Cultural Heritage		Under HTL and ATL I would prefer 'Protection of Listed Buildings' because there are undesignated heritage assets in the intertidal zone which will not be protected but are of equal interest	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010

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106	PU3A.2 Cultural Heritage	Key features	St. Helen's Old Church is a Listed Building which would be impacted upon	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
107	PU3A.3 Cultural Heritage		No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
107	PU3A.4 Cultural Heritage		No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
108	PU3A.5 Cultural Heritage		Drinking Fountain at former entrance to Spithead Hotel is a Grade II Listed Building	Rloader	09-Jun-10	IWCAHES	Changed, impacts added	LJolley	01/07/2010
109	PU3B.1and PU3B.2 Geology & Soils/Cultural Heritage		Should be Whitecliff Bay and Bembridge Ledges SSSI	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
110	PU3B.3and PU3B.4 Geology & Soils/Cultural Heritage		Should be Whitecliff Bay and Bembridge Ledges SSSI. Cultural Heritage also includes palaeoenvironmental deposits relating to the Bembridge School and Cliffs SSSI (Steyne Wood Clay)	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
111	PU3B.5		Should be Whitecliff Bay and Bembridge Ledges SSSI	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
111	PU3C.1 Cultural Heritage	NAI	Erosion unlikely to result in loss of designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
111	PU3C.1 Cultural Heritage		Bronze Age round barrow (Scheduled Monument) on Culver Down, Bembridge Fort also a SM...	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
112	PU3C.1 Cultural Heritage	MR	Erosion unlikely to result in loss of designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010

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112	PU3C.2 Cultural Heritage		There is a Grade II Listed Building (PLUTO power station in the golf course pavilion), which may be impacted by NAI or MR	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
112	PU3C.3 Cultural Heritage	Key Features	St. Helen's Fort is not on this frontage. Listed Buildings at Shanklin around the Chine and on the cliff top	Rloader	09-Jun-10	IWCAHES	Added and removed respective bits	LJolley	01/07/2010
112	PU3C.3 Cultural Heritage	NAI	Loss of or damage to Scheduled Monument to coastal erosion	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
112	PU3C.3 Land use etc.	NAI	typo - Number of seafront built assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
112			I'm not sure whether it's in PU3C.1 or 2 but Yaverland Fort is now a Scheduled Monument	Rloader	09-Jun-10	IWCAHES	In PU3C.1	LJolley	01/07/2010
113	PU3C.3 Cultural Heritage	MR	Loss of heritage assets to coastal erosion	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
113	PU3C.4 Cultural heritage	Key features	No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
113	PU4A.1 Cultural Heritage		No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
114	PU4A.2 Cultural Heritage	ATL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
114	PU4A.2 Cultural Heritage	HTL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010

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114	PU4A.2 Cultural Heritage	Key Features	Other Conservation Areas e.g. Cowes, East Cowes, Newport, Ryde, Yarmouth, Freshwater Bay haven't been highlighted, but p.v of the SEA Environmental Report does include Conservation Areas. Mention here the Listed Buildings and Registered Park	Rloader	09-Jun-10	IWCAHES	Removed reference to conservation area as not mentioned p	LJolley	01/07/2010
115	PU4B.1 Cultural Heritage	ATL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
115	PU4B.1 Cultural Heritage	HTL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
115	PU4B.1 Cultural Heritage	Key features	Apart from the Botanic Gardens, these are undesignated heritage assets which have been scoped out of the SEA. Include Listed Buildings	Rloader	09-Jun-10	IWCAHES	removed undesignated features. No LB's within erosion lines.	LJolley	01/07/2010
115	PU4B.2 Cultural Heritage	HTL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
116	PU4B.2 Cultural Heritage	ATL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
116	PU4B.2 Cultural Heritage	HTL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
116	PU4B.3 Cultural Heritage	ATL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
116	PU5.1 Cultural Heritage	Key features	Scheduled Monument (Barrow near Sud Moor). There are numerous undesignated heritage assets on this frontage	Rloader	09-Jun-10	IWCAHES	Changed text	LJolley	01/07/2010

Page No.	Paragraph	Line	Comment	Name	Date	Organisation	IWCCE Response	Name	Date
117	PU5.1 Cultural Heritage	NAI	No designated heritage assets within the coastal erosion zone...	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
117	PU5.1 Cultural Heritage		Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
117	PU5.1 Cultural Heritage		Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
117	PU5.1 Cultural Heritage		No designated heritage assets within the coastal erosion zone...	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
117	PU6A.1 Cultural Heritage	Key Features	Area rich with archaeological potential, though no designated heritage assets along the coast	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
118	PU6A.2 Cultural Heritage	ATL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
118	PU6A.2 Cultural Heritage	HTL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
118	PU6A.2 Cultural Heritage	Key features	Listed Buildings (Tennyson's Beacon, Needles New Battery). Scheduled Monuments (Mortuary Enclosure, Barrows, Needles Old Battery)	Rloader	09-Jun-10	IWCAHES	added	LJolley	01/07/2010
118	PU6B.1 Cultural Heritage	HTL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
118	PU6B.1 Cultural Heritage	Key features	Listed Building (Warden Point gun emplacement)	Rloader	09-Jun-10	IWCAHES	Added	LJolley	01/07/2010
118	PU6B.1 Cultural Heritage	NAI	Loss or damage to Listed Building from coastal erosion	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010

Page No.	Paragraph	Line	Comment	Name	Date	Organisation	IWCCE Response	Name	Date
119	PU6B.1 Cultural Heritage	ATL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
119	PU6B.1 Cultural Heritage	MR	Possible loss or damage to Listed Building from coastal erosion	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
119	PU6B.2 Cultural Heritage	Key features	No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
120	PU6B.3 Cultural Heritage	ATL	Maintenance of Fort Albert	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
120	PU6B.3 Cultural Heritage	HTL	Maintenance of Fort Albert	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
120	PU6B.4 Cultural Heritage	Key features	No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
120	PU6B.5 Cultural Heritage	Key features	Fort Victoria is a Grade II Listed Building	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
120	PU6B.5 Cultural Heritage	NAI	Loss of or damage to Fort Victoria (Listed Building) from coastal erosion	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
121	PU6B.5 Cultural Heritage	ATL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
121	PU6B.5 Cultural Heritage	HTL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
121	PU6B.5 Cultural Heritage	MR	Loss of or damage to Fort Victoria (Listed Building) from coastal erosion	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010

Page No.	Paragraph	Line	Comment	Name	Date	Organisation	IWCCE Response	Name	Date
121	PU6C.1 Cultural heritage	ATL	Listed Building at risk from flooding	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
121	PU6C.1 Cultural heritage	HTL	Listed Building at risk from flooding	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
121	PU6C.1 Cultural heritage	Key features	The Old Sand House (Grade II Listed Building)	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
121	PU6C.1 Cultural heritage	MR	Loss or damage to Listed Building from coastal erosion and flooding	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
121	PU6C.1 Cultural heritage	NAI	Loss or damage to Listed Building from coastal erosion and flooding	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
122	PU6C.2 Cultural Heritage	ATL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
122	PU6C.2 Cultural Heritage	HTL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
122	PU6C.2 Cultural Heritage	Key features	Listed Buildings at Kings Manor	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
123	PU6C.4 Cultural Heritage	Key features	No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
123	PU6C.5 Cultural Heritage	Key features	No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
124	PU6C.6 Cultural Heritage	ATL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010

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124	PU6C.6 Cultural Heritage	HTL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
124	PU6C.6 Cultural Heritage	Key features	Change SAM to SM	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
125	PU7.1 Cultural Heritage	ATL	Designated heritage assets protected but not sites in the intertidal/subtidal zone	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
125	PU7.1 Cultural Heritage	HTL	Designated heritage assets protected but not sites in the intertidal/subtidal zone	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
125	PU7.1 Cultural Heritage	Key features	Bould**no**r Battery **SM**	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
125	PU7.1 Cultural Heritage	MR	Erosion not expected to impact the Scheduled Monument but will impact sites in the intertidal/offshore zone	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
125	PU7.1 Cultural Heritage	NAI	Erosion not expected to impact the Scheduled Monument but will impact sites in the intertidal/offshore zone	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
125	PU7.2 Cultural Heritage	Key features	Replace SAM with SM	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
126	PU7.2 Cultural Heritage	ATL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
126	PU7.2 Cultural Heritage	HTL	Designated heritage assets protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
126	PU7.2 Cultural Heritage	MR	Portion of Scheduled Monument and Newtown Bridge...	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010

Page No.	Paragraph	Line	Comment	Name	Date	Organisation	IWCCE Response	Name	Date
126	PU7.2 Cultural Heritage	NAI	Portion of Scheduled Monument and Newtown Bridge...	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
126	PU7.3 Cultural Heritage	Key features	But these are undesignated so should be scoped out of this SEA	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
127	PU7.3 Cultural Heritage	ATL	No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
127	PU7.3 Cultural Heritage	HTL	No designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
127	PU7.3 Cultural Heritage	MR	No loss of designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
127	PU7.3 Cultural Heritage	NAI	No loss of designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
133	PU1A.5 Cultural Heritage		See above, comment p.91	Rloader	09-Jun-10	IWCAHES	changed	LJolley	01/07/2010
137	PU2A.1 Cultural Heritage		Also loss of Listed Buildings relating to Osborne House	Rloader	09-Jun-10	IWCAHES	Added	LJolley	01/07/2010
142	PU2B.8 Cultural Heritage		Impact on Quarr Abbey Scheduled Monument?	Rloader	09-Jun-10	IWCAHES	No impact - text made clearer	LJolley	01/07/2010
145	PU3A.1 Cultural Heritage		Loss of Palaeolithic deposits in Priory Woods	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
145	PU3A.2 Cultural Heritage		Impact on St Heoelns Old Church (Listed Building)?	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010

Page No.	Paragraph	Line	Comment	Name	Date	Organisation	IWCCE Response	Name	Date
147	PU3A.5 Cultural Heritage		Impact on Drinking fountaion at former entrance to Spithead Hotel (Listed Building)?	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
147	PU3B.1 Cultural Heritage	0-20, 20-50 and 50-100 years	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
148	PU3B.2 Cultural Heritage	50-100 years	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
148	PU3B.3 Cultural Heritage	0-20, 20-50 and 50-100 years	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
148	PU3B.4 Cultural Heritage	0-20, 20-50 years	Palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI protected	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
148	PU3B.4 Cultural Heritage	50-100 years	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
149	PU3B.5 ultural Heritage	0-20, 20-50 and 50-100 years	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI, and the Bembridge School and Cliffs SSSI (Steyne Wood Clay)	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
149	PU3C.1 Cultural Heritage	0-20, 20-50 and 50-100 years	No impact on designated heritage assets expected - but possibly on Yaverland Battery (now a Scheduled Monument)	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
153	PU4B.1 Cultural Heritage	0-20 years	No impact on designated heritage assets expected rather than features protected	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
153	PU4B.2 Cultural Heritage	0-20, 20-50 years	Listed Buuildings protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010

Page No.	Paragraph	Line	Comment	Name	Date	Organisation	IWCCE Response	Name	Date
155	PU5.1 Cultural Heritage	0-20, 20-50 and 50-100 years	Erosion will impact sites of interest, although no designated heritage assets will be affected	Rloader	09-Jun-10	IWCAHES	Changed	LJolley	01/07/2010
156	PU6A.2 Cultural Heritage	0-20, 20-50 and 50-100 years	Erosion to threaten Scheduled Monuments and Listed Buildings	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
157	PU6B.1 Cultural Heritage		Impact on Fort Warden Gun Emplacement (Listed Building)?	Rloader	09-Jun-10	IWCAHES	Added	LJolley	01/07/2010
158	PU6B.5 Cultural Heritage		Impact on Fort Victoria (Listed Building)?	Rloader	09-Jun-10	IWCAHES	Added	LJolley	01/07/2010
159	PU6C.1 Cultural Heritage		Impact on the Old Sand House (Listed Building)?	Rloader	09-Jun-10	IWCAHES	This is in PU6C.6 and will be protected from HTL policy for Yarmouth	LJolley	01/07/2010
162	PU6C.6 Cultural Heritage		Listed Buildings and **SM** protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
147-8	PU3B.2 Cultural Heritage	0-20, 20-50 years	Palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI protected	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
153-4	PU4B.3 Cultural Heritage	0-20 years, 20-50 years	No loss of designated heritage assets	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010
163-4	PU7.2 Cultural Heritage		Portion of Newtown medieval settlement (Scheduled Monument) and Newtown Bridge...	Rloader	09-Jun-10	IWCAHES	changed	Claire Earlie	17/06/2010

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ANNEX F-III: DETAILED ASSESSMENT OF ALTERNATIVE POLICY OPTIONS

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ANNEX FIII – Detailed Assessment of Alternative Policy Options

						SEA Receptors						
PDZ	**MU**	**PU**	**Policy Name**	**Policy Comments**	**SMP Policy**	**Population and Communities**	**Land Use, Infrastructure & Material Assets**	**Biodiversity, Habitats and Species**	**Landscape**	**Geology & Soils**	**Water**	**Cultural Heritage**
1	**MAN1A**	**PU1A1.1**	Gurnard Luck	HTL supports the existing community and allows time for adaptation. Unlikely to qualify for national funding but HTL would allow small scale private defences to be maintained. Moving to NAI reflects the medium to long term increasing risks and need for increasing adaptation. NAI would not preclude maintenance of private defences	**Key Features**	Properties	Marsh Road, Rew Road, Gurnard Bridge	Solent Maritime SAC, coastal grazing marsh around Gurnard Luck. Poor quality sand beach	Settlement Landscape Character	Grade 4 / Urban	Solent CWB, IOW Solent Group GWB	1 Listed Building – 37 Lower Church Road (Grade II)
					NAI	Potential loss of properties by the 2nd epoch - those fronting Marsh Road. By the 3rd epoch loss of some properties landward of Marsh Road.	Marsh Road, Rew Road would be affected and some amenity beach. A pipeline runs into the sea would be affected. Loss of Gurnard bridge between 1st and 2nd epoch.	Loss of coastal grasing marsh as defences fail and the Gurnard Marshes flood more frequently. Opportunity to create intertidal and transitional habitat in the medium to long term, as the coastal grazing marshes become more and more brackish and erode to mudflat and saltmarsh. Natural change.	Degradation of landscape as defences fail, though over time the landscape will become more natural.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	Not at risk from flooding if defences fail in any epoch.
					HTL	A small community of homes would be affected as would the access road and bridge - Marsh Road.	Marsh Road, Rew Road would be affected and some amenity beach. A pipeline runs into the sea would be affected	Coastal grazing marshes maintained, though coastal squeeze of narrow band of intertidal sandy beach (not identified as a habitat by NE?)	Improve existing landscape as the defences are in poor disrepair.	Restricts natural geomorphological evolution of Gurnard Luck.	No known impacts on water quality.	No impact
					ATL	Potential loss of properties but potentially slower than HTL. Fluvial flooding adversely affecting the situation	Marsh Road, Rew Road would be affected and some amenity beach. A pipeline runs into the sea would be affected	Potential adverse effect on coastal processes and coastal squeeze of the narrow sand beach.	The landscape will be changed. Futher hard defences will impact on the visual quality of the Solent landscape.	Restricts natural geomorphological evolution of Gurnard Luck.	Potential for impacts on water quality and to compromise the WFD objectives.	No impact
					MR	Loss of properties seaward and landward of Marsh road.	Marsh Road, Rew Road would be affected and some amenity beach. A pipeline that runs into the sea would be affected	Opportunity for habitat creation - gain of mudflats and saltmarsh. Loss of some of the coastal grazing marsh in its place, but it would be a wholly sustainable habitat.	Opportunity to improve the visual quality over time as a more natural coastline landscape evolves.	Works with natural erosion and geomorphological processes.	Potential for water quality to improve.	No potential for damage or loss from either erosion or loss
		PU1A1.2	Gurnard Cliff		**Key Features**	Properties	None	Solent Maritime SAC, poor quality sand beach	Settlement Landscape Character	Urban	Cowes Shellfish Water	No designated heritage assets
					NAI	Loss of gardens bordering the cliffs in the 2nd and 3rd epochs, loss of two houses at western end in 3rd epoch when landslide reactivation occurs	No loss of amenities, though as the cliffs reactivate this may cause impairments to cliff stability on which houses are built and Solent View Road	Natural coastal squeeze of beach as cliffs slump and sea level rises. Creation of natural cliff habitats.	Limited change to landscape - settlement character will remain dominant.	Works with natural processes - erosion will cause significant landslide reactivation of the cliffs - not designated for geology.	No known impacts on water quality.	N/A
					HTL	Defences will continue to provide the appropriate standard of protection to built assets during this period.	Defences will continue to provide the appropriate standard of protection to material assets, infrastructure and agricultural land. Minor flooding of Prince's Esplanade may occur.	Coastal squeeze of sand beach (though not a habitat) and vegetated habitats on the cliffs as they are not allowed to erode naturally.	The landscape is dominated by settlements. Existing landscape will be maintained.	Restricts natural geomorphological and erosional processes of the cliffs.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A

						SEA Receptors						
PDZ	**MU**	**PU**	**Policy Name**	**Policy Comments**	**SMP Policy**	**Population and Communities**	**Land Use, Infrastructure & Material Assets**	**Biodiversity, Habitats and Species**	**Landscape**	**Geology & Soils**	**Water**	**Cultural Heritage**
					ATL	Defences will continue to provide the appropriate standard of protection to built assets during this period.	Defences will continue to provide the appropriate standard of protection to material assets, infrastructure and agricultural land. Minor flooding of Prince's Esplanade may occur.	Coastal squeeze of sand beach (though not a habitat) and interference of coastal processes so that the vegetated cliffs are not eroded naturally and climax species dominate.	The landscape will be change. Futher hard defences will impact on the visual quality of the Solent landscape.	Restricts natural geomorphological and erosional processes of the cliffs.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A
					MR	Some loss of coastal gardens and property.	No loss of amenities, though potential impairment of cliff stability on whch houses are built and Solent View Road.	Coastal mudslides have resulted in undermining and recession of the cliff top in this area. MR would need to take account of this.	Not possible to realign without changing the visual landscape, though it could be more natural than at present.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	N/A
		PU1A1.3	Gurnard to Cowes Parade		**Key Features**	Properties	Built up community, A and B roads, recreation grounds - golf course and open/wooded spaces	Solent Maritime SAC, poor quality beach	Settlement Landscape Character	Urban	Cowes Bathing Water, number of point source discharges linked to water treatment works	Listed Buildings - 12 with 3 immediately adjacent to the coast (Statue of Lion - GII, Statue of Lion on Plinth - GII, West Cowes Castle - GII*), Cowes Parade sea wall (Grade II LB)
					NAI	The defences would not be sufficient to prevent erosion of the north coast resulting in a loss of properties and built assets.	The defences would fail to provide the appropriate protection against erosion, and tidal inundation would impact slipways, the public highway (The Esplanade), footpath access and public open space.	Coastal erosion could trigger landslide reactivation, though no Natura features impacted.	Degradation of landscape as defences fail, though over time the landscape will become more natural.	Works with natural processes.	No known impacts on water quality.	4 LBs at risk from damage/loss – Cowes Parade sea wall, Statue of Lion would be lost in epoch 1, Statue of Lion on Plnth - 2nd to 3rd epoch, West Cowes Castle in 2nd epoch.
					HTL	A small number of properties to the west of the Foot Ferry Terminal are likely to be affected, the number of which will increase with time.	Defences will continue to provide the appropriate standard of protection to built assets and infrastructure during this period. There is potential for the Royal Yacht Squadron/Cowes Castle to be adversely affected.	Coastal squeeze of sand beach over time - though as sandy beach is not a BAP habitat it is not as significant.	Maintain existing landscape	Restricts natural geomorphological and erosional processes of the cliffs.	Potential impacts on water quality during construction works associated with upgrading of defences.	Historic buildings would be maintained providing the defences are raised; otherwise coastal flooding could cause damage to the LBs adjacent to the coast e.g. Cowes Castle LB (Royal Royal Yacht Squadron). Cowes Parade sea wall (Grade II LB) will be affected over time.
					ATL	Defences will continue to provide the appropriate standard of protection to built assets during this period.	Defences will continue to provide the appropriate standard of protection to material assets, infrastructure and agricultural land.	Potential loss of sand beach, though no Natura features impacted.	The landscape will be changed. Futher hard defences will impact on the visual quality of the Solent landscape.	Restricts natural geomorphological and erosional processes of the cliffs.	Potential impacts on water quality during construction works associated with upgrading of defences.	Historic buildings would be maintained providing the defences are raised; otherwise coastal flooding could cause damage to the LBs adjacent to the coast e.g. Cowes Castle LB (Royal Royal Yacht Squadron). Cowes Parade sea wall (Grade II LB) will be affected over

PDZ	MU	PU	Policy Name	Policy Comments	SMP Policy	SEA Receptors: Population and Communities	Land Use, Infrastructure & Material Assets	Biodiversity, Habitats and Species	Landscape	Geology & Soils	Water	Cultural Heritage
												time.
					MR	Some loss of coastal property and gardens along The Esplanade and Queen's Road.	Some impact upon slipways, roads, and footpaths.	Coastal erosion could trigger landslide reactivation, though no Natura features impacted.	Not possible to realign without changing the visual landscape, though it could be more natural than at present.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	Those along the coast would be at risk from damage/loss
		PU1A1.4	West Cowes	Recognise that HTL may be difficult to achieve with sea level rise and the community may need to consider coastal adaptation. This will be examined further in the Strategy Study.	**Key Features**	Properties	Coastal access infrastructure (slipways, piers, pontoons), A and B roads, commercial and industrial sites, electricity sub-station, farmland to the south of Cowes	Solent Maritime SAC, BAP intertidal mudflats	Settlement & Harbours and Creeks Landscape Characters	Urban with areas of Grade 3 soils	Numerous point source discharges associated with industrial and commercial sites, Cowes and Medina Shellfish Waters	25 listed buildings within 500m of the coast - 8 known buildings at risk - no erosion lines for the Medina
					NAI	Coastal residences in Cowes subject to flooding.	Shoreline assets at risk from flooding.	No opportunity for habitat creation, as those areas that do not need to be defended are constrained naturally by height of land.	Alteration of landscape as defences fail.	Works with natural processes, though area is heavily developed/modified already so not especially pertinent.	No known impacts on water quality.	Risk of damage/loss from erosion and flooding
					HTL	Continued significant flood risk and some erosion, resulting in loss of property.	The defences would fail to provide the appropriate protection against flooidng and erosion, over time resulting in adverse impacts on coastal infrastructure including the marina.	Habitat loss through coastal squeeze of BAP intertidal mud flats. No opportunity for habitat creation, as those areas that do not need to be defended are constrained naturally by height of land. Conservation objectives of the SAC would be affected.	Maintain existing landscape	Restricts natural geomorphological and erosional processes, though this is already the case given developed nature of area.	No significant change. Potential impacts on water quality during construction works associated with upgrading of defences.	Defences would prevent damage/loss to most of the listed buildings along the coast. Though those that are not defended e.g. Coles Yard and Slipway (Grade II) could be damaged by erosion and flooding as not presently protected.
					ATL	As above but deterioriation would be slower.	As above but degradation would be slower.	As above but habitat loss would be greater.	The landscape will be changed. Futher hard defences will impact on the visual quality of the Medina landscape.	Restricts natural geomorphological and erosional processes, though this is already the case given developed nature of area.	Potential impacts on water quality during construction works associated with upgrading of defences. Temporary impact only.	Defences would prevent damage/loss to listed buildings along the coast.
					MR	Coastal residences in Cowes subject to flooding.	Shoreline assets at risk from flooding.	No opportunity for habitat creation, as those areas that do not need to be defended are constrained naturally by height of land.	Alteration of landscape as coastline is allowed to reallign.	Works with natural processes, though area is heavily developed/modified already so not especially pertinent.	No known impacts on water quality.	Risk of damage/loss from erosion and flooding
		PU1A1.5	East Cowes	Recognise that HTL may be difficult to achieve with sea level rise and the community may need to consider coastal adaptation. This will be examined further in the Strategy Study.	**Key Features**	Properties	Coastal access infrastructure (slipways, piers, pontoons), A and B roads, commercial and industrial sites, electricity sub-station, farmland to the south of Cowes	Solent Maritime SAC, Solent and Southampton Water Ramsar and SPA sites, BAP intertidal mudflats, sandflats	Settlement & Harbours and Creeks Landscape Characters	Urban with areas of Grade 3 soils	Numerous point source discharges associated with industrial and commercial sites, Cowes and Medina Shellfish Waters	3 listed buildings, – former East Cowes Congregational Church (GII LB), Clare Lallow Grid Iron Works LB (former sea plane factory) is right on the waterfront, and the coastguard cottages (LBs) within 100m of coast
					NAI	Coastal residences in Cowes subject to flooding.	Shoreline assets at risk from flooding.	Potential for expansion of intertidal habitats as coast rolls back.	Alteration of landscape as defences fail. Heavily developed coastline, so no expected return to	Works with natural processes, though area is heavily developed/modified already so not	No known impacts on water quality.	Risk of damage/loss of LBs from erosion and flooding.

PDZ	MU	PU	Policy Name	Policy Comments	SMP Policy	SEA Receptors: Population and Communities	Land Use, Infrastructure & Material Assets	Biodiversity, Habitats and Species	Landscape	Geology & Soils	Water	Cultural Heritage
									'natural' landscape.	especially pertinent.		
					HTL	The defences would fail to provide the appropriate protection against flooding which would adversely affect a number of properties.	The defences would fail to provide the appropriate protection against flooding resulting in adverse effects on industrial works and infrastructure such as ferry terminals, access roads, and leisure facilities such as the marina.	Loss of BAP intertidal mudflats through coastal squeeze as they are not allowed to naturally rollback as constrained by man-made defences.	No significant change.	No significant change.	No significant change. Potential impacts on water quality during construction works associated with upgrading of defences.	No risk of damage/loss from erosion. Risk remains from flooding for LBs within 100m of the coast (e.g. the East Cowes Congregational Church)
					ATL	As above but deterioriation would be slower.	As above but degradation would be slower.	As above but habitat loss would be greater.	The landscape will be changed. Futher hard defences will impact on the visual quality of the Cowes landscape.	Restricts natural geomorphological and erosional processes, though this is already the case given developed nature of area.	No significant change. Potential impacts on water quality during construction works associated with upgrading of defences.	No risk of damage/loss from erosion. Flood risk could be increased.
					MR	Coastal residences in Cowes subject to flooding.	Shoreline assets at risk from flooding.	Potential for expansion of intertidal habitats if coastline is allowed to retreat.	Alteration of landscape as coastline is allowed to reallign - see NAI.	Works with natural processes, though area is heavily developed/modified already so not especially pertinent.	No known impacts on water quality.	Risk of damage/loss to LBs from erosion and flooding.
		PU1A1.6	East Cowes Outer Esplanade	HTL by maintenance of the existing seawall until the end of its effective life, gradually removing the influence of management.	**Key Features**	Single residential property, school some distance inland	Coastal pathway and public open space, sewage works, camping site	Solent Maritime SAC, sandflats	Osborne Coast, AONB	Grade 3 soils	Cowes Shellfish Water, offshore sewage discharge	Norris Castle Registered Park and Garden
					NAI	Flooding on the Outer Esplanade would be limited to the west of Spring Hill where a single residential property would be impacted.	Erosion and coastal flooding to impact the Esplanade road (main waterfront access) and the grassy public open space to the rear of it.	Sandflats will be allowed to roll-back naturally, though higher ground will constrain any fast erosion. Initially, whilst defences still hold there will be coastal squeeze.	Alteration of landscape as defences fail. Return to more natural conditions, therefore assume beneficial in relation to AONB.	Works with natural erosion and geomorphological processes of coastal erosion.	No known impacts on water quality.	Masonry wall will fail in time, allowing natural rollback of the coast. This will result in the damage/loss of the historically significant parks and gardens, though since it is a garden rather than a building the significance is minor.
					HTL	Current flood levels would still see the single residential property impacted.	Current flood levels may impact the Esplanade road and a small area of public open space.	Loss of intertidal sandflats through coastal squeeze, since roll back will be constrained by defences.	No significant change.	Restricts natural processes. No change expected.	No significant change. Potential impacts on water quality during construction works associated with upgrading of defences.	Protection of the Park and Garden feature.
					ATL	As above.	As above.	Loss of intertidal habitat in footprint of defences and resulting from coastal squeeze.	The landscape will be changed. Futher hard defences will impact on the visual quality of the landscape and AONB.	Restricts natural geomorphological and erosional processes, though this is already the case given defences present.	No significant change. Potential impacts on water quality during construction works associated with upgrading of defences.	Protection of the Park and Garden feature.
					MR	Flooding of single resdential property.	Flooding of access road and public space.	If retreat is the preferred option, sandflats will be allowed to roll-back naturally, though higher ground will constrain any fast erosion.	Alteration of landscape as coastline is allowed to reallign - see NAI.	Works with natural erosion and geomorphological processes of coastal erosion.	No known impacts on water quality.	As per NAI.

						SEA Receptors						
PDZ	**MU**	**PU**	**Policy Name**	**Policy Comments**	**SMP Policy**	**Population and Communities**	**Land Use, Infrastructure & Material Assets**	**Biodiversity, Habitats and Species**	**Landscape**	**Geology & Soils**	**Water**	**Cultural Heritage**
	MAN1B	**PU1B.1**	Central Medina NW	NAI would not preclude maintenance of private defences	**Key Features**	Small number residences	Farmland / wooded land, cycle ways	Solent and Southampton Water SPA and Ramsar, Solent Maritime SAC, BAP intertidal mudlfats, saltmarsh, club rush swamp, important wader roost site and used by Brent Geese	Traditional enclosed pasture land / Harbours and Creeks	Grade 3 soils, closed Stag Lane Landfill Site	Medina Shellfish Water, point source discharge at Landing Stage	No designated heritage assets
					NAI	No impacts expected.	Tidal inundation of estuary margins to have minimal impact - some loss of cycle way.	Opportunities for habitat creation from northern boundary down to Little Werrar Wood (though this would cross cycle track). Where there are private defences that are holding saltmarsh, when these fail there will be natural erosion of the saltmarsh and creation of mudflat. Inundation of club rush swamp with time.	Localised changes in landscape associated with inundation in particular locations, though maintenance of overall character.	No significant change. Although flood waters will approach to closed landfill site, it is not thought that they will encroach upon it.	No known impacts on water quality.	N/A
					HTL	As above.	As above.	Loss of intertidal habitats through coastal squeeze, since roll back will be constrained by defences. Maintenance of some areas of saltmarsh and swamp.	Changes to landscape associated with defence maintenance and construction - less 'natural' landscape.	Restricts natural processes. No change expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A
					ATL	As above.	As above.	Loss of intertidal habitat in footprint of defences and resulting from coastal squeeze.	Changes to landscape associated with defence maintenance and construction - less 'natural' landscape.	Restricts natural processes. No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A
					MR	As above.	As above.	Clear areas with opportunities for habitat creation - see NAI.	Localised changes as per NAI.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	N/A
		PU1B.2	West Medina Mills	Private defences will be maintained	**Key Features**	No coastal residences	Depots and a coastal wharf, open land (including closed landfill site), cycle way *this area is currently being developed by SEEDA*	Solent and Southampton Water SPA and Ramsar, Solent Maritime SAC, Medina Estuary SSSI, mudlfats	Traditional enclosed pasture land / Harbours and Creeks	Grade 3 soils, closed Stag Lane Landfill Site	Number of point source discharges associated with cement works	No designated heritage assets
					NAI	No impacts expected.	Tidal inundation of estuary margins to have minimal impact - some loss of cycle way and potential for loss of depot sites.	Coastal rollback enabled over time; potential for some habitat gain, though limited by coastal topography.	Localised changes in landscape associated with inundation in particular locations, though maintenance of overall character.	No significant change. Although flood waters will approach to closed landfill site, it is not thought that they will encroach upon it.	No known impacts on water quality.	N/A

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					HTL	Tidal inundation still to occur but to a lesser extent than under NAI. No impacts expected.	Tidal inundation may still result in impacts upon the cycle way and West Medina Wharf.	Loss of intertidal mudflats through coastal squeeze caused by sea level rise and unable to rollback because of defences, though opportunities for habitat migration to surrounding NAI coastline.	Changes to landscape associated with defence maintenance and construction - less 'natural' landscape.	Restricts natural processes. No change expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A
					ATL	No impacts expected.	Effects of tidal flooding minimised.	As per HTL, with potential for further habitat loss associated with construction of new defences.	Changes to landscape associated with defence maintenance and construction - less 'natural' landscape.	Restricts natural processes. No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A
					MR	No impacts expected.	Tidal inundation of estuary margins to have minimal impact - some loss of cycle way and potential for loss of depot sites.	As per NAI, though expect more limited opportunities for habitat gain.	Localised changes as per NAI.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	N/A
		PU1B.3	Central Medina SW	NAI would not preclude maintenance of private defences	**Key Features**	Small number of residences	Framland, works sites at Dodnor Park, coastal path / cycle way, electricity infrastructure (sub-stations)	Solent and Southampton Water SPA and Ramsar, Solent Maritime SAC, Medina Estuary SSSI, mudlfats, club rush swamp (though majority not within Natura or Ramsar site)	Traditional enclosed pasture land / Harbours and Creeks / Settlement	Grade 3 soils	Number of point source discharges	No designated heritage assets
					NAI	Tidal inundation of Dodnor Cottages and properties at Riverview Park.	Tidal inundation of farmland and coastal pathway - minimal losses.	Opportunity for coastal roll back and habitat gain limited due to coastal topography - natural coastal squeeze in some locations. However, opportunities for habitat creation under the Viaduct near Dodnor Cottages (presently defended). Small area of club rush swamp south of Medina Valley Centre to be altered and eventually lost under indundation.	Localised changes in landscape associated with inundation in particular locations, though maintenance of overall character.	Works with natural processes.	No known impacts on water quality.	N/A
					HTL	Tidal inundation still to occur but to a lesser extent than under NAI.	Tidal inundation may still result in impacts upon the cycle way.	Loss of intertidal habitat associated with coastal squeeze. Maintenance of club rush swamp.	Changes to landscape associated with defence maintenance and construction - less 'natural' landscape.	Restricts natural processes. No change expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A
					ATL	No impacts expected.	Effects of tidal flooding minimised.	As per HTL, with potential for further habitat loss associated with construction of new defences.	Changes to landscape associated with defence maintenance and construction - less 'natural' landscape.	Restricts natural processes. No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A

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PDZ	**MU**	**PU**	**Policy Name**	**Policy Comments**	**SMP Policy**	**Population and Communities**	**Land Use, Infrastructure & Material Assets**	**Biodiversity, Habitats and Species**	**Landscape**	**Geology & Soils**	**Water**	**Cultural Heritage**
					MR	Tidal inundation of Dodnor Cottages and properties at Riverview Park.	Tidal inundation of farmland and coastal pathway - minimal losses.	As per NAI.	Localised changes as per NAI.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	N/A
		PU1B.4	Newport Harbour		**Key Features**	Town centre - residences, commercial properties	Residential and commercial land uses, harbour, A and B roads (bridges), cemetery, electricity infrastructure (sub-stations), moorings and pontoons	Solent and Southampton Water SPA and Ramsar, Solent Maritime SAC, mudlfats	Harbours and Creeks / Settlement	Urban with areas of Grade 3 soils	Number of point source discharges	Large number of listed buildings in Newport town centre, including parts of the quay wall.
					NAI	Property and infrastructure significantly impacted by tidal flooding.	Property and infrastructure signifisantly impacted by tidal flooding.	Limited opportunities for coastal roll back / habitat gain due to infrastructure and river and topography of surrounding land.	Increasingly frequent flooding of settlement landscape. Degradation of existing defences and other infrastructure leading to change in landscape character within flood zones.	Works with natural processes.	Flooding may result in temporary adverse impacts upon water quality.	Flooding would result in the inundation of a number of Listed Buildings in Newport centre, on Sea Street and Quay Street.
					HTL	Function of harbour and town maintained. Effects of tidal inundation minimised.	Function of harbour and town maintained. Effects of tidal inundation minimised.	Expect coastal squeeze and loss of some intertidal habitat as a result of sea level rise.	Limited change expected - potential improvements associated with upgrading of existing defence walls.	Restricts natural processes. No change expected.	No significant impacts. Potential temporary impacts on water quality during works associated with upgrading of defences.	No impacts expected.
					ATL	Function of harbour and town maintained. Effects of tidal inundation minimised. However, limited opportunities for ATL given function of waterway.	Function of harbour and town maintained. Effects of tidal inundation minimised.	As per HTL, with potential for further habitat loss associated with construction of new defences.	Limited change expected - some local alterations associated with defence construction, but in keeping with developed landscape.	Restricts natural processes. No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	No impacts expected.
					MR	Property and infrastructure signifisantly impacted by tidal flooding.	Property and infrastructure signifisantly impacted by tidal flooding.	Limited opportunities for coastal roll back / habitat gain due to infrastructure and river and topography of surrounding land.	Limited opportunities for MR; expect similar outcome to NAI.	Works with natural erosion and geomorphological processes.	Flooding may result in temporary adverse impacts upon water quality.	Expect MR to be managed so as to avoid / minimise loss of historic sites.
		PU1B.5	Central Medina East	NAI would not preclude maintenance of private defences	**Key Features**	Fairlee and Medina Park communities, with associated residences	Mostly farmland, works sites, including sewage works and closed landfill site at Little Copse, marina at Island Harbour, jetties and pontoons	Solent and Southampton Water SPA and Ramsar, Solent Maritime SAC, mudlfats, saltmarsh, club rush swamp, reedbed, used by Brent Geese	Traditional enclosed pasture land / Harbours and Creeks / Settlement / Landscape Improvement Area	Grade 1,2 and 3 soils, Closed landfill site	Medina Shellfish Water, Number of point source discharges	Small number of Listed Buildings (agricultural) significant distance inland
					NAI	Residences at Island Harbour impacted by tidal flooding if private defences are not maintained.	If private defences are not maintained parts of Island Harbour and Folly Works will be lost to tidal flooding.	The coast will roll back naturally, with the potential for expansion of intertidal flats, particulalry around Blackbush Copse. Potential for alteration of swamp and reedbed habitats as a result of more frequent and extensive saline inundation.	Inundation will alter the landscape around Blackbush Copse, though limited change to landscape character (i.e. remains as pasture).	Works with natural processes. Flooding will result in inundation of part of the closed landfill site, posing a risk to the stability of the site (potential leaching of contaminants).	Risk associated with flooding of the closed landfill site and release of contaminants.	East Medina House (Listed Building) may be subject to inundation.

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					HTL	Assuming upkeep of private defences, no properties impacted.	Assuming upkeep of private defences, impacts minimal.	Natural coastal evolution prevented. Squeeze and loss of intertidal habitats under sea level rise.	Maintain existing landscape.	Restricts natural geomorphological processes, though protects from exposure of landfill site.	Potential temporary impacts on water quality during works associated with upgrading of defences.	No impacts expected.
					ATL	Assuming upkeep/advancement of private defences, no properties impacted.	Assuming upkeep/advancement of private defences, no properties impacted.	As per HTL, with potential for further habitat loss associated with construction of new defences.	The landscape will be changed. Futher hard defences will impact on the visual quality of the eastern Medina landscape.	Restricts natural geomorphological processes, though protects from exposure of landfill site.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	No impacts expected.
					MR	Reallignment may be managed so as to avoid impacts.	Reallignment may be managed so as to avoid impacts.	As per NAI.	Opportunity to improve the visual quality over time as a more natural coastline landscape evolves.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	As per NAI.
2	**MAN2A**	**PU2A.1**	Osborne Bay		**Key Features**	Scattered residential developments - few coastal properties.	Little infrastructure - farmland, mostly undeveloped woodland with some public footpaths	Solent Maritime SAC, Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, King's Quay shore SSSI, seagrass beds, sandflats, vegetated shingle, BAP intertidal mudflats, saltmarsh	Osborne Coast / Traditional enclosed pasture land / Harbours and Creeks, AONB	Grade 3 and 4 soils	Cowes Shellfish Water	Two Registered Parks and Gardens – Osborne (Grade II*) and Norris Castle (Grade II) and associated Listed Buildings. Norris Castle (Grade I Listed Building)
					NAI	Defences will fail by the end of the first epoch and coastal slope erosion would occur. Some tidal inundation expected to occur around Kings Quay. Three residences around King's Quay to be lost to coastal erosion in the third epoch.	Defences to fail by end of the first epoch and coastal erosion to occur. However, limited assets to be impacted. Mostly loss of wooded land, with some pathways impacted (e.g. Boundary Drive).	Once the defences fail the coast will roll back naturally, allowing for more natural intertidal sandflats with seagrass beds in the shallows. The creek between Steps Copse and Curlews Copse (King's Quay) will naturally evolve to be a wider mouth with in-turned spits; this may have resultant effects upon the important habitats within the creek (though no overall loss expected).	Return to more 'natural' landscape. Parkland and woodland of the estates of Norris Castle and Osborne House will be impacted by coastal erosion. King's Quay local landscape altered with changes to spits and enlargement of inlet.	Works with natural erosion and geomorphological processes. King's Quay inlet altered significantly ovet time - spit formation altered and inlet enlarged.	No significant effects.	Loss of the historic gardens through erosion, with significant loss in the 3rd epoch which will see encroachment close (~65m) to Norris Castle. Also by the 3rd epoch there will be damage/loss to the Pier Landing house and surrounding paths.
					HTL	Patchwork of erosion along the coastline if current defences are maintained. Expect similar outcome as for NAI - loss of three residences.	Patchwork of erosion along the coastline if current defences are maintained. Expect similar outcome as for NAI - loss of wooded land and pathways.	This is generally an eroding coastline and maintenance of defended stretches will reduce sediment supply for the foreshore. Expect some (minor) loss of intertidal flats and saltmarsh as a result of coastal squeeze. Vegetated shingle spits expected to migrate landwards, though may not result in habitat loss.	Natural evolution of landscape prevented, though opportunities to upgrade current visual appearance of hard defences.	Restricts natural geomorphological development of coastline.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Protection of the Park and Garden feature.

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					ATL	Patchwork of erosion along the coastline if current defences are advanced. Expect similar outcome as for NAI - loss of three residences.	Patchwork of erosion along the coastline if current defences are advanced. Expect similar outcome as for NAI - loss of wooded land and pathways.	Expect loss of habitat in the footprint of defences and some (minor) loss of intertiral flats and saltmarsh as a result of coastal squeeze.	Natural evolution of landscape prevented, though opportunities to upgrade visual appearance of existing hard defences.	Restricts natural geomorphological development of coastline.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Protection of the Park and Garden feature.
					MR	As per NAI.	As per NAI.	If retreat is the preferred option along undefended stretches, coastal roll back will allow for more natural intertidal habitats and seagrass beds.	Opportunity to improve the visual quality over time as a more natural coastline landscape evolves.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	As per NAI.
		PU2A.2	Woodside		**Key Features**	Scattered residential properties, with much green space, Holiday Village	Copse/green space, pathways	Solent Maritime SAC, Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, King's Quay shore SSSI, BAP intertidal mudflats, rocky reefs, sandflats	Landscape Improvement Area / AONB	Grade 3 and 4 soils	Cowes Shellfish Water, offshore sewage discharge point	No designated heritage assets
					NAI	The current situation will not continue to provide the appropriate protection against erosion - six houses at Ghapal will be lost in the first epoch if private defences are allowed to fail. Part of Woodside Holiday would also be lost.	Minor losses of wooded areas and pathways.	The coast will be allowed to roll back naturally; there will be no habitat loss or gain.	Already a largely naturally evolving coastline, and this would continue - expect coastal erosion and slope failure.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	N/A
					HTL	Maintenance of defence structures will protect the houses at Ghapal from coastal erosion, though Holiday Village still impacted.	As per NAI.	An eroding coastline. HTL likely to result in some loss of intertidal habitat as a result of coastal squeeze. Small area of reef not expected to be impacted.	Natural evolution of coastline prevented.	Natural evolution of coastline prevented, though no significant impacts expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A
					ATL	Maintenance of defence structures will protect the houses at Ghapal from coastal erosion, though Holiday Village still impacted.	As per NAI.	Loss of intertidal flats in defence footprint and through coastal squeeze.	Natural evolution of coastline prevented.	Natural evolution of coastline prevented, though no significant impacts expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A
					MR	Reallignment may be managed so as to avoid impacts at Ghapal.	As per NAI.	Assume gradual roll back allowed; no habitat loss or gain.	Already a largely naturally evolving coastline, and this would continue - expect coastal erosion and slope failure.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	N/A
	MAN2B	**PU2B.1**	Western Wootton Creek	Properties are generally set back from the shoreline and not in the risk zone. NAI would not preclude maintenance of private	**Key Features**	Scattered residential properties, with much green space, Holiday Village	Farmland, recreational moorings and pontoons, boatyards, tourist accommodation, pathways	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, estuaries, BAP intertidal mudflats	Landscape Improvement Area / AONB	Grade 3 and 4 soils, Chapel Corner is described as a geologically unique site	Cowes Shellfish Water, point source discharge from domestic property in Lisle Court	No designated heritage assets

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				waterside access structures and minor defences fronting the narrow individual properties and gardens, subject to normal approvals.	**NAI**	By the end of the first epoch the margins of the creek will be subject to inundation. Loss of several properties near to the Holiday Village. Erosion in outer Creek to result in loss of a property at Lisle Court.	By the end of the first epoch the margins of the creek will be subject to inundation and erosion. Impacts on slipways/moorings and boatyard sites inland of Wootton Hard.	Natural coastal evolution enabled from Chapel Point south. Intertidal flats have potential to expand, around Lambsleaze Copse and Holiday Village.	Natural evolution of coastline allowed.	NAI would support natural evolution of Chapel Corner.	No known impacts on water quality.	N/A
					HTL	Erosion to be limited, though some overtopping of defences still to occur. However, no properties impacted.	Erosion to be limited, though some overtopping of defences still to occur. Inundation of some coastal assets - slipways/moorings and boatyard sites.	Potential for loss of intertidal habitat through coastal squeeze.	Natural evolution of coastline prevented.	Evolution of Chapel Corner hindered.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A
					ATL	Erosion and flooding to be limited - no impacts expected.	Erosion and flooding to be limited - no impacts expected.	As per HTL, though with further habitat loss as a result of defence construction.	Natural evolution of coastline prevented.	Evolution of Chapel Corner hindered.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A
					MR	Reallignment may be managed so as to avoid impacts on properties.	Reallignment may be managed so as to avoid impacts on most assets.	Similar to NAI with potential for expansion of intertidal, particulalry near Lambsleaze Copse.	Gradual return to more natural coastal landscape.	Evolution of Chapel Corner supported.	No known impacts on water quality.	N/A
		PU2B.2	South-west Wootton Creek	Continue defence to properties from flood risk by HTL of private and public defences.	**Key Features**	Residential village of Wootton	A road / Wootton Bridge, electricity infrastructure (sub-stations), jetties	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, estuaries, BAP intertidal mudflats	Settlement	Grade 4 soils	Point source discharges associated with sewage pumping stations	3 Listed Buildings on Mill Square
					NAI	Tidal flooding to become more frequent by the end of the first epoch. Properties in Wootton at risk.	Tidal flooding to become more frequent by the end of the first epoch. Assets at risk and potential for effects on bridge structure.	Limited opportunities for roll back and habitat creation given nature of coastal slopes.	Change to landscape character associated with loss of some land to inundation and erosion.	Some loss of land to erosion and inundation.	No known impacts on water quality.	Loss of, or damage to, buildings during tidal inundation.
					HTL	Tidal flooding already affects properties near Wootton Bridge and would occur more frequently if defences are maintained solely at their current levels.	Tidal flooding already affects assets (minor roads, jetties) near Wootton Bridge and would occur more frequently if defences are maintained solely at their current levels.	Expect loss of intertidal habitat through coastal squeeze.	Erosion and inundation prevented / limited - no change to landscape.	No impact expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	No impact expected.
					ATL	Opportunities for further protection of properties.	Opportunities for further protection of assets.	As per HTL, though with further habitat loss as a result of defence construction.	Erosion and inundation prevented / limited - no change to landscape. Landscape modified with the construction of new defences.	No impact expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	No impact expected.
					MR	Limited opportunities for reallignment - likely that outcome would be as per NAI.	Limited opportunities for reallignment - likely that outcome would be as per NAI.	Similar to NAI with potential for expansion of intertidal.	Change to landscape character associated with loss of some land to inundation.	Some loss of land to erosion and inundation.	No known impacts on water quality.	Potential for loss of, or damage to, buildings during tidal inundation.

						SEA Receptors						
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		PU2B.3	Old Mill Pond	Undertake no specific defence within the Mill Pond and accept increased saline intrusion. Continue to maintain use of the road.	**Key Features**	No properties	Woodland, camp sites, pathways	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, Biddlesford Copses SSSI, estuaries, intertidal mudflats, saltmarsh, club rush swamp	Settlement / Traditional enclosed pasture land / Harbours and Creeks, AONB	Grade 4 soils	Point source discharge associated with sewage pumping station	Bridge House Listed Building, near Wootton Bridge
					NAI	No effects expected.	Small areas of inundation on the Pond margins - no loss of important assets.	Expect saline intrusion into Old Mill Pond over time, though not in as controlled a manner as with MR.	Localised changes to landscape resulting from inundation and degradation of defences - no change to overall character.	Changes to local soil conditions in immediate vicinity of Pond as a result of saline intrusion.	Water levels / tidal flow into Old Mill Pond not controlled - expect changes to water quality in the Pond.	Unlikely to be impacted by tidal inundation.
					HTL	No effects expected.	Small areas of inundation on the Pond margins - no loss of important assets.	No significant change expected, though potential for habitat squeeze with sea level rise.	No significant change.	No change expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	No impact.
					ATL	No effects expected.	Small areas of inundation on the Pond margins - no loss of important assets.	As per HTL, though impacts associated with defence construction.	The landscape will be changed. Futher hard defences will impact on the visual quality of the local landscape.	No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	No impact.
					MR	No effects expected.	Small areas of inundation on the Pond margins - no loss of important assets.	Sluice to be managed to allow gradual saline intrusion into Pond and return to more natural conditions. Note saline intrusion will not impact woodland areas associated with Biddlesford Copses SSSI.	Expect gradual change to landscape with altered/removed defence structure and change in Pond habitats resulting from increased saline intrusion - return to more natural conditions.	Minor changes to local soil conditions in immediate vicinity of Pond as a result of saline intrusion.	Water levels / tidal flow into Old Mill Pond not controlled - expect changes to water quality in the Pond.	Unlikely to be impacted by tidal inundation.
		PU2B.4	South-east Wootton Creek	Continue defence to properties from flood risk by HTL of private and public defences.	**Key Features**	Residential village of Wootton	A road / Wootton Bridge, electricity infrastructure (sub-stations), jetties	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, Biddlesford Copses SSSI, estuaries, intertidal mudflats	Settlement / Traditional enclosed pasture land / Harbours and Creeks, AONB	Grade 3 and 4 soils	Point source discharges from sewerage network	No designated heritage assets
					NAI	Properties near Barge Lane and at Kite Hill subject to inundation.	Tidal flooding to become more frequent by the end of the first epoch. Assets at risk and potential for effects on bridge structure.	NAI may progressively increase the amount of unmodified water frontage, helping support the development of intertidal mudflats. However, limited opportunities for roll back given coastal topography.	Localised changes to Settlement landscape associated with abandonment of defences and inundation of settlement areas.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	N/A

						SEA Receptors						
PDZ	**MU**	**PU**	**Policy Name**	**Policy Comments**	**SMP Policy**	**Population and Communities**	**Land Use, Infrastructure & Material Assets**	**Biodiversity, Habitats and Species**	**Landscape**	**Geology & Soils**	**Water**	**Cultural Heritage**
					HTL	Tidal flooding already affects properties near Barge Lane and would occur more frequently if defences are maintained solely at their current levels.	Tidal flooding already affects assets (minor roads, jetties) near Wootton Bridge and would occur more frequently if defences are maintained solely at their current levels.	Habitat squeeze expected, resulting in loss of habitat features over time. Maintenance of existing private defences would impact on the ability of the estuary to adapt naturally to sea level rise and there would be continued loss of saltmarsh and intertidal area.	Minor and localised changes to landscape associated with defence upgrading, and erosion of the small undefended frontages within the Creek.	Natural evolution of coastline prevented, though no significant impacts on soils/geology expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A
					ATL	No loss.	Opportunities for further protection of assets.	Loss of habitat features resulting from coastal squeeze and in the footprint of new defences.	Localised changes associated with defence construction; potential visual amenity benefits associated with upgrading of defences.	Natural evolution of coastline prevented, though no significant impacts on soils/geology expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A
					MR	Limited opportunities for reallignment - likely that outcome would be as per NAI.	Limited opportunities for reallignment - likely that outcome would be as per NAI.	Expect similar response to NAI.	Localised changes to Settlement landscape associated with abandonment of defences and inundation of settlement areas.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	N/A
		PU2B.5	Eastern Wootton Creek	Properties are generally set back from the shoreline and not in the risk zone. NAI would not preclude maintenance of private waterside access structures and minor defences fronting the narrow individual properties and gardens, subject to normal approvals.	**Key Features**	Properties with coastal gardens	Jetties / pontoons / slipway, yacht club, small works site, small area of green space near Ashlake Creek with pathway	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, estuaries, BAP intertidal mudflats, saltmarsh, vegetated shingle	Settlement / Harbours and Creeks	Grade 3 soils	Point source discharges from commercial and residential sites	No designated heritage assets
					NAI	Tidal flooding to become more frequent by the end of the first epoch. Properties however lie outwith the at-risk zone - no loss.	Tidal flooding to become more frequent by the end of the first epoch. Jetties / pontoons / slipway and area of land to west of ferry terminal (yacht club / works site) at risk.	NAI may progressively increase the amount of unmodified water frontage, helping support the development of intertidal mudflats and saltmarsh. Potential for habitat gain in particular at the Yacht Club and around Ashlake Creek. Shingle spit feature and small area of saltmarsh near Yacht Club may be lost as a result of erosion and sea level rise.	Localised changes around Ashlake Creek as natural evolution of landscape sees inudation of low lying areas. No adverse effects on landscape character or visual amenity.	No significant changes expected. Works with natural erosion and geomorphological processes.	No known impacts on water quality.	N/A
					HTL	Tidal flooding to occur, but no loss.	Similar to NAI - tidal flooding to occur and coastal assets, particularly near ferry terminal, to be at risk.	Habitat squeeze expected, resulting in loss of habitat features over time.	Minor and localised changes to landscape associated with defence upgrading, and erosion of the small undefended frontages within the Creek.	Natural evolution of coastline prevented, though no significant impacts on soils/geology expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A

						SEA Receptors						
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					ATL	Opportunities for further protection of properties.	Opportunities for further protection of assets.	Loss of habitat features resulting from coastal squeeze and in the footprint of new defences.	Localised changes associated with defence construction; potential visual amenity benefits associated with upgrading of defences.	Natural evolution of coastline prevented, though no significant impacts on soils/geology expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A
					MR	Limited opportunities for reallignment - likely that outcome would be as per NAI.	Limited opportunities for reallignment - likely that outcome would be as per NAI.	Expect similar response to NAI.	Localised changes to Settlement landscape associated with abandonment of defences and inundation of low lying areas.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	N/A
		PU2B.6	Fishbourne Ferry Terminal		**Key Features**	None	Ferry link (vehicle) to Portsmouth	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, estuaries	Settlement / Harbours and Creeks	Grade 3 soils	None	No designated heritage assets
					NAI	N/A	Coastal erosion and inudation to impact ferry infrastructure.	NAI may progressively increase the amount of unmodified water frontage, helping support the development of intertidal mudflats. Though limited opportunities for roll back given coastal slopes.	Erosion and inundation, with loss of defences, would see return to a more 'natural' landscape in the long term, though degradation of defences in short time may have adverse effects on visual amenity.	No significant changes expected. Works with natural erosion and geomorphological processes.	No known impacts on water quality.	N/A
					HTL	N/A	Required to maintain ferry link.	No signficant implications for the wider estuary; no loss or gain of important habitats in this location.	Defended coastline maintained; no significant effects on landscape.	Natural evolution of coastline prevented, though no change to existing situtation and no significant effects on soils and geology expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A
					ATL	N/A	Ensures protection of ferry link.	Loss of intertidal habitat in footprint of defences and resulting from coastal squeeze.	Defended coastline maintained; no significant effects on landscape. Possible upgrading of existing defences.	Natural evolution of coastline prevented, though no significant impacts on soils/geology expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A
					MR	N/A	No opportunity for MR - would be as per NAI.	Limited potential for intertidal habitat gain.	Similar to NAI, though reallignment may be managed so as to minimise adverse effects associated with abandoned defences.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	N/A
		PU2B.7	Outer Eastern Creek	Assist protection of the ferry terminal at the mouth of Wootton Creek.; gradually realigning in the third epoch.	**Key Features**	Properties along Fishbourne Lane	Residential land, slipway / landing stage	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, estuaries, BAP intertidal flats	Settlement / Harbours and Creeks, AONB	Grade 3 soils	Ryde and Cowes Shellfish Waters, Point source discharges associated with domestic property and sewerage network	No designated heritage assets

PDZ	MU	PU	Policy Name	Policy Comments	SMP Policy	SEA Receptors: Population and Communities	Land Use, Infrastructure & Material Assets	Biodiversity, Habitats and Species	Landscape	Geology & Soils	Water	Cultural Heritage
					NAI	Eight properties would be lost to coastal erosion by the third epoch. Tidal inundation also to occur at the east end of Fishbourne Lane, thoug no properties directly lost.	Slipway and landing stage to be subject to effect of coastal erosion.	Inundation and coastal roll back, enabling gain of intertidal mudflat around the Landing Stage.	Erosion and inundation, with loss of defences, would see return to a more 'natural' landscape in the long term, though degradation of defences in short time may have adverse effects on visual amenity.	No significant changes expected. Works with natural erosion and geomorphological processes.	No known impacts on water quality.	N/A
					HTL	Properties protected.	Assets protected.	No significant implications. Some potential for squeeze across small portion of intertidal mudflats, though opportunities for migration along adjacent coastline - no loss expected.	Defended coastline maintained; no significant effects on landscape.	Natural evolution of coastline prevented, though no change to existing situtation and no significant effects on soils and geology expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A
					ATL	Properties protected.	Assets protected.	As per HTL, though some implications for habitat loss in footprint of any new defences.	Defended coastline maintained; no significant effects on landscape. Possible upgrading of existing defences.	Natural evolution of coastline prevented, though no significant impacts on soils/geology expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A
					MR	Scope for some coastal erosion to occur without impacts on properties, though ultimately expect some loss.	Scope for some coastal erosion to occur without impacts on assets.	Gradual return to coastline to more natural conditions, with potential for habitat gain with roll back near the Landing Stage.	Similar to NAI, though reallignment may be managed so as to minimise adverse effects associated with abandoned defences.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	N/A
		PU2B.8	Quarr and Binstead		**Key Features**	Small number of properties around Binstead Hall at at Pelhamfield	Mostly green open space / woodland with pathways, slipways	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, estuaries, BAP intertidal flats, sandflats, vegetated shingle, coastal grazing marsh	Settlement / Traditional enclosed pasture land, AONB	Grade 3 soils	Ryde Shellfish Water, single coastal point source discharge	Quarr Abbey Scheduled Monument, walls of Quarr Abbey are designated a Listed Building. Archaeological features on foreshore noted by English Heritage. May become part of a UNESCO World Heritage Site.
					NAI	No Active Intervention will result in continuing erosion of this sparsely developed frontage. Coastal retreat may place several properties on the outskirts of Pelhamfield at risk, and a single property at The Keys.	Coastal retreat but no major loss - slipways impacted.	The coast will be allowed to roll back naturally, with potential for gain of intertidal habitats. There is an area of coastal grazing marsh and vegetated shingle in front of Quarr Abbey which will be subject to increasing erosion and tidal inundation with time.	Natural recession of shoreline, with loss of existing defences seeing return to fully 'natural' landscape.	Natural evolution of eroding coastline.	No known impacts on water quality - temporary increases in nearshore turbidity during periods of erosion/landslips.	Northern edge of Quarr Abbey SM site at threat of tidal flooding. Foreshore archaeological features will be subject to erosion (ongoing).
					HTL	As per NAI, though with no impact at The Keys.	As per NAI.	Potential loss of intertidal habitat as a result of coastal squeeze.	Defended coastline maintained; no significant effects on landscape.	Natural evolution of coastline prevented, though no change to existing situtation and no significant effects on soils and geology expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Some features protected, though this is a largely undefended coastline at present.

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					ATL	Expect similar to NAI.	Expect similar to NAI.	Loss of intertidal habitat in footprint of defences and resulting from coastal squeeze.	Defended coastline maintained; no significant effects on landscape. Possible upgrading of existing defences.	Natural evolution of coastline prevented, though no significant impacts on soils/geology expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Protection of cultural heritage features.
					MR	Expect similar to NAI.	Expect similar to NAI.	Potential for gain of intertidal flats.	Similar to NAI, though reallignment may be managed so as to minimise adverse effects associated with abandoned defences.	Works with natural erosion and geomorphological processes.	No known impacts on water quality.	Similar to NAI, though some opportunities for protection of sites and features of particular interest.
	MAN2C	**PU2C.1**	Ryde	Hold the Line by seawall encasement and revetment	**Key Features**	Heavily developed frontage - community of Ryde	Range of assets - A and B roads, hovercraft and ferry terminal, marina, train station, slipways	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, intertidal mud and sandflats, subtidal marine habitats (seagrass)	Settlement	Urban	Several offshore point source discharges, Ryde Shellfish Water	Numerous listed buildings in Ryde centre, also historical Ryde Pier
					NAI	Defences along the majority of the frontage of Ryde town will fail towards the end of the first epoch. Large numbers of residential properties and businesses at risk. Tidal flooding would affect seafrotn properties along the lower reaches of St Thomas St, extending eastwards along the Esplanade and Strand as far east as the boating lake. Flooding could also extend inalnd along Monktonmead Brook to Ryde St Johns Station.	The esplanade, a section of railway and the coastal road will be affected by ongoing erosion and flooding will extend across a large portion of the town - NAI will severely affect the functioning of Ryde as a key transport link and tourist resort for the island.	Balance of sediment supply on this stretch of coastline unclear. Erosion of foreshore sands expected.	Failure of defences and coastal erosion and flooding would lead to a significant change in the settlement landscape. Also expect loss of foreshore sands with time.	Loss of land to erosion and flooding, though no 'sensitive' soil/geology features to be impacted.	No known impacts on water quality - temporary increases in nearshore turbidity during periods of erosion/landslips.	Loss of several Listed Buildings and other sites of historical interest to flooding and erosion.
					HTL	The defences will provide adequate protection against flooding which will protect the town centre and several built assets.	The defences will provide adequate protection against flooding which will protect the railway line, town centre roads, the pier, ferry terminal and st. John's park.	Loss of intertidal habitats as a result of coastal squeeze. Potential changes in sediment supply may result in alteration of the seagrass bed features.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Protection of features of interest.
					ATL	Further protection of properties enabled, though access to amenity areas on seafront likely to be limited.	Further protection of assets enabled, though access to amenity areas on seafront likely to be limited.	Loss of intertidal habitat in defence footprint and as a result of coastal squeeze.	Maintain existing landscape, with some opportunities for improvement in visual amenity.	No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Protection of features of interest.
					MR	Limited opportunities for reallignment - likely that outcome would be as per NAI.	Limited opportunities for reallignment - likely that outcome would be as per NAI.	See NAI, assuming approach involves retreat.	Similar to NAI, expect significant changes to landscape with time.	Loss of land to erosion and flooding, though no 'sensitive' soil/geology features to be impacted.	No known impacts on water quality.	Loss of several Listed Buildings and other sites of historical interest to flooding and erosion.

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		PU2C.2	Appley and Puckpool	HTL by seawall encasement and revetment	**Key Features**	Small number of residences to rear of Appley Park, Holiday Village	Golf course, public green space, Appley Walk coastal path, sewage treatment works	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, intertidal mud and sandflats, subtidal marine habitats (seagrass)	Settlement	Urban / Grade 3 soils	Coastal sewage treatment works, Ryde Shellfish Water	Appley Tower Listed Building, Puckpool Mortar Battery Scheduled Monument
					NAI	Coastal erosion will result in loss of land, though no properties. Small areas subject to flooding, though again no loss.	As below but the degradation may occur at a faster rate.	Under NAI defences would fail and roll back of the coast would allow expansion of intertidal flats. Offshore seagrass beds are sensitive to variations in sediment supply; with erosion there is potential for the sediment supply to increase with time leading to habitat alteration, though monitoring would be required.	Coastal erosion, though limited change to landscape (golf course and holiday village impacted).	Loss of land to erosion and flooding, though no 'sensitive' soil/geology features to be impacted.	No known impacts on water quality - temporary increases in nearshore turbidity during periods of erosion/landslips.	Loss to coastal erosion.
					HTL	The defences will provide protection against flooding in the central area of this Policy Unitbut either side to the east and west there will be a risk of flooding the consequences of which will increase in time. However, few built assets will be affected.	The defences will provide protection against flooding in the central area of this Policy Unit but either side to the east and west there will be a risk of flooding the consequences of which will increase in time. However, limited infrastructure assets will be affected with the inclusion of the coast access road.	Under HTL coastal squeeze would result in some loss of intertidal flats. There is uncertainty regarding sediment supply at Ryde Sands, though the potential for starvation is thought to be minimal; the potential effect of HTL on seagrass beds is not known and monitoring would be required.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Protection of features of interest.
					ATL	As per HTL.	As per HTL.	Loss of intertidal habitat in defence footprint and as a result of coastal squeeze.	Maintain existing landscape, with some opportunities for improvement in visual amenity.	No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Protection of features of interest.
					MR	As per NAI.	As per NAI.	Assuming retreat is preferred option, assume roll back of coast and expansion of intertidal flats.	Similar to NAI, expect some change resulting from coastal erosion, though no effect on wider character.	Loss of land to erosion and flooding, though no 'sensitive' soil/geology features to be impacted.	No known impacts on water quality.	Loss to coastal erosion.
		PU2C.3	Springvale to Seaview	Hold the Line by seawall encasement and revetment	**Key Features**	Springvale and Seaview communities	Small communities surrounded by green amenity land (camp and holiday accommodation sites), slipways	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, coastal grazing marsh, saline lagoons, subtidal marine habitats (reefs)	Settlement / Landscape Improvement Area	Grade 3 soils	Ryde Shellfish Water, offshore sewage outfalls	Small number of Listed Buildings at Seaview, and Haven House on Spring Vale Road, Vale House at Springvale

PDZ	MU	PU	Policy Name	Policy Comments	SMP Policy	SEA Receptors: Population and Communities	Land Use, Infrastructure & Material Assets	Biodiversity, Habitats and Species	Landscape	Geology & Soils	Water	Cultural Heritage
					NAI	Coastal erosion and flooding will result in the loss of a large number of properties.	Coastal erosion and flooding will result in the loss of amenity land / tourism sites.	Brackish lagoon expected to become saline lagoon / inlet and increasing saline intrusion to adjacent grazing marsh. Potential for beach depletion.	Coastal erosion and flooding would significantly alter the landscape (e.g. inundation around The Duver, forming an inlet rather than the existing lagoon).	Loss of land to erosion and flooding, though no 'sensitive' soil/geology features to be impacted.	No known impacts on water quality - temporary increases in nearshore turbidity during periods of erosion/landslips.	Flood and erosion risk at Springvale - loss of Listed Buildings.
					HTL	The defences will offer adequate protection to Spring Vale with the exception of the long term protection of the coastal access road which links to the B3330 and coastal properties in Spring Vale.	The defences will fail to offer adequate protection which will result in the flooding of the Seaview Wildlife Garden and adjacent properties. The nearby campsite will also be at potential risk together with the link roads to the B3340 and place of worship.	Under HTL no significant effects on coastal marsh or saline lagoons are expected. Reefs may experience habitat change / erosion under rising sea level and increasing storminess.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Protection of Listed Buildings.
					ATL	Erosion prevented and effects of flooding minimised, reducing loss of property.	Erosion prevented and effects of flooding minimised, reducing loss of amenity features.	No significant effects on coastal marsh or lagoons. Loss of intertidal habitat in footprint of defences and as a result of coastal squeeze.	Maintain existing landscape, with some opportunities for improvement in visual amenity.	No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Protection of Listed Buildings.
					MR	Some opportunities for reallignment at The Duver, whilst maintaining properties elsewhere.	Some opportunities for reallignment at The Duver, whilst maintaining assets elsewhere.	Assume similar to NAI if retreat is the preferred approach.	Similar to NAI, expect some change resulting from coastal erosion and flooding.	Loss of land to erosion and flooding, though no 'sensitive' soil/geology features to be impacted.	No known impacts on water quality.	Flood and erosion risk at Springvale - loss of Listed Buildings.
		PU2C.4	Seagrove Bay	Along the majority of frontage Hold the Line by seawall encasement and revetment. Opportunity along the central section to investigate offshore breakwaters.	**Key Features**	Seaview community	B roads, slipways, small areas of open green space (football ground, allotments)	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, subtidal marine habitats (reefs)	Settlement / Landscape Improvement Area	Grade 3 soils	Ryde Shellfish Water, offshore sewage outfall	Small number of Listed Buildings at Seaview
					NAI	NAI would have serious consequences for the lower parts of the village of Nettlestone, principally due to erosion triggering slope failures.	Erosion to impact coastal assets.	Coastal slope erosion may result in increased debris across nearshore reef features.	Coastal erosion and slop failure will significantly impact the Nettlestone settlement.	Loss of land to erosion, though no 'sensitive' soil/geology features to be impacted.	No known impacts on water quality - temporary increases in nearshore turbidity during periods of erosion/landslips.	Erosion and coastal retreat may impact Vectis Cottage on Circular Road.
					HTL	The defences will continue to provide the appropriate standard of protection to built assets during all epochs.	The defences will continue to provide the appropriate standard of protection to infrastructure and land use during all epochs.	Reefs may experience habitat change and coastal squeeze under rising sea level and increasing storminess.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Protection of features of interest.
					ATL	As per HTL.	As per HTL.	Physical impacts of defence construction on nearshore reef feature.	Maintain existing landscape, with some opportunities for improvement in visual amenity.	No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Protection of features of interest.
					MR	As per NAI.	As per NAI.	Coastal slope erosion may result in increased debris across nearshore reef features.	Similar to NAI, expect some change resulting from coastal erosion.	Loss of land to erosion, though no 'sensitive' soil/geology features to be	No known impacts on water quality.	Erosion and coastal retreat may impact Vectis Cottage on Circular Road.

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										impacted.		
3	**MAN3A**	**PU3A.1**	Priory Bay		**Key Features**	No residences	Undeveloped - Priory Woods, golf course, camp site, slipway	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, subtidal marine habitats (reefs and seagrass beds)	Landscape Improvement Area	Grade 3 soils, Priory Woods Geological SSSI	Ryde Shellfish Water	Fairy Hill Listed Building, The Priory, Old Stone Age remains in the gravels at Priory Woods
					NAI	Coastal retreat after first epoch, though no loss.	Coastal retreat, though no major loss.	Limited change to limestone rocky ledges and seagrass areas is expected.	Reactivation of coastal slopes and erosion will cause localised changes to landscape.	Coastal erosion will wholly impact the SSSI (Pleistocene gravels).	No known impacts on water quality - temporary increases in nearshore turbidity during periods of erosion/landslips.	Loss of features of interest associated with Priory Woods gravels to erosion.
					HTL	Coastal retreat controlled - no loss.	Coastal retreat controlled - no loss.	Limited change to limestone rocky ledges and seagrass areas is expected.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Protection of features of interest.
					ATL	Coastal retreat controlled - no loss.	Coastal retreat controlled - no loss.	Potential for physical impacts on nearshore reef habitat resulting from defence construction.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Protection of features of interest.
					MR	Similar to NAI.	Similar to NAI.	Limited change to limestone rocky ledges and seagrass areas is expected.	Similar to NAI, expect some change resulting from coastal erosion.	Loss of land to erosion, including at least part of the SSSI.	No known impacts on water quality.	Loss of features to erosion.
		PU3A.2	St Helens Duver	Realignment in line with a plan for management of the harbour entrance.	**Key Features**	Properties at the head of The Duver	Largely open green space with pathways, some infrastructure (works sites, slipways) at the head of The Duver	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, intertidal mud and sandflats, subtidal marine habitats (reefs)	Harbours and Creeks	Grade 3 soils	Several point source discharges around The Duver	St. Helen's Old Church (Listed Building)
					NAI	Erosion and overtopping at The Duver - potential for breach. Properties likely to be lost to inundation.	Erosion and overtopping at The Duver - potential for breach. Existing infrastructure likely to be lost to inundation.	Potential for Duver to roll back and maintain integrity, though behaviour over time difficult to predict. Impacts on associated habitats difficult to predict.	Potential breach of spit (erosion and flooding) resulting in significant local change to a landscape feature.	Loss of land to erosion and flooding,and potential for loss of spit feature.	No known impacts on water quality - changes to discharge points as a result of loss of commercial (boat yard) sites on The Duver.	Designated asset would be damaged and eventually lost if it were not protected.
					HTL	Defences will protect properties and assets from erosion, though would require significant upgrading to continue to do so. Inundation would continue to impact properties and assets.	Defences will protect properties and assets from erosion, though would require significant upgrading to continue to do so. Inundation would continue to impact properties and assets.	Under HTL there is a potential for loss of intertidal habitat as a resutl of coastal squeeze.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Protection of designated asset.
					ATL	New defence likely to be required to maintain Duver. Protection of properties and assets.	New defence likely to be required to maintain Duver. Protection of properties and assets.	Loss of intertidal habitats as a result of defence construction and coastal squeeze.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Protection of designated asset

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					MR	As above.	As above.	Potential for intertidal habitat gain (though depends on approach to MR). This is an eroding coastline - potential change to reef feature associated with altered coastal processes.	Potential breach of spit (erosion and flooding) resulting in significant local change to a landscape feature.	Loss of land to erosion and flooding, and potential for loss of spit feature.	No known impacts on water quality - changes to discharge points as a result of loss of commercial (boat yard) sites on The Duver.	Designated asset could be damaged and eventually lost if MR were an option, though it would depend on the project details as it is on the policy unit boundary and could remain protected.
		PU3A.3	St Helens	Maintain the defences at the current level.	**Key Features**	Community of St Helens - properties	B roads, public green space (The Common), pathways	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar (high tide roosts), coastal saltmarsh, intertidal mud and sandflats, sand dunes, variety of BAP habitats. St Helen's Ledges SSSI	Settlement	Grade 3 soils	Point source discharges	No designated heritage assets
					NAI	Inundation of a number of properties in St Helens.	Inundation of section of B road near St Helens.	Potential for Duver to roll back and maintain integrity, though behaviour over time difficult to predict. Impacts on associated habitats difficult to predict.	Breach of old sea wall and causeway, allowing inundation of low lying land behind The Duver - significant change to local landscape.	Loss of land to flooding, though no 'sensitive' soil/geology features to be impacted.	No known impacts on water quality - changes to discharge points as a result of loss of commercial (boat yard) sites on The Duver.	N/A
					HTL	Inundation would continue to impact properties and assets.	Inundation would continue to impact properties and assets.	Loss of intertidal flats and saltmarsh as a result of coastal squeeze.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A
					ATL	Some degree of inundation still expected.	Some degree of inundation still expected.	Loss of intertidal habitats as a result of defence construction and coastal squeeze.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A
					MR	As above.	As above.	Effects are dependent on approach to MR. Habitats here are associated with The Duver - assuming existing defences are allowed to fail there may be potential for breaching of the spit as erosion from the front of the Duver meets increasing extents of tidal inundation from the rear, but the Duver may, however, roll back maintaining its overall integrity, despite sea level rise.	Breach of old sea wall and causeway, allowing inundation of low lying land behind The Duver - significant change to local landscape.	Loss of land to flooding, though no 'sensitive' soil/geology features to be impacted.	No known impacts on water quality - changes to discharge points as a result of loss of commercial (boat yard) sites on The Duver.	N/A

						SEA Receptors						
PDZ	**MU**	**PU**	**Policy Name**	**Policy Comments**	**SMP Policy**	**Population and Communities**	**Land Use, Infrastructure & Material Assets**	**Biodiversity, Habitats and Species**	**Landscape**	**Geology & Soils**	**Water**	**Cultural Heritage**
		PU3A.4	Embankment Road	Strong links to PU3C.2.	**Key Features**	Residences at South Quay	Mostly open green space with development along the coastline - boat yards, yacht club, pontoons/slipways, tracks, B road	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, Solent and Wight Lagoons SAC, estuaries, coastal saltmarsh, intertidal mud and sandflats, saline lagoons	Harbours and Creeks / Settlement	Grade 4 soils	Point source discharges associated with moorings	No designated heritage assets
					NAI	Erosion and inundation will result in loss of properties.	Erosion and inundation will result in loss of assets.	Bembridge Embankment overtopped and status of Brading Marshes altered. Some potential for expansion of intertidal habitats.	Overtopping of Embankment would see significant local change to landscape as a result of inundation.	Loss of land to flooding, though no 'sensitive' soil/geology features to be impacted.	No known impacts on water quality.	N/A
					HTL	The proposed option is likely to fail to protect several built assets and leisure activity after 30 years, when the road will need to be raised. The area would be at risk if this is not carried out.	For the short term the road will not be flooded, but will need raising in the medium to long term to ensure it is still a functioning transport route.	Designated habitats largely maintained - lagoons and saltmarsh protected. Some loss of intertidal flats as a result of coastal squeeze in the long term if the system changes from being an accreting system once The Duver is realigned.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A
					ATL	Only option would be to further raise embankment (beyond levels already proposed). Further protection of assets.	Only option would be to further raise embankment (beyond levels already proposed). Further protection of assets.	Loss of intertidal habitat. Maintenance of saline lagoons and some areas of saltmarsh that are already within defence lines.	Maintain existing landscape - some change associated with upgrading of Embankment.	No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A
					MR	Expect similar to NAI.	Expect similar to NAI.	As per NAI if retreat is preferred approach.	Overtopping of Embankment would see significant local change to landscape as a result of inundation.	Loss of land to flooding, though no 'sensitive' soil/geology features to be impacted.	No known impacts on water quality.	N/A
		PU3A.5	Bembridge Point	During epoch one a new defence alignment to be defined that links with Embankment Road and higher ground at the back of Bembridge Point. This will provide a continuous defence around the point that will be held in future epochs (*Eastern Yar Strategy 2010). No intervention will be undertaken seaward of this defence line allowing the groyne to collapse/disappear and continuation of natural coastal processes along the	**Key Features**	Residences in the east of Bembridge	B road, some open space at Bembridge Point, otherwise residential	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, intertidal mud and sandflats, sand dunes	Harbours and Creeks / Settlement	Grade 4 soils	Point source discharges	Drinking Fountain at former entrance to Spithead Hotel (Grade II Listed Building)
					NAI	Flood risk to properties behind Bembridge Point.	The defences will fail to protect some elements of infrastructure including links to Bembridge Harbour which is a National Trust area.	Coastal erosion and roll back expected, resulting in potential for gain of intertidal habitat but potentialfor loss of dune habitat.	Coastal erosion and flooding would see significant local change to landscape as a result of inundation.	Loss of land to flooding, though no 'sensitive' soil/geology features to be impacted.	No known impacts on water quality.	N/A
					HTL	As above but deterioriation would be slower - flood risk would remain.	As above but deterioriation would be slower - flood risk would remain.	Potential habitat loss associated with coastal squeeze.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A

						SEA Receptors						
PDZ	**MU**	**PU**	**Policy Name**	**Policy Comments**	**SMP Policy**	**Population and Communities**	**Land Use, Infrastructure & Material Assets**	**Biodiversity, Habitats and Species**	**Landscape**	**Geology & Soils**	**Water**	**Cultural Heritage**
				shoreline and the sand dunes.	ATL	Limited opportunities for ATL, with limited benefit.	Limited opportunities for ATL, with limited benefit.	Potential habitat loss associated with defence construction and coastal squeeze.	Maintain existing landscape - some change associated with upgrading of defences.	No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A
					MR	Flood risk to properties behind Bembridge Point.	The defences will fail to protect some elements of infrastructure including links to Bembridge Harbour which is a National Trust area.	As per NAI if retreat is preferred approach.	Coastal erosion and flooding would see significant local change to landscape as a result of inundation.	Loss of land to flooding, though no 'sensitive' soil/geology features to be impacted.	No known impacts on water quality.	N/A
	MAN3B	**PU3B.1**	Bembridge		**Key Features**	Bembridge community - properties	Mostly residential land with green space along coastline, B roads	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, intertidal mud and sandflats, subtidal marine habitats (reef and seagrass beds)	Settlement	Urban, Whitecliffs Bay and Bembridge Ledges SSSI (Geological importance)	No noted features	Palaeoenvironmental deposits a feature of Whitecliffs to Bembridge Ledges SSSI (Geological feature)
					NAI	A few properties will be lost following erosion of the cliffs.	No infrastructure or community assets to be lost.	Steady coastal erosion to continue, ensuring continued sediment supply. Potential gain of intertidal sand flats. No signifcant effect on reef or seagrass features expected.	Erosion of cliffs, though limited effects on landscape.	Loss of land to erosion, though no 'sensitive' soil/geology features to be impacted.	N/A	Erosion of cliff line may result in some loss of deposits.
					HTL	The defences would protect the built assets, population and contributors to well being.	The defences would protect the infrastructure assets and current landuses of Bembridge although there is a risk of erosion which may impact on the cliff faces and coastal zones.	Eroding coastline; squeeze and loss of sandflats. Limited effects on reef and seagrass features expected.	Maintain existing landscape.	No change expected.	N/A	No effects expected.
					ATL	As above.	As above.	Potential habitat loss associated with defence construction and coastal squeeze.	Maintain existing landscape.	No change expected.	N/A	No effects expected.
					MR	As above.	As above.	As per NAI if retreat is preferred approach.	Erosion of cliffs, though limited effects on landscape.	Loss of land to erosion, though no 'sensitive' soil/geology features to be impacted.	N/A	Erosion of cliff line may result in some loss of deposits.
		PU3B.2	Lane End	Gradually reduce influence of management as existing defences fail in the third epoch.	**Key Features**	Bembridge community - properties	Mostly residential land	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, subtidal marine habitats (reef and seagrass beds)	Settlement	Urban, Whitecliffs to Bembridge Ledges SSSI (Geological importance)	No noted features	Palaeoenvironmental deposits a feature of Whitecliffs to Bembridge Ledges SSSI (Geological feature)
					NAI	As above.	As above.	Steady erosion, though limited effects on reef and seagrass expected.	Erosion of cliffs, though limited effects on landscape.	Loss of land to erosion, though no 'sensitive' soil/geology features to be impacted.	N/A	Erosion of cliff line may result in some loss of deposits.

PDZ	MU	PU	Policy Name	Policy Comments	SMP Policy	SEA Receptors: Population and Communities	Land Use, Infrastructure & Material Assets	Biodiversity, Habitats and Species	Landscape	Geology & Soils	Water	Cultural Heritage
					HTL	As above.	As above.	Coastal erosion contributes to sediment supply. Decreased supply has potential to alter seagrass beds.	Maintain existing landscape.	No change expected.	N/A	No effects expected.
					ATL	As above.	As above.	Potential habitat loss associated with defence construction.	Maintain existing landscape.	No change expected.	N/A	No effects expected.
					MR	As above.	As above.	Depends upon approach to MR. Coastal erosion contributes to sediment supply. Change in supply has potential to alter seagrass beds.	Erosion of cliffs, though limited effects on landscape.	Loss of land to erosion, though no 'sensitive' soil/geology features to be impacted.	N/A	Erosion of cliff line may result in some loss of deposits.
		PU3B.3	Foreland	Gradually reduce influence of management as existing defences fail in the third epoch.	**Key Features**	Bembridge community - properties (holiday village)	Mostly residential land	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, subtidal marine habitats (reef and seagrass beds)	Settlement, AONB, Whitecliffs to Bembridge Ledges SSSI (Geological importance)	Urban	Bembridge Bathing Water	Palaeoenvironmental deposits - a feature of Whitecliff Bay and Bembridge Ledges SSSI (Geological feature) and Bembridge School and Cliffs SSSI (Steyne Wood Clay)
					NAI	As above.	As above.	Steady erosion, though limited effects on reef and seagrass expected.	Erosion of cliffs, though limited effects on landscape.	Loss of land to erosion, though no 'sensitive' soil/geology features to be impacted.	Potential transient effects on bathing water quality associated with erosion / suspended sediments.	Erosion of cliff line may result in some loss of deposits.
					HTL	As above.	As above.	Coastal erosion contributes to sediment supply. Decreased supply has potential to alter seagrass beds.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during construction works associated with defences.	No effects expected.
					ATL	As above.	As above.	Potential habitat loss associated with defence construction.	Piecemeal defences may be upgraded.	No change expected.	Potential temporary impacts on water quality during construction works associated with defences.	No effects expected.
					MR	As above.	As above	Depends upon approach to MR. Coastal erosion contributes to sediment supply. Change in supply has potential to alter seagrass beds.	Erosion of cliffs, though limited effects on landscape.	Loss of land to erosion, though no 'sensitive' soil/geology features to be impacted.	Potential transient effects on bathing water quality associated with erosion / suspended sediments.	Erosion of cliff line may result in some loss of deposits.
		PU3B.4	Foreland Fields	Gradually reduce influence of management as existing defences fail in the third epoch.	**Key Features**	Bembridge community - properties	Mostly residential land	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, subtidal marine habitats (reef and seagrass beds), vegetated sea cliffs	Settlement, AONB, Whitecliffs to Bembridge Ledges SSSI (Geological importance)	Urban, Geological SSSI (Bembridge School and Cliffs)	No noted features	Palaeoenvironmental deposits a feature of Whitecliff Bay and Bembridge Ledges SSSI (Geological feature) and Bembridge School and Cliffs SSSI (Steyne Wood Clay)
					NAI	As above.	As above.	Steady erosion, though limited effects on reef and seagrass expected.	Erosion of cliffs, though limited effects on landscape.	Loss of land to erosion, including part of SSSI.	N/A	Erosion of cliff line may result in some loss of deposits.

PDZ	MU	PU	Policy Name	Policy Comments	SMP Policy	SEA Receptors: Population and Communities	Land Use, Infrastructure & Material Assets	Biodiversity, Habitats and Species	Landscape	Geology & Soils	Water	Cultural Heritage
					HTL	As above	As above	Natural erosion and succession of cliffs prevented under HTL. No significant effects on subtidal marine habitats.	Maintain existing landscape.	No change expected.	N/A	No effects expected.
					ATL	As above.	As above.	Potential habitat loss associated with defence construction.	Piecemeal defences may be upgraded.	No change expected.	N/A	No effects expected.
					MR	As above.	As above.	Depends upon approach to MR. Coastal erosion of sea cliffs would be expected. Change in sediment supply has potential to alter seagrass beds. Change in shoreline may result in altered energy/coastal processes across reef feature.	Erosion of cliffs, though limited effects on landscape.	Loss of land to erosion, including part of SSSI.	N/A	Erosion of cliff line may result in some loss of deposits.
		PU3B.5	Whitecliff Bay		**Key Features**	Small number of dispersed properties on outskirts of Bembridge	Mostly open green space, holiday parks, camping grounds	Solent and Southampton Water SPA, Solent and Southampton Water Ramsar, subtidal marine habitats (reefs), vegetated sea cliffs	Landscape Improvement Area, Settlement, AONB, Chalk Downs	Urban, Grade 3 soils, Geological SSSI (Bembridge School and Cliffs), Whitecliffs to Bembridge Ledges SSSI (Geological importance)	Whitecliffe Bay Bathing Water	Palaeoenvironmental deposits a feature of Whitecliffs Bay and Bembridge Ledges SSSI (Geological feature)
					NAI	As above, although there may be potential risk of erosion impacting on coastal properties and camp sites.	As above	No significant effects.	Erosion of cliff line (more rapid that to the north), though no significant effect on landscape character - natural evolution of landscape.	Loss of land to erosion, including part of SSSI.	Potential transient effects on bathing water quality associated with erosion / suspended sediments.	Erosion of cliff line may result in some loss of deposits.
					HTL	As above, although there may be potential risk of erosion impacting on coastal properties and camp sites.	As above	Natural erosion and succession of cliffs prevented with knock-on effects on sediment supply.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during construction works associated with defences.	No effects expected.
					ATL	As above, although there may be potential risk of erosion impacting on coastal properties and camp sites.	As above	Natural erosion and succession of cliff line prevented. Potential habitat loss associated with defence construction.	Piecemeal defences may be upgraded.	No change expected.	Potential temporary impacts on water quality during construction works associated with defences.	No effects expected.
					MR	As above, although there may be potential risk of erosion impacting on coastal properties and camp sites.	As above	No significant effects.	Erosion of cliff line (more rapid that to the north), though no significant effect on landscape character - natural evolution of landscape.	Loss of land to erosion, including part of SSSI.	Potential transient effects on bathing water quality associated with erosion / suspended sediments.	Erosion of cliff line may result in some loss of deposits.
	MAN3C	**PU3C.1**	Culver Cliff & Red Cliff		**Key Features**	Very few properties - Coastguard cottages	Bembridge Down - open green space with pathways	South Wight Maritime SAC, subtidal marine habitats (reefs), vegetated sea cliffs	AONB, Southern Coastal Farmland, Chalk Downs, Settlement	Bembridge Down SSSI (geological importance), grade 3 and 4 soils	Yaverland Bathing Water	Bronze Age round barrow Scheduled Monument (SM) at top of Culver Down, Yaverland Fort Battery (SM) on coast at Yaverland and Bembridge Fort

PDZ	MU	PU	Policy Name	Policy Comments	SMP Policy	SEA Receptors: Population and Communities	Land Use, Infrastructure & Material Assets	Biodiversity, Habitats and Species	Landscape	Geology & Soils	Water	Cultural Heritage
												also a SM (but further inland)
					NAI	As above although there is a risk of erosion which may affect a small number of built assets and sense of well being.	As above	No significant effects.	Erosion of cliff line following eventual failure of defences and loss of upper beach, though no significant effect on landscape character - natural evolution of landscape.	Loss of land to erosion, including part of SSSI.	Potential transient effects on bathing water quality associated with erosion / suspended sediments.	Erosion will result in the loss of some of Yaverland Fort SM in the second and third epochs, but not to the other designated heritage assets.
					HTL	As above although there is a risk of erosion which may affect a small number of built assets and sense of well being.	As above	Natural erosion and succession of cliffs prevented with knock-on effects on sediment supply.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during construction works associated with defences.	No effects expected.
					ATL	As above although there is a risk of erosion which may affect a small number of built assets and sense of well being.	As above	Natural erosion and succession of cliff line prevented. Potential habitat loss associated with defence construction.	Piecemeal defences may be upgraded.	No change expected.	Potential temporary impacts on water quality during construction works associated with defences.	No effects expected.
					MR	As above although there is a risk of erosion which may affect a small number of built assets and sense of well being.	As above	No significant effects.	Erosion of cliff line followign eventual failure of defences and loss of upper beach, though no significant effect on landscape character - natural evolution of landscape.	Loss of land to erosion, including part of SSSI.	Potential transient effects on bathing water quality associated with erosion / suspended sediments.	Erosion unlikely to result in loss of designated heritage features..
		PU3C.2	Yaverland and Eastern Yar Valley	Strong links to PU3A.4.	**Key Features**	Properties associated with Yaverland and Sandown communities	Tourist attractions - zoo, hotel, golf, museum, B road, slipway	South Wight Maritime SAC, vegetated sea cliffs	Settlement, Landscape Improvement Area	Urban / grade 4 soils	Offshore outfall	PLUTO power station (Grade II LB) – in the golf course pavilion.
					NAI	Erosion would not impact properties, though when defences are overtopped, flooding would impact a large number of residences.	Erosion and flooding would impact tourism-related assets and roads.	No significant effects.	Erosion of cliff line following eventual failure of defences and loss of upper beach, though no significant effect on landscape character - natural evolution of landscape.	Loss of land to erosion, though no 'sensitive' soil/geology features to be impacted.	No known impacts on water quality.	Erosion unlikely to result in loss of designated assets, however coastal flooding would result in the damage and loss of the golf course pavilion on Culver Parade/Yaverland Road.
					HTL	Fluvial and coastal flood defences will protect a significant number of built assets.	The defences will protect important infrastructure including including a sewage works, railway line, main road, museum and potential agricultural land.	Natural erosion and succession of cliff line prevented (effects on sediment supply resulting).	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	No effects expected.
					ATL	As above but the degradation will be at a slower rate.	As above but degradation is likely to be slower.	Natural erosion and succession of cliff line prevented. Potential habitat loss associated with defence construction.	Piecemeal defences may be upgraded.	No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	No effects expected.

						SEA Receptors						
PDZ	**MU**	**PU**	**Policy Name**	**Policy Comments**	**SMP Policy**	**Population and Communities**	**Land Use, Infrastructure & Material Assets**	**Biodiversity, Habitats and Species**	**Landscape**	**Geology & Soils**	**Water**	**Cultural Heritage**
					MR	Fluvial and coastal flood defences will fail to protect a significant number of built assets, including leisure activities such as the zoo	As above although the degradation may be at a slower rate.	Potential for coastal squeeze depending upon approach to MR.	Erosion of cliff line following eventual failure of defences and loss of upper beach, though no significant effect on landscape character - natural evolution of landscape.	Loss of land to erosion, though no 'sensitive' soil/geology features to be impacted.	No known impacts on water quality.	MR would open up the Eastern Yar valled to coastal flooding, which would result in the loss of the golf course pavilion on Culver Parade/Yaverland Road, which is a Listed Building..
		PU3C.3	Sandown and Shanklin		**Key Features**	Sandown and Shanklin communities - properties	Commercial and residential land use, A and B roads, railway line, pier and slipway	South Wight Maritime SAC, vegetated sea cliffs	Settlement	Urban	Sandown Bathing Water, offshore outfalls	Sandown Barrack Battery Scheduled Monuments. Listed Buildings at Shanklin around the Chine and on the cliff top.
					NAI	Coastline subject to erosion. No residences directly lost to erosion.	Coastline subject to erosion. Number of seafrotn bult assets threatened by erosion.	No SAC features present. No significant effects.	Erosion of cliff line following eventual failure of defences and loss of upper beach, with potential for significant change to settlement landscape.	Loss of land to erosion, though no 'sensitive' soil/geology features to be impacted.	Potential transient effects on bathing water quality associated with erosion / suspended sediments.	Loss of or damage to Scheduled Monument to coastal erosion
					HTL	The defences will continue to protect the built assets, population and contributors to well being.	The defences will continue to provide appropriate protection for the infrastructural assets, although erosion may put the coastal areas including the National Trust site at risk. The deterioration rate is likely to be slower.	Natural erosion and succession prevented - adverse effect on habitat.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	No effects expected.
					ATL	The defences will continue to protect the built assets, population and contributors to well being.	The defences will continue to provide appropriate protection for the infrastructural assets, although erosion may put the coastal areas including the National Trust site at risk.	No SAC features present. Natural erosion and succession prevented - adverse effect on habitat.	Maintain existing landscape.	No change expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	No effects expected.
					MR	The defences will continue to protect the built assets, population and contributors to well being.	as above, although the deterioration rate is likely to be slower.	No SAC features present. No significant effects.	Erosion of cliff line following eventual failure of defences and loss of upper beach, with potential for significant change to settlement landscape.	Loss of land to erosion, though no 'sensitive' soil/geology features to be impacted.	Potential transient effects on bathing water quality associated with erosion / suspended sediments.	Loss of heritage assets to coastal erosion.
		PU3C.4	Luccombe		**Key Features**	South Shanklin and Luccombe village communities - properties	Open green space around village, wooded areas, tracks	South Wight Maritime SAC, subtidal marine habitats (reef), vegetated sea cliffs	AONB, The Undercliff, Chalk Downs	Urban / grade 4 soils	No features noted	No designated heritage assets
					NAI	As above	As above	No significant effects.	Erosion of cliff line - natural landscape evolution.	Loss of land to erosion, though no 'sensitive' soil/geology features to be impacted.	N/A	N/A
					HTL	As above	As above	Natural erosion and succession prevented - adverse effect on habitat.	Maintain existing landscape.	No change expected.	N/A	N/A

						SEA Receptors						
PDZ	**MU**	**PU**	**Policy Name**	**Policy Comments**	**SMP Policy**	**Population and Communities**	**Land Use, Infrastructure & Material Assets**	**Biodiversity, Habitats and Species**	**Landscape**	**Geology & Soils**	**Water**	**Cultural Heritage**
					ATL	As above	As above	Natural erosion and succession prevented - adverse effect on habitat. Potential physical impact on nearshore reef associated with defence construction.	Maintain existing landscape.	No change expected.	N/A	N/A
					MR	As above	As above	No significant effects.	Erosion of cliff line - natural landscape evolution.	Loss of land to erosion, though no 'sensitive' soil/geology features to be impacted.	N/A	N/A
4	**MAN4A**	**PU4A.1**	Dunnose		**Key Features**	Few scattered residences	Mostly wooded cliff with tracks, A road some distance inland	South Wight Maritime SAC, Isle of Wight Downs SAC, subtidal marine habitat (reef), vegetated sea cliffs	The Undercliff, AONB	Grade 4/5 soils	Several sea outfalls	No designated heritage assets
					NAI	Coastal erosion to conitnue - no losses.	Coastal erosion to conitnue - coastal path to be partly affected.	No significant effects - cliff erosion continues / accelerates.	Natural cliff erosion continues and accelerates - no significant effects.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	N/A
					HTL	As above	As above	Natural erosion and succession prevented - significant implications also for sediment supply to beaches to the north.	Maintain existing landscape.	No impact expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A
					ATL	As above	As above	Natural erosion and succession prevented as per HTL and impacts on features resulting from defence construction.	Maintain existing landscape.	No impact expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A
					MR	As above	As above	Retreat and reactivation of cliff line as per NAI.	Natural cliff erosion continues and accelerates - no significant effects.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	N/A
		PU4A.2	Ventnor & Bonchurch		**Key Features**	Ventnor and Bonchurch communities - properties	Mostly built-up residential and commercial land use, A and B roads, slipways	South Wight Maritime SAC, Isle of Wight Downs SAC, subtidal marine habitat (reef), vegetated sea cliffs, dry grasslands	The Undercliff, Settlement, AONB, Heritage Coast	Grade 5 soils / Urban	Several sea outfalls	Listed Buildings (The Beach Hotel, Clock Tower on the Esplanade – GII, and GII Registered Park and Gardens (Ventnor Botanic Gardens).
					NAI	Loss of existing defences and coastal erosion / landslides - serious implications for Ventnor community (community would not have time to adapt) with certain loss of some properties and potential for loss of many more should landslides occur.	Loss of existing defences and coastal erosion / landslides - serious implications for Ventnor community with certain loss of some properties and potential for loss of many more should landslides occur.	Erosion of soft cliffs with potential for landslides. Possible loss of maritime cliff grasslands following cliff line retreat, and smothering of nearshore reefs with cliff debris.	Loss of existing defences and erosion of cliff line, altering 'settlement' coast significantly - character of seafront towns lost.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Listed Buildings on the Ventnor Esplanade lost to coastal erosion. Part of the Botanic Gardens similarly impacted.

PDZ	MU	PU	Policy Name	Policy Comments	SMP Policy	SEA Receptors: Population and Communities	Land Use, Infrastructure & Material Assets	Biodiversity, Habitats and Species	Landscape	Geology & Soils	Water	Cultural Heritage
					HTL	Stability of coast expected to be maintained - built assets, community and economic viability of area sustained.	Stability of coast expected to be maintained - built assets, community and economic viability of area sustained.	No significant effect on dry grassland, inland of existing defences. Natural processes of erosion and succesion prevented along sea cliffs. Limited change to reef features expected - potential habitat change as a result of altered sediment supply and rising sea level.	Maintain existing landscape.	No impact expected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Designated heritage assets protected
					ATL	As above	As above	Natural erosion and succession prevented as per HTL and impacts on features resulting from defence construction.	Maintain existing landscape.	No impact expected.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Designated heritage assets protected
					MR	No opportunities for MR - similar result to NAI.	No opportunities for MR - similar result to NAI.	Retreat and reactivation of cliff line; effects as per NAI.	Loss of existing defences and erosion of cliff line, altering 'settlement' coast significantly - character of seafront towns lost.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Listed Buildings on the Ventnor Esplanade lost to coastal erosion. Part of the Botanic Gardens similarly impacted.
	MAN4B	**PU4B.1**	St Lawrence Undercliff		**Key Features**	St Lawrence community - properties	Residential areas and open farmland, small wooded areas, pathways and tracks, A road (A3055), sewage works, Ventnor Botanic Garden	South Wight Maritime SAC, subtidal marine habitat (reef), vegetated sea cliffs	AONB, Heritage Coast, The Undercliff	Geological SSSI (Compton Chine to Steephill Cove), Grade 5 soils	Sea outfalls	Ventnor Botanical Garden (Registered Park and Garden).
					NAI	Coastal erosion is the issue here, as at Ventnor/Bonchurch. However, impacts of NAI less severe as coastal slopes are wooded and development is generally set further back from the coast. Three properties near Woody Point likely to be impacted by erosion.	Coastal erosion is the issue here, as at Ventnor/Bonchurch. However, impacts of NAI less severe as coastal slopes are wooded and development is generally set further back from the coast. Only coastal paths impacted.	No significant effects on habitats, though expect increasing rates of coastal erosion with rising sea levels over time. Increasing slope reactivations over the long term may have implications for habitats.	Continuing cliff erosion and slope reactivation - natural evolution of landscape.	Erosion will naturally alter the form/features of the SSSI with time.	No known impacts on water quality.	Erosion will impact the Botanical Garden.
					HTL	Largely as per NAI.	Largely as per NAI.	Natural erosion and succession prevented - significant implications also for sediment supply to beaches to the north.	Maintain existing landscape - natural evolution prevented.	Maintain existing status.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Designated heritage assets protected
					ATL	Largely as per NAI.	Largely as per NAI.	Natural erosion and succession prevented as per HTL and impacts on features resulting from defence construction.	Maintain existing landscape - natural evolution prevented.	Maintain existing status.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Designated heritage assets protected
					MR	Largely as per NAI.	Largely as per NAI.	Few changes expected along this largely undefended coastline, as per NAI.	Continuing cliff erosion and slope reactivation - natural evolution of landscape.	Erosion will naturally alter the form/features of the SSSI with time.	No known impacts on water quality.	Erosion will impact the Botanical Garden.

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		PU4B.2	Castlehaven	Management option in epoch three will be dependent on the slope stability conditions in the area at the time and whether the cliff retreat can be minimised through MR.	**Key Features**	Small number of scattered residential properties	Not heavily developed - scattered residential properties and farmland, tracks, A road inland	South Wight Maritime SAC, subtidal marine habitat (reef), vegetated sea cliffs	AONB, Heritage Coast, The Undercliff	Geological SSSI (Compton Chine to Steephill Cove), Grade 5 soils	Sea outfalls	Listed Buildings - Puckaster Lane and Gatepiers to Reith Lodge
					NAI	Significant erosion under NAI will result in the loss of several residences.	Significant erosion under NAI though no loss of major assets.	Return to more natural conditions, involving rapid coastal slope retreat, particularly in second and third epochs, with cliff slumping over existing defences.	Continuing cliff erosion and slope reactivation - natural evolution of landscape. However, coastal retreat more dramatic here than along adjacent coastline.	Erosion will naturally alter the form/features of the SSSI with time.	No known impacts on water quality.	Potential for loss of features to erosion.
					HTL	Some slope failure and retreat is likely to continue, though community will be maintained.	Some slope failure and retreat is likely to continue, though assets will be maintained.	Natural erosion and succession of cliffs prevented under HTL. No significant effects on subtidal marine habitats in short term though potential for altered coastal processes as erosion and slope failure along the adjacent coast will continue.	Maintain existing landscape - natural evolution prevented (though settlements protected).	Maintain existing status.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Designated heritage assets protected
					ATL	As above.	As above.	Natural erosion and succession prevented as per HTL and impacts on features resulting from defence construction.	Maintain existing landscape - natural evolution prevented.	Maintain existing status.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Designated heritage assets protected
					MR	Reallignment without loss of properties may be possible.	As per NAI.	Return to more natural conditions, involving rapid coastal slope retreat, particularly in second and third epochs, with cliff slumping over existing defences.	Continuing cliff erosion and slope reactivation - natural evolution of landscape. However, coastal retreat more dramatic here than along adjacent coastline.	Erosion will naturally alter the form/features of the SSSI with time.	No known impacts on water quality.	Potential for loss of features to erosion.
		PU4B.3	St Catherines and Blackgang		**Key Features**	Small community at Blackgang and at St Catherines Point - properties	Scattered properties, though mostly undeveloped cliff slopes, tracks and pathways, A road further inland, theme park	South Wight Maritime SAC, subtidal marine habitat (reef), vegetated sea cliffs, maritime grassland	AONB, Heritage Coast, The Undercliff	Geological SSSI (Compton Chine to Steephill Cove), Grade 5 soils	Sea outfalls	Listed Buildings - St Catherine's Lighthouse
					NAI	NAI to continue - coastal erosion will impact a small number (max. 3) of properties.	NAI to continue. Blackgang coastal road to be threatened by thirs epoch. Potential loss of theme park infrastructure with resultant impacts on island tourism.	No significant effects. Rapid natural cliff retreat.	Continuing cliff erosion and slope reactivation - natural evolution of landscape.	Erosion will naturally alter the form/features of the SSSI with time.	No known impacts on water quality.	Potential for loss of features at St Catherine's Lighthouse to erosion.
					HTL	As above.	As above.	Natural erosion and succession of cliffs prevented under HTL. No significant effects on subtidal marine habitats in short term though potential for altered coastal processes as erosion and slope failure along the adjacent coast will continue.	Maintain existing landscape - natural evolution prevented.	Maintain existing status.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Designated heritage assets protected

						SEA Receptors						
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					ATL	As above.	As above.	Natural erosion and succession prevented as per HTL and impacts on features resulting from defence construction.	Maintain existing landscape - natural evolution prevented.	Maintain existing status.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Designated heritage assets protected
					MR	As above.	As above.	No significant effects. Rapid natural cliff retreat.	Continuing cliff erosion and slope reactivation - natural evolution of landscape.	Erosion will naturally alter the form/features of the SSSI with time.	No known impacts on water quality.	Potential for loss of features at St Catherine's Lighthouse to erosion.
5	**MAN5**	**PU5.1**	Central Chale Bay to Compton Bay	Allow cliff erosion, support the geological designation, abandon current A3055 and re-route.	**Key Features**	Scattered residential properties (mostly holiday accommodation)	Largely undeveloped coastline - farmland, pathways, coastal A road	South Wight Maritime SAC, Isle of Wight Downs SAC, subtidal marine habitat (reef), vegetated sea cliffs, dry grasslands	AONB, Heritage Coast, The Undercliff, Southern Coastal Farmland, Intensive Agricultural Land	Geological SSSI, grade 3 soils	Sea outfalls	Archaeological sites tend to be on high points along the coast - e.g. Scheduled Monument - Barrow near Sud Moor. .
					NAI	Coastal erosion to continue - property losses, though mostly holiday properties (e.g Atherfield Bay Holiday Camp).	Coastal erosion to continue - limited loss of assets with the exception of a portion of the A3055.	No significant effects; nature conservation interests to adapt to change (erosion and sea level rise) naturally.	Coastline represents unique geology and in a source of sediment for the foreshore elsewhere - natural evolution of coastline allowed to continue - no siginifcant change to character.	Erosion will naturally alter the form/features of the SSSI with time.	No known impacts on water quality.	No designated heritage assets within the coastal erosion zone over the next 100 years
					HTL	As above.	As above.	Natural erosion and succession of cliffs prevented under HTL. Implications for supply of sediment to other parts of the coastline.	Maintain existing landscape - natural evolution prevented.	Maintain existing status.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Designated heritage assets protected
					ATL	As above.	As above.	As per HTL with additional habitat loss resulting from defence construction.	Maintain existing landscape - natural evolution prevented.	Maintain existing status.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Designated heritage assets protected
					MR	As above.	As above.	Assuming retreat is preferred option, similar to NAI - natural erosion of cliff line.	Coastline represents unique geology and in a source of sediment for the foreshore elsewhere - natural evolution of coastline allowed to continue - no siginifcant change to character.	Erosion will naturally alter the form/features of the SSSI with time.	No known impacts on water quality.	No designated heritage assets within the coastal erosion zone over the next 100 years.
6	**MAN6A**	**PU6A.1**	Freshwater Bay	Short section of HTL provides flood defence for the West Yar Valley (with PU6C.3). Maintain the road and support or enhance the protective	**Key Features**	Afton community - scattered residential properties	Developed seafront - hotels, slipways, A road	South Wight Maritime SAC, Isle of Wight Downs SAC, subtidal marine habitat (reef)	Settlement, Chalk Downs, AONB, Heritage Coast	Urban	No features noted	Area rich with archaeological potential, though no designated heritage assets along the coast

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				beach.	NAI	Defences to fail and erosion and flooding of valley to occur - loss of a number of properties to flooding. Flood risk increasing over time.	Defences to fail and erosion and flooding of valley to occur - loss of a number of assets including part of A road. Flood risk increasing over time.	Frequent tidal inundation expected in this low-lying embayment, though no significant effects on small areas of nearshore reef anticipated - gradual natural change in response to sea level rise.	Enables natural evolution, though coastal recession combined with likely inundation may have dramatic consequences for the landscape (Western Yar river open to sea at both ends).	Coastal form significantly altered through erosion and inundation. Significant changes, though no 'sensitive' features impacted.	N/A	N/A
					HTL	The defences will continue to provide appropriate protection against flooding although the anxiety presented by the population regarding the risk may affect the sense of well being.	The defences will continue to provide adequate protection for the majority of infrastructure assets with the exception being the coastal road to Freshwater Bay and the access way over the river towards the B3055.	Limited change to chalk reefs expected.	Maintain existing landscape.	Current status maintained.	N/A	N/A
					ATL	Protection of properties.	Protection of assets.	As per HTL with potential impacts on nearshore reef habitat resulting from defence construction.	Maintain existing landscape.	Current status maintained.	N/A	N/A
					MR	Limited opprtunity for MR - results would be similar to NAI.	Limited opprtunity for MR - results would be similar to NAI.	Assuming retreat is preferred option, similar to NAI.	Enables natural evolution, though coastal recession combined with likely inundation may have dramatic consequences for the landscape (Western Yar river open to sea at both ends).	Coastal form significantly altered through erosion and inundation. Significant changes, though no 'sensitive' features impacted.	N/A	N/A.
		PU6A.2	Tennyson Down, Alum Bay and Headon Warren		**Key Features**	Scattered residences	Undeveloped chalk headland - scattered residential properties, open green space with tracks, B road	South Wight Maritime SAC, Isle of Wight Downs SAC, subtidal marine habitat (reef), vegetated sea cliffs	Settlement, Chalk Downs, AONB, Heritage Coast	Geological SSSI (Headon Warren and West High Down, The Needles), Non-Agricultural soils	Small number of point source discharges	Listed Buildings (Tennyson's Beacon, Needles New Battery). Scheduled Monuments (Mortuary Enclosure, Barrows, Needles Old Battery)
					NAI	No defences, though resistant headland limits erosion. Several properties lost by third epoch; loss focused on Totland.	No defences, though resistant headland limits erosion. No loss of important assets.	Natural change will continue unchecked - episodic rock falls along resistant cliff line followed by periods of inactivity. Natural evolution of reefs and sea caves to continue.	Natural change continues unchecked - slow erosion with occasional rockfalls.	Natural evolution continues (e.g. development of new stacks at The Needles).	No known impacts on water quality.	Erosion may threaten some sites (e.g. Needles Battery).
					HTL	As above	As above	Natural erosion and succession of cliffs prevented.	Natural evolution prevented - maintain current landscape.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Designated heritage assets protected.
					ATL	As above	As above	As per HTL with potential impacts on nearshore reef habitat resulting from defence construction.	Natural evolution prevented - maintain current landscape.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Designated heritage assets protected..

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					MR	As above	As above	Assuming retreat is preferred option, similar to NAI.	Natural change continues unchecked - slow erosion with occasional rockfalls.	Natural evolution continues (e.g. development of new stacks at The Needles).	No known impacts on water quality.	Erosion may threaten some sites (e.g. Needles Battery).
	MAN6B	**PU6B.1**	Totland and Colwell		**Key Features**	Totland and Colwell communities - properties	Mostly residential, some commercial, A and B roads, recreation grounds, pier	No Natura or Ramsar sites	Settlement, Landscape Improvement Area, Heritage Coast (small portion)	Urban. Colwell Bay Geological SSSI.	Offshore sewage outfalls, Totland Bay Bathing Water, Colwell Bay Bathing Water	Listed Building (Warden Point gun emplacement)
					NAI	Defences fail - cliff line retreat resulting in loss of a significant number of properties.	The defences will continue to provide appropriate protection to the infrastructure assets against flooding although there is a risk of erosion to the coastline.	N/A	Natural evolution of landscape following failure of defences - coastal retreat and reactivation. Significant effects on settlement landscape.	Works with natural processes. No 'sensitive' features to be impacted.	Potential transient effects on bathing water quality associated with erosion / suspended sediments.	Loss or damage to Listed Building from coastal erosion
					HTL	Erosion prevented, though some localised slumping. Overtopping to become more frequent. However, majority of properties protected.	Erosion prevented, though some localised slumping. Overtopping to become more frequent. However, majority of assets protected.	N/A	Natural evolution prevented - maintain current landscape.	Natural erosion of the cliffs is prevented thus could result in the geological SSSI being adversely affected.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Designated heritage assets protected
					ATL	Erosion prevented, though some localised slumping. Overtopping to become more frequent. However, majority of properties protected.	Erosion prevented, though some localised slumping. Overtopping to become more frequent. However, majority of assets protected.	N/A	Natural evolution prevented - maintain current landscape.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Designated heritage assets protected
					MR	As per NAI.	As per NAI.	N/A	Natural evolution of landscape following failure of defences - coastal retreat and reactivation. Significant effects on settlement landscape.	Works with natural processes. No 'sensitive' features to be impacted.	Potential transient effects on bathing water quality associated with erosion / suspended sediments.	Possible loss or damage to Listed Building from coastal erosion
		PU6B.2	Central Colwell Bay		**Key Features**	Few full-time residences	Farmland and holiday park surrounded by open land with pathways	No Natura or Ramsar sites	Landscape Improvement Area	Grade 3 soils, Colwell Bay SSSI	Offshore sewage outfalls	No designated heritage assets
					NAI	Undefended coastline - groynes rendered ineffective. Rapid erosion and retreat to continue. Holiday accommodation at threat.	Undefended coastline - groynes rendered ineffective. Rapid erosion and retreat to continue. Holiday accommodation at threat.	N/A	Continuing erosion will not cause a significant change to landscape character.	Erosion will naturally alter the form/features of the SSSI with time - importantly the exposure of features of geological importance will be maintained.	No known impacts on water quality.	N/A
					HTL	As above.	As above.	N/A	Natural evolution prevented - maintain current landscape.	Natural evolution prevented - existing staus maintained.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A
					ATL	As above.	As above.	N/A	Natural evolution prevented - maintain current landscape.	Natural evolution prevented - existing staus maintained.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A

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					MR	As above.	As above.	N/A	Continuing erosion will not cause a significant change to landscape character.	Erosion will naturally alter the form/features of the SSSI with time - importantly the exposure of features of geological importance will be maintained.	No known impacts on water quality.	N/A
		PU6B.3	Fort Albert	Existing structures can be maintained to extend their life, but gradually removing the influence of management.	**Key Features**	Small number of properties (plus Fort has residential use)	Undeveloped - Fort Albert and open green space	No Natura or Ramsar sites	Northern Coastal Cliffs	Grade 3 soils	Single point source outfall	Fort Albert (Grade II*) Listed Building
					NAI	Significant erosion under NAI will result in the loss of several residences.	Significant erosion under NAI - Fort would be lost.	N/A	Eroding clayey clifts allowed to evolve naturally. No change to landscape character and move towards a more natural landscape with time.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Erosion of coastal headland with Fort Albert infrastructure - loss of feature.
					HTL	Maintenance and upgradign of defences would significantly limit erosion - no loss.	Maintenance and upgradign of defences would significantly limit erosion - no loss.	N/A	Natural evolution of landscape prevented - maintain current status.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Maintenance of Fort Albert.
					ATL	Further protection of properties enabled.	Further protection of assetsenabled.	N/A	Natural evolution of landscape prevented, and some further alteration associated with creation of new defences.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Maintenance of Fort Albert.
					MR	As per NAI.	As per NAI.	N/A	Eroding clayey clifts allowed to evolve naturally. No change to landscape character and move towards a more natural landscape with time.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Erosion of coastal headland with Fort Albert infrastructure - loss of feature.
		PU6B.4	Fort Victoria Country Park		**Key Features**	No residences	Country Park with pathways	No Natura or Ramsar sites	Northern Coastal Cliffs	Grade 3 soils	No features noted	No designated heritage assets
					NAI	N/A	Continued erosion along the Fort Victoria Country Park area.	N/A	Slumping cliffs allowed to evolve naturally - no significant change to landscape character.	Works with natural processes. No 'sensitive' features to be impacted.	N/A	N/A
					HTL	N/A	As above.	N/A	Natural evolution of landscape prevented - maintain current status.	Natural evolution prevented - maintain current landscape.	N/A	N/A
					ATL	N/A	As above.	N/A	Natural evolution of landscape prevented, and some further alteration associated with creation of new defences.	Natural evolution prevented - maintain current landscape.	N/A	N/A
					MR	N/A	As above.	N/A	Eroding clayey clifts allowed to evolve naturally. No change to landscape character and move towards a more natural landscape	Works with natural processes. No 'sensitive' features to be impacted.	N/A	N/A

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									with time.			
		PU6B.5	Fort Victoria and Norton	Existing structures can be maintained to extend their life, but gradually removing the influence of management.	**Key Features**	Norton community - properties	Residential area surrounded by green open space and Country Park	Solent Maritime SAC, Solent and Southampton Water SPA and Ramsar, vegetated sea cliffs	Northern Coastal Cliffs / Settlement, AONB	Grade 3 soils	Yarmouth Shellfish Water, sea outfalls	Fort Victoria Grade II Listed Building
					NAI	Defences would fail within first epoch - erosion will affect local access road, several properties, holiday cottages, tourism businesses.	Defences would fail within first epoch - erosion will affect local access road, several properties, holiday cottages, tourism businesses.	Increased coastal erosion as defences fail. No significant effects.	Foreshore erosion, cliff retreat and migration of spits allowed to take place naturally. No change to landscape character.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Loss of or damage to Fort Victoria (Listed Building) from coastal erosion
					HTL	Defences would need to be significantly upgraded to prevent erosion. Narrow undefended gap may allow erosion to destabilise surrounding defences. Protection of properties and other assets in short term, though loss in longer term.	Defences would need to be significantly upgraded to prevent erosion. Narrow undefended gap may allow erosion to destabilise surrounding defences. Protection of properties and other assets in short term, though loss in longer term.	Natural erosion and succession prevented along the small section of cliff - adverse effect on habitat.	Natural evolution of landscape prevented - maintain current status.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Designated heritage assets protected
					ATL	Significant upgrading of defences may minimise losses.	Significant upgrading of defences may minimise losses.	Natural erosion and succession prevented along the small section of cliff - adverse effect on habitat.	Natural evolution of landscape prevented, and some further alteration associated with creation of new defences.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Designated heritage assets protected
					MR	Similar to NAI.	Similar to NAI.	As per NAI.	Coastal erosion allowed to continue.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Loss of or damage to Fort Victoria (Listed Building) from coastal erosion
	MAN6C	**PU6C.1**	Norton Spit		**Key Features**	No properties - outskirts of Norton community	largely undeveloped, A road, boatyards and slipways	Solent and Southampton Water SPA and Ramsar, Solent Maritime SAC, coastal saltmarsh, intertidal mud and sandflats, saline lagoons, sand dunes, vegetated shingle	Settlement / Harbours and Creeks, AONB	Grade 3 soils	Yarmouth Shellfish Water	The Old Sand House (Grade II Listed Building)
					NAI	Stabilisation of spit and breakwater would fail within first epoch - migration and possible breach of spit. No loss of properties.	Stabilisation of spit and breakwater would fail within first epoch - migration and possible breach of spit. Erosion and inundation of A road and loss of slipways/boatyards.	Norton Spit to migrate and potentially breach. Associated habitats to be altered; some scope fo gain of intertidal habitats.	Foreshore erosion, cliff retreat and migration of spits allowed to take place naturally. Potential for local change to landscape should spit breach and entrance to estuary be significantly widened.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Loss of or damage to Listed Building from coastal erosion and flooding

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					HTL	Erosion prevented, though area still at risk from inundation. No loss of properties.	Erosion prevented, though area still at risk from inundation.	HTL required to maintain dunes and vegetated shingle features. Potential loss of saltmarsh and intertidal flats resulting from coastal squeeze. No significant effect on saline lagoon.	Natural evolution of landscape prevented - maintain current status and maintain spit in current position.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Listed Building at risk from flooding
					ATL	Erosion prevented, though area still at risk from inundation. No loss of properties.	Erosion prevented, though area still at risk from inundation.	As per HTL but potential further loss on intertidal habitats as a result of defence construction.	Natural evolution of landscape prevented, and some further alteration associated with creation of new defences.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Listed Building at risk from flooding
					MR	As per NAI.	As per NAI.	As per NAI, though more controlled approach to retreat.	Coastal erosion and flooding allowed to continue.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Loss of or damage to Listed Building from coastal erosion and flooding
		PU6C.2	Western Yar Estuary - west		**Key Features**	Largely undeveloped in the north, with scattered properties, Freshwater community to the south	Mostly open farmland and farm buildings with tracks, slipways/jetties/boatyard	Solent and Southampton Water SPA and Ramsar, Solent Maritime SAC, coastal saltmarsh, intertidal mud and sandflats, saline lagoons, estuaries	Settlement / Harbours and Creeks / Intensive Agricultural Land / Landscape Improvement Area, AONB	Grade 3 soils	Several point source discharges	Listed Buildings at Kings Manor
					NAI	Uncertainty regarding future behaviour of estuary under NAI, but expect increased risk of erosion and inundation. Few properties affected by flooding - one north of Saltern Wood and one on the outskirts of Freshwater.	Uncertainty regarding future behaviour of estuary under NAI, but expect increased risk of erosion and inundation. Few assets affected - coastal infrastructure near Saltern Wood likely to be lost to flooding.	Increased risk of marine inundation and erosion. Saline intrusion associated with sea level rise and increasingly frequent tidal flooding will result in change to saline lagoons. Potential for habitat gain of saltmarsh and intertidal flats in restricted locations. Natural habitat evolution allowed, though limited opportunities for intertidal habitat gain given steep coastal slopes and rising sea levels.	Potential for change to local landscape as erosion and flooding lead to permanent flood breach along valley, with river becoming open to sea at both ends and potential for inundation of settlement areas.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Listed Buildings likely to be lost to flooding.
					HTL	As above, with the exception of added protection provided to Kings Manor Farm.	As above, with the exception of added protection provided to Kings Manor Farm.	Coastal squeeze under rising sea levels and increasingly frequent tidal inundation will result in loss of intertidal habitat.	Natural evolution of landscape prevented - maintain current status of estuary maintained.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Designated heritage assets protected
					ATL	As per HTL.	As per HTL.	As per HTL, though potential for habitat loss in footprint of defences.	Natural evolution of landscape prevented, and some further alteration associated with creation of new defences.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Designated heritage assets protected
					MR	As per NAI.	As per NAI.	Similar to NAI.	Coastal erosion and flooding allowed to continue.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Listed Buildings likely to be lost to flooding.

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		PU6C.3	The Causeway	Short section of HTL provides flood defence from Freshwater (with PU6A.1)	**Key Features**	Undeveloped - few scattered residences. More dense community inland.	Mostly open green space - Afton Park, pathways, rifle range, A and B roads inland	Solent and Southampton Water SPA and Ramsar, Solent Maritime SAC, coastal saltmarsh, intertidal mud and sandflats	Settlement / Harbours and Creeks / Intensive Agricultural Land / Landscape Improvement Area, AONB, Heritage Coast	Grade 3 soils	Several point source discharges	Listed Buildings in Freshwater (focused around Church Place)
					NAI	Flooding to affect 3 residential properties near the shoreline and several properties inland of the A road/Afton Park.	Flooding to affect A road, rife range and areas of Afton Park. Threat to The Causeway road.	This area will become increasingly susceptible to tidal inundation. Natural habitat evolution allowed, though limited opportunities for intertidal habitat gain given steep coastal slopes and rising sea levels.	Potential for significant change to local landscape as flooding leads to inundation and loss of settlement areas.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Buildings not likely to become susceptible to flooding in time frame considered.
					HTL	Causeway bridge maintained, with flood risk reduced.	Causeway bridge maintained, with flood risk reduced.	Coastal squeeze under rising sea levels and increasingly frequent tidal inundation will result in loss of intertidal habitat.	Natural evolution of landscape prevented - maintain current status of Freshwater locale.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Features not at risk of flooding in any epoch.
					ATL	As per HTL.	As per HTL.	As per HTL, though potential for habitat loss in footprint of defences.	Natural evolution of landscape prevented, and some further alteration associated with creation of new defences.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Buildings not likely to become susceptible to flooding in time frame considered.
					MR	As per NAI.	As per NAI.	Similar to NAI.	Potential for significant change to local landscape as flooding leads to inundation and loss of settlement areas.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Buildings not likely to become susceptible to flooding in time frame considered.
		PU6C.4	Western Yar Estuary - east		**Key Features**	Undeveloped - no residences	Open land with wooded areas, eastern bank cycleway	Solent and Southampton Water SPA and Ramsar, Solent Maritime SAC, coastal saltmarsh, intertidal mudlats (also BAP)	Harbours and Creeks / Intensive Agricultural Land, AONB	Grade 3 soils	Several point source discharges	No designated heritage assets
					NAI	N/A	Cycleway lost to inundation.	This area will become increasingly susceptible to tidal inundation. Natural habitat evolution allowed, enabling expansion of intertidal habitats, particularly around Barnfields Stream.	Natural evolution allowed - tidal inundation of estuary margins will result in substantial change to local landscape.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	N/A
					HTL	N/A	As above.	Coastal squeeze under rising sea levels and increasingly frequent tidal inundation will result in loss of intertidal habitat.	Natural evolution of landscape prevented - maintain current status of Freshwater locale.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A
					ATL	N/A	As above.	As per HTL, though potential for habitat loss in footprint of defences.	Natural evolution of landscape prevented, and some further alteration associated with creation of new	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during construction works associated with	N/A

						SEA Receptors						
PDZ	**MU**	**PU**	**Policy Name**	**Policy Comments**	**SMP Policy**	**Population and Communities**	**Land Use, Infrastructure & Material Assets**	**Biodiversity, Habitats and Species**	**Landscape**	**Geology & Soils**	**Water**	**Cultural Heritage**
									defences.		upgrading of defences.	
					MR	N/A	As above.	Similar to NAI.	Natural evolution allowed - tidal inundation of estuary margins will result in substantial change to local landscape.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	N/A
		PU6C.5	Thorley Brook and Barnfields Stream	HTL for the first epoch to allow time for habitat adaptation.	**Key Features**	Undeveloped - no residences	Open land with wooded areas, eastern bank cycleway	Solent and Southampton Water SPA and Ramsar, Solent Maritime SAC, coastal saltmarsh, coastal grazing marsh, intertidal mudlats (also BAP)	Harbours and Creeks / Intensive Agricultural Land, AONB	Grade 3 soils	Several point source discharges	No designated heritage assets
					NAI	N/A	Cycleway lost to inundation.	This area will become increasingly susceptible to tidal inundation. Natural habitat evolution allowed, enabling expansion of intertidal habitats, particularly around Barnfields Stream. Coastal grazing marsh lost to inundation.	Natural evolution allowed - tidal inundation of estuary margins will result in substantial change to local landscape.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	N/A
					HTL	N/A	Cycleway protected along defended section.	Coastal squeeze under rising sea levels and increasingly frequent tidal inundation will result in loss of intertidal habitat.	Natural evolution of landscape prevented - maintain current status of Freshwater locale.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during works associated with upgrading of defences.	N/A
					ATL	N/A	As above.	As per HTL, though potential for habitat loss in footprint of defences.	Natural evolution of landscape prevented, and some further alteration associated with creation of new defences.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	N/A
					MR	N/A	As above.	Similar to NAI.	Natural evolution allowed - tidal inundation of estuary margins will result in substantial change to local landscape.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	N/A
		PU6C.6	Yarmouth to Port la Salle		**Key Features**	Yarmouth and Bouldner communities - properties	Largely residential, A and B roads, playing fields and area of open land between Yarmouth and Bouldner	Solent and Southampton Water SPA and Ramsar, Solent Maritime SAC, coastal saltmarsh, intertidal mud and sandflats, coastal grazing marsh	Settlement / Harbours and Creeks, AONB	Grade 3 and 4 soils	Yarmouth Shellfish Water, several point source discharges	Listed Buildings in Yarmouth centre, Yarmouth Castle SM, offshore protected wreck (Yarmouth Roads)
					NAI	Loss of number of properties in Yarmouth to inundation and erosion.	Potential for breach east of Yarmouth. Loss of A3054 road (which is the main link between West Eight and Newport) and also the coastal footpath link would result.	Coastal erosion and eventual breach of defences, enabling return to more natural conditions. Potential for new inlet to be created at low-lying	Flood risk at Yarmouth is significant - potential for substantial change to local settlement landscape - town potentially encircled.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Loss of Yarmouth Castle and several Listed Buildings to flooding.

PDZ	MU	PU	Policy Name	Policy Comments	SMP Policy	SEA Receptors: Population and Communities	Land Use, Infrastructure & Material Assets	Biodiversity, Habitats and Species	Landscape	Geology & Soils	Water	Cultural Heritage
								Thorley Brook.				
					HTL	Maintenance of seawalls will prevent erosion and a marine breach through to Thorley Brook, maintaining properties and infrastructure. Defences increasingly exposed to wave action however.	Maintenance of seawalls will prevent erosion and a marine breach through to Thorley Brook, maintaining infrastructure.	Coastal squeeze is expected to result in loss of coastal habitats.	Natural evolution of landscape prevented - maintain current status of Yarmouth.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Designated heritage assets protected.
					ATL	As per HTL.	As per HTL.	As per HTL, though potential for habitat loss in footprint of defences.	Natural evolution of landscape prevented, and some further alteration associated with creation of new defences.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Designated heritage assets protected.
					MR	As per NAI.	As per NAI.	As per NAI, though reversion to natural conditions expected to be more gradual.	Flood risk at Yarmouth is significant - potential for substantial change to local settlement landscape.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Loss of Yarmouth Castle and several Listed Buildings to flooding.
7	**MAN7**	**PU7.1**	Bouldnor Copse and Hamstead	Allow cliff erosion, supporting the natural habitats.	**Key Features**	Scattered properties at Bouldnor and Cranmore and Hamstead	Largely undeveloped - open green land/forest, small residential areas further inland	Solent Maritime SAC, Solent and Southampton Water SPA and Ramsar, vegetated sea cliffs, subtidal marine habitats (reef)	Northern Coastal Cliffs, Northern Woodland, Traditional Enclosed Pasture Land, Landscape Improvement Area, AONB, Heriage Coast	Bouldner and Hamstead Cliffs Geological SSSI, Grade 4 and 5 soils	Yarmouth and Newtown Bank Shellfish Waters	Bouldnor Battery SM, rich archaeological potential in intertidal, offshore underwater cliff with palaeoenvironmental deposits (internationally important)
					NAI	Erosion of cliff line. Few properties impacted - likely impacts on 3 properties on outskirts of Cranmore.	Erosion of cliff line. No important assets lost.	No significant effects - natural evolution of nature conservtaion features with cliff toe erosion to continuing.	Coastal slopes would continue to evolve naturally, with erosion of the cliff toe and cliff foot debris triggering mudslides. Evolution of the 'Northern Coastal Cliffs' landscape type would be rapid.	Erosion will naturally alter the form/features of the SSSI with time.	No known impacts on water quality.	Erosion not expected to impact the Scheduled Monument but will impact sites in the intertidal/offshore zone.
					HTL	As above	As above	Natural erosion and succession of cliffs prevented under HTL with implications for sediment supply to nearby beaches.	Natural evolution of landscape prevented - current status maintained.	Natural evolution prevented - existing staus maintained.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Designated heritage assets protected but not sites in the intertidal/subtidal zone.
					ATL	As above	As above	As per HTL, though potential for habitat loss associated with defence construction.	Natural evolution of landscape prevented, and some further alteration associated with creation of new defences.	Natural evolution prevented - existing staus maintained.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Designated heritage assets protected but not sites in the intertidal/subtidal zone.
					MR	As above	As above	Similar to NAI - natural evolution of coastline.	Natural slope evolution to continue.	Erosion will naturally alter the form/features of the SSSI with time.	No known impacts on water quality.	Erosion not expected to impact the Scheduled Monument but will

PDZ	MU	PU	Policy Name	Policy Comments	SMP Policy	SEA Receptors: Population and Communities	Land Use, Infrastructure & Material Assets	Biodiversity, Habitats and Species	Landscape	Geology & Soils	Water	Cultural Heritage
												impact sites in the intertidal/offshore zone.
		PU7.2	Newtown Estuary	Allow tidal flooding and erosion. This would not preclude local management by the landowner during the first epoch to maintain limited quay structures and access walkways.	**Key Features**	Scattered properties at Newtown	Largely undeveloped - open green land/forest, farmland	Solent Maritime SAC, Solent and Southampton Water SPA and Ramsar, coastal grazing marsh, coastal saltmarsh, estuaries, intertidal mud and sandflats, saline lagoons, vegetated shingle, vegetated sea cliffs	Northern Coastal Cliffs, Harbours and Creeks, Traditional Enclosed Pasture Land, AONB, Heritage Coast	Grade 4 and 5 soils	Newtown Bank and Newtown Harbour Shellfish Waters, number of point source discharges	Medieval settlement (SM) and Listed Buildings at Newtown.
					NAI	Tidal flooding, though no loss of properties.	Tidal flooding may periodically inundate the local access road links to Newtown village from the south, the channel approaching Porchfield and cross the Porchfield-Shalfleet road at Clamerkin Bridge. No loss of important assets.	Expect erosion/breach of protective spits and increased wave penetration. In long term, potential for habitat gain in relation to coastal saltmarsh and intertidal flats as coast is allowed to naturally roll back. Changes to coastal grazing marsh and saline lagoons associated with increasing saline intrusion over time. Shingle habitat associated with spit may be lost; spits unstable due to shortage of sediment and expect them to be overtopped with sea level rise and increased storminess. No significant effect on sea cliffs expected.	The Estuary will evolve naturally under the NAI scenario, with significant changes to the local landscape expectedas a result of spit reformation/loss and inundation of the estuary margins.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Portion of Scheduled Monument and Newtown Bridge Listed Building lost to flooding.
					HTL	As above.	As above.	HTL would prevent the natural evolution of the estuary, resulting in squeeze of intertidal habitats and alteration or loss of other coastal habitats that depend upon regular tidal inundation.	Natural evolution of landscape prevented - current status maintained.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during works associated with upgrading of defences.	Designated heritage assets protected.
					ATL	As above.	As above.	As per HTL, though potential for additional habitat loss as a result of defence construction.	Natural evolution of landscape prevented, and some further alteration associated with creation of new defences.	Natural evolution prevented - maintain current landscape.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	Designated heritage assets protected.
					MR	As above.	As above.	As per NAI if retreat is preferred approach.	Changes to the local landscape expectedas a result of spit reformation/loss and inundation of the estuary margins.	Works with natural processes. No 'sensitive' features to be impacted.	No known impacts on water quality.	Portion of medieval feature and Newtown Bridge Listed Building lost to flooding.

						SEA Receptors							
PDZ	**MU**	**PU**	**Policy Name**	**Policy Comments**	**SMP Policy**	**Population and Communities**	**Land Use, Infrastructure & Material Assets**	**Biodiversity, Habitats and Species**	**Landscape**	**Geology & Soils**	**Water**	**Cultural Heritage**
		PU7.3	Thorness Bay and southern Gurnard Bay	Allow cliff erosion, supporting the natural habitats.	**Key Features**	Very few scattered residences	Undeveloped - open/wooded green space and farmland dominates, holiday park	Solent Maritime SAC, Solent and Southampton Water SPA and Ramsar, coastal saltmarsh, freshwater habitats - club rush swamp, intertidal mud and sandflats, subtidal marine habitats (reef), vegetated sea cliffs	Northern Coastal Cliffs, Traditional Enclosed Pasture Land, Landscape Improvement Area, AONB, Heritage Coast	Thorness Bay Geological SSSI, grade 3 and 4 soils	Newtown Bank and Cowes Shellfish Waters, offshore sewage outfalls and coastal point source discharges	No designated heritage assets
					NAI	Coastal retreat - seaward edge of the Thorness Bay Holiday Park and several small cliff top properties lost.	Coastal retreat - seaward edge of the Thorness Bay Holiday Park and several small cliff top properties lost.	In long term, potential for habitat gain in relation to coastal saltmarsh and intertidal flats as coast is allowed to naturally roll back (particularly within Thorness Bay). Changes to club rush swamp associated with increasing saline intrusion over time. Continuing erosion of cliff line. Limited effects in reef feature expected; though potential for minor changes associated with altered sediment supply. Retreat within low-lying Thorness Bay could form a small intertidal area similar in scale to the present King's Quay inlet on the north east coast.	Natural evolution of coast allowed - erosion and slope reactivation of coastal cliffs continues. Also coastal flooding at Little Thorness. Local and natural changes to landscape.	Erosion and flooding will naturally alter the form/features of the SSSI with time.	No known impacts on water quality.	No loss of designated heritage assets.
					HTL	As above.	As above.	HTl would prevent the natural evolution of the coast (cliff line erosion and slumping) and result in coastal squeeze of intertidal habitats.	Natural evolution of landscape prevented - current status maintained.	Natural evolution prevented - existing staus maintained.	Potential temporary impacts on water quality during works associated with upgrading of defences.	No designated heritage assets
					ATL	As above.	As above.	As per HTL, though potential for additional habitat loss as a result of defence construction.	Natural evolution of landscape prevented, and some further alteration associated with creation of new defences.	Natural evolution prevented - existing staus maintained.	Potential temporary impacts on water quality during construction works associated with upgrading of defences.	No designated heritage assets
					MR	As above.	As above.	As per NAI if retreat is preferred approach.	Natural evolution of coast allowed - erosion and slope reactivation of coastal cliffs continues. Also coastal flooding at Little Thorness.	Erosion and flooding will naturally alter the form/features of the SSSI with time.	No known impacts on water quality.	No loss of designated heritage assets

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ANNEX F-IV: DETAILED ASSESSMENT OF PREFERRED POLICY OPTIONS

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Annex F-IV Table 1 Assessment of Preferred Policy Options for PDZ 1 (Cowes and Medina Estuary)

PDZ:	1	**Policy Unit Name:**	Gurnard Luck
MU:	MAN1A	**Policy Unit Reference:**	PU1A.1

		SEA Receptors															
Time Period	**Management Activities**	**Population, Communities & Human Health**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**	
0-20 years	HTL	✓	Defences will continue to provide protection to recreation features and properties.	✓	Defences will continue to provide protection to infrastructure.	✖	Loss of coastal grazing marsh at Gurnard Luck (designated feature) as result of inundation.	O	Settlement landscape character will be maintained.	O	No change to soil quality / geomoprhology.	O	No change to water quality.	O	No change to heritage features.
20-50 years	NAI	✖✖	Marsh Road properties lost to erosion and inundation.	✖✖	Gurnard Bridge and grazing land around Gurnard Luck lost to erosion and inundation.	✓✓	Creation of internationally and nationally important intertidal habitat in inundated areas.	O	Wider settlement landscape character will be maintained, though signficiant local change around Marsh Road.	✖	Some loss of grade 3/4 agricultural soils due to inundation.	✖	Pipeline outfall may be impacted by erosion - potential minor effects on Shellfish Water.	O	No change to heritage features.
50-100 years	NAI	✖	More Marsh Road properties lost to erosion and inundation.	✖	Major losses already occurred in epoch 2 - some further inundation.	✓✓	Creation of internationally and nationally important intertidal habitat in inundated areas.	O	Wider settlement landscape character will be maintained, potential for a more natural shoreline through NAI.	✖	Major losses already occurred in epoch 2 - some further inundation.	✖	As above.	O	No change to heritage features.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Need to consider replacement of assets.		Potential need to compensate for loss of coastal grazing habitat.		No mitigation required.		No mitigation identified for losses of agricultural soils.		Consider works required to protect/maintain outfall.		No mitigation required.

PDZ:	1	**Policy Unit Name:**	Gurnard Cliff
MU:	MAN1A	**Policy Unit Reference:**	PU1A.2

		SEA Receptors															
Time Period	**Management Activities**	**Population, Communities & Human Health**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**	
0-20 years	NAI	✖	Loss of coastal gardens to erosion.	O	No loss of critical infrastructure or important land use.	O	Natural coastal squeeze of beach. Natural cliff habitats continue to evolve.	O	Wider Settlement landscape character to be retained, with minor and natural local changes due to cliff retreat.	O	No significant change.	O	No change to water quality.	O	No change to heritage features.
20-50 years	NAI	✖	Loss of coastal gardens to erosion.	O	No loss of critical infrastructure or important land use.	O	Natural coastal squeeze of beach. Natural cliff habitats continue to evolve.	O	Wider Settlement landscape character to be retained, with minor and natural local changes due to cliff retreat.	O	No significant change.	O	No change to water quality.	O	No change to heritage features.
50-100 years	NAI	✖✖	Loss of small number of properties off Solent View Road to erosion.	O	No loss of critical infrastructure or important land use.	O	Natural coastal squeeze of beach. Natural cliff habitats continue to evolve.	O	Wider Settlement landscape character to be retained, with minor and natural local changes due to cliff retreat.	O	No significant change.	O	No change to water quality.	O	No change to heritage features.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.

PDZ:	1	**Policy Unit Name:**	Gurnard to Cowes Parade
MU:	MAN1A	**Policy Unit Reference:**	PU1A.3

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓	No loss assuming defences are upgraded. Small number of properties to the west of the ferry terminal may be impacted by inundation if defences are not upgraded.	✓	No loss assuming defences are upgraded. Roads and infrastructure along the frontage unless defences upgraded.	O	Natural coastal squeeze of beach.	O	Existing landscape maintained.	O	Natural succession of cliff line hindered, though no loss of features.	✘	Temporary and minor impacts on water quality during defence works.	✓	Listed Buildings retained.
20-50 years	HTL	✓	No loss assuming defences are upgraded. Small number of properties to the west of the ferry terminal may be impacted by inundation if defences are not upgraded.	✓	No loss assuming defences are upgraded. Roads and infrastructure along the frontage unless defences upgraded.	O	Natural coastal squeeze of beach.	O	Existing landscape maintained.	O	Natural succession of cliff line hindered, though no loss of features.	✘	Temporary and minor impacts on water quality during defence works.	✓	Listed Buildings retained.
50-100 years	HTL	✓	No loss assuming defences are upgraded. Small number of properties to the west of the ferry terminal may be impacted by inundation if defences are not upgraded.	✓	No loss assuming defences are upgraded. Roads and infrastructure along the frontage unless defences upgraded.	O	Natural coastal squeeze of beach.	O	Existing landscape maintained.	O	Natural succession of cliff line hindered, though no loss of features.	✘	Temporary and minor impacts on water quality during defence works.	✓	Listed Buildings retained.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	1	**Policy Unit Name:**	West Cowes
MU:	MAN1A	**Policy Unit Reference:**	PU1A.4

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✘	Some loss or properties to inundation in Cowes.	✘	Inundation would impact infrastructure - important transport links and commercial sites.	✘✘	Intertidal habitat loss through coastal squeeze. No opportunities for habitat creation at undefended locations. Potential impacts on SAC conservtaion objectives.	O	Existing landscape maintained.	O	No change expected.	✘	Temporary and minor impacts on water quality during defence works.	✘	Defences to protect most features, though loss at specific locations, e.g. Coles Yard and Slipway.
20-50 years	HTL	✘	Further loss or properties to inundation.	✘	Inundation would impact infrastructure - important transport links and commercial sites.	✘✘	Intertidal habitat loss through coastal squeeze. No opportunities for habitat creation at undefended locations. Potential impacts on SAC conservtaion objectives.	O	Existing landscape maintained.	O	No change expected.	✘	Temporary and minor impacts on water quality during defence works.	✘	Defences to protect most features, though loss at specific locations, e.g. Coles Yard and Slipway.

50-100 years	HTL	✖	Further loss or properties to inundation.	✖	Inundation would impact infrastructure - important transport links and commercial sites.	✖✖	Intertidal habitat loss through coastal squeeze. No opportunities for habitat creation at undefended locations. Potential impacts on SAC conservtaion objectives.	O	Existing landscape maintained.	O	No change expected.	✖	Temporary and minor impacts on water quality during defence works.	✖	Defences to protect most assets, though loss at specific locations, e.g. Coles Yard and Slipway.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Need to develop exit plan for affected infrastructure.		Potential requirement to compensate for habitat losses.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		Monitor and record all assets; may need to develop exit plan for specific features.

PDZ:	1	**Policy Unit Name:**	East Cowes
MU:	MAN1A	**Policy Unit Reference:**	PU1A.5

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✖	Some loss or properties to inundation in Cowes.	✖	Inundation would impact infrastructure - important transport links and commercial sites.	✖✖	Intertidal habitat loss through coastal squeeze. No opportunities for habitat creation at undefended locations. Potential impacts on SAC conservtaion objectives.	O	Existing landscape maintained.	O	No change expected.	✖	Temporary and minor impacts on water quality during defence works.	✖	Defences to protect most assets, though some damage could occur from flooding if the sea defences are not raised. Particularly at specific locations, e.g. the former East Cowes Congregational Church, Clare Lallow Grid Iron Works (former sea plane factory) and the coastguard cottages..
20-50 years	HTL	✖	Further loss or properties to inundation.	✖	Inundation would impact infrastructure - important transport links and commercial sites.	✖✖	Intertidal habitat loss through coastal squeeze. No opportunities for habitat creation at undefended locations. Potential impacts on SAC conservtaion objectives.	O	Existing landscape maintained.	O	No change expected.	✖	Temporary and minor impacts on water quality during defence works.	✖	Defences to protect most assets, though some damage could occur from flooding if the sea defences are not raised. Particularly at specific locations, e.g. the former East Cowes Congregational Church, Clare Lallow Grid Iron Works (former sea plane factory) and the coastguard cottages..
50-100 years	HTL	✖	Further loss or properties to inundation.	✖	Inundation would impact infrastructure - important transport links and commercial sites.	✖✖	Intertidal habitat loss through coastal squeeze. No opportunities for habitat creation at undefended locations. Potential impacts on SAC conservtaion objectives.	O	Existing landscape maintained.	O	No change expected.	✖	Temporary and minor impacts on water quality during defence works.	✖	Defences to protect most assets, though some damage could occur from flooding if the sea defences are not raised. Particularly at specific locations, e.g. the former East Cowes Congregational Church, Clare Lallow Grid Iron Works (former sea plane factory) and the coastguard cottages..
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Need to develop exit plan for affected infrastructure.		Potential requirement to compensate for habitat losses.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		Monitor and record all features; may need to develop exit plan for specific features.

PDZ:	1	**Policy Unit Name:**	East Cowes Outer Esplanade
MU:	MAN1A	**Policy Unit Reference:**	PU1A.6

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✖	Single residential property lost to inundation near Spring Hill.	✖	Flooding to impact main waterfront access road.	✖	Coastal squeeze to result in loss of sandflats within Solent Maritime SAC.	O	Existing landscape maintained.	O	No change expected.	✖	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
20-50 years	NAI	O	No further loss of property.	✖✖	Flooding and erosion to result in loss of main waterfront access road.	✓	Natural roll back of coast enabled, minor opportunity for sandflat gain.	✓	Coastline, part of AONB, to return to more natural state.	✖	Some loss (not significant) of grade 3 agricultural soils due to erosion.	O	No change to water quality.	✖	Loss to erosion of small section of designated park and garden (Norris Castle).
50-100 years	NAI	O	No further loss of property.	✖	Sewage works infrastructure impacted by erosion.	✓	Natural roll back of coast enabled, minor opportunity for sandflat gain.	✓	Coastline, part of AONB, to return to more natural state.	✖	Some loss (not significant) of grade 3 agricultural soils due to erosion.	O	No change to water quality.	✖	Loss to erosion of small section of designated park and garden (Norris Castle).
Mitigation Measures/Environmental Opportunities			Liaison with owner of property.		Need to develop exit / relocation plan for affected infrastructure.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	1	**Policy Unit Name:**	Central Medina – NW
MU:	MAN1B	**Policy Unit Reference:**	PU1B.1

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	O	No loss expected.	✖	Inundation to impact cycle way.	✓✓	Natural evolution of features of nature conservation interest, and support of important bird populations. Opportunities for creation of important intertidal habitat.	O	Localised changes in landscape associated with inundation in particular locations, though maintenance of overall character.	✖	Some loss (not significant) of grade 3 agricultural soils due to inundation.	O	No change to water quality.	O	No noted features.
20-50 years	NAI	O	No loss expected.	✖	Inundation to impact cycle way.	✓✓	Natural evolution of features of nature conservation interest, and support of important bird populations. Opportunities for creation of important intertidal habitat.	O	Localised changes in landscape associated with inundation in particular locations, though maintenance of overall character.	✖	Some loss (not significant) of grade 3 agricultural soils due to inundation.	O	No change to water quality.	O	No noted features.
50-100 years	NAI	O	No loss expected.	✖	Inundation to impact cycle way.	✓✓	Natural evolution of features of nature conservation interest, and support of important bird populations. Opportunities for creation of important intertidal habitat.	O	Localised changes in landscape associated with inundation in particular locations, though maintenance of overall character.	✖	Some loss (not significant) of grade 3 agricultural soils due to inundation.	O	No change to water quality.	O	No noted features.
Mitigation Measures/Environmental Opportunities			No mitigation required.		Consider re-routing of cycle way.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.

PDZ:	1	**Policy Unit Name:**	West Medina Mills
MU:	MAN1B	**Policy Unit Reference:**	PU1B.2

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	O	No loss expected.	✓	Maintenance of important industrial sites and residential properties.	✗	Loss of important intertidal habitats as a result of coastal squeeze.	O	Localised changes associated with defence construction, though no change to broad character.	O	Some loss (not significant) of grade 3 agricultural soils due to inundation.	✗	Temporary and minor impacts on water quality during defence works.	O	No noted features.
20-50 years	HTL	O	No loss expected.	✓	Maintenance of important industrial sites and residential properties.	✗	Loss of important intertidal habitats as a result of coastal squeeze.	O	Localised changes associated with defence construction, though no change to broad character.	O	Some loss (not significant) of grade 3 agricultural soils due to inundation.	✗	Temporary and minor impacts on water quality during defence works.	O	No noted features.
50-100 years	HTL	O	No loss expected.	✓	Maintenance of important industrial sites and residential properties.	✗	Loss of important intertidal habitats as a result of coastal squeeze.	O	Localised changes associated with defence construction, though no change to broad character.	O	Some loss (not significant) of grade 3 agricultural soils due to inundation.	✗	Temporary and minor impacts on water quality during defence works.	O	No noted features.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required		Potential requirement to compensate for habitat losses.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	1	**Policy Unit Name:**	Central Medina – SW
MU:	MAN1B	**Policy Unit Reference:**	PU1B.3

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	✓	Where defences are maintained tidal inundation of Dodnor Cottages and properties at Riverview Park would be abated.	✗	Inundation of farmland and coastal pathway - minor losses.	O	Natural coastal evolution allowed. Natural coastal squeeze in some locations and loss of intertidal habitat. However, opportunities for habitat creation under the Viaduct near Dodnor Cottages (presently defended). Small area of club rush swamp south of Medina Valley Centre to be altered and eventually lost under indundation.	O	Localised changes associated with inundation, though no change to broad character.	O	Some loss (not significant) of grade 3 agricultural soils due to inundation.	O	No change to water quality.	O	No noted features.
20-50 years	NAI	O	Increased risk of tidal inundation on residential properties as tidal flood risk increases.	O	No further significant loss expected.	O	As above.	O	Localised changes associated with inundation, though no change to broad character.	O	Some loss (not significant) of grade 3 agricultural soils due to inundation.	O	No change to water quality.	O	No noted features.
50-100 years	NAI	✗	Increased risk of tidal inundation on residential properties as tidal flood risk increases.	O	No further significant loss expected.	O	As above.	O	Localised changes associated with inundation, though no change to broad character.	O	Some loss (not significant) of grade 3 agricultural soils due to inundation.	O	No change to water quality.	O	No noted features.

Mitigation Measures/Environmental Opportunities		Need to develop exit plan for affected properties.		Consider re-routing of pathways and liaison with landowners.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.

PDZ:	1	**Policy Unit Name:**	Newport Harbour
MU:	MAN1B	**Policy Unit Reference:**	PU1B.4

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓	Function of harbour and town maintained.	✓	Function of harbour and town maintained.	✗	Loss of designated intertidal habitat as a result of coastal squeeze.	O	No change to broad character. Potential for some improvement in visual amenity with defence upgrades.	O	No change expected.	✗	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
20-50 years	HTL	✓	Function of harbour and town maintained.	✓	Function of harbour and town maintained.	✗	Loss of designated intertidal habitat as a result of coastal squeeze.	O	No change to broad character. Potential for some improvement in visual amenity with defence upgrades.	O	No change expected.	✗	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
50-100 years	HTL	✓	Function of harbour and town maintained.	✓	Function of harbour and town maintained.	✗	Loss of designated intertidal habitat as a result of coastal squeeze.	O	No change to broad character. Potential for some improvement in visual amenity with defence upgrades.	O	No change expected.	✗	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		Potential requirement to compensate for habitat losses.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	1	**Policy Unit Name:**	Central Medina –East
MU:	MAN1B	**Policy Unit Reference:**	PU1B.5

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	✗✗	Residences at Island Harbour impacted by tidal flooding if private defences are not maintained.	✗✗	If private defences are not maintained parts of Island Harbour and Folly Works will be lost to tidal flooding.	✓✓	The coast will roll back naturally, with the potential for expansion of intertidal flats. Potential for alteration of swamp and reedbed habitats as a result of more frequent and extensive saline inundation.	O	Inundation will lead to localised changes, though broad character not altered.	✗	Flooding will result in partial inundation of closed landfill site, posing a risk to the stability of the site. Inundation will result in loss of grade 1, 2 and 3 agricultural soils.	✗✗	Potential adverse effects on water quality if landfill is impacted by floding.	✗	Listed Building (Medina House) subject to inundation.
20-50 years	NAI	O	No further significant loss expected.	O	No further significant loss expected.	✓✓	The coast will roll back naturally, with the potential for expansion of intertidal flats. Potential for alteration of swamp and reedbed habitats as a result of more frequent and extensive saline inundation.	O	Inundation will lead to localised changes, though broad character not altered.	✗	Flooding will result in partial inundation of closed landfill site, posing a risk to the stability of the site. Inundation will result in loss of grade 1, 2 and 3 agricultural soils.	✗✗	Potential adverse effects on water quality if landfill is impacted by floding.	✗	Listed Building (Medina House) subject to inundation.

50-100 years	NAI	O	No further significant loss expected.	O	No further significant loss expected.	✓✓	The coast will roll back naturally, with the potential for expansion of intertidal flats. Potential for alteration of swamp and reedbed habitats as a result of more frequent and extensive saline inundation.	O	Inundation will lead to localised changes, though broad character not altered.	✗	Flooding will result in partial inundation of closed landfill site, posing a risk to the stability of the site. Inundation will result in loss of grade 1, 2 and 3 agricultural soils.	✗✗	Potential adverse effects on water quality if landfill is impacted by floding.	✗	Listed Building (Medina House) subject to inundation.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Need to develop exit / relocation plan for affected infrastructure.		No mitigation required.		No mitigation required.		Need to investigate potential contamination issues. Liaison with landowners regarding loss of high quality agricultural land.		Need to investigate potential contamination issues.		Monitor and record all features; may need to develop exit plan for specific features.

Annex F-IV Table 2 Assessment of Preferred Policy Options for PDZ 2 (Ryde and the North-East Coastline)

PDZ:	2	**Policy Unit Name:**	Osborne Bay
MU:	MAN2A	**Policy Unit Reference:**	PU2A.1

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	O	No loss expected.	✖	Erosion to impact slipways and coastal tracks - no significant losses.	✓✓	Natural coastal roll back enabled, allowing for more natural intertidal sandflats with seagrass beds in the shallows and natural evolution of King's Quay. Benefits for habitats of nature conservation importance and associated bird populations.	✓	Return to more 'natural' landscape.	O	Some loss (not significant) of grade 3 and 4 agricultural soils due to erosion.	O	No change to water quality.	✖	Loss of historic gardens and some Listed Buildings relating to Osborne House (Registered Park and Garden) to erosion.
20-50 years	NAI	✖✖	Coastal erosion to impact 2 properties near King's Quay between 2nd and 3rd epoch.	✖	Erosion to impact slipways and coastal tracks - no significant losses.	✓✓	Natural coastal roll back enabled, allowing for more natural intertidal sandflats with seagrass beds in the shallows and natural evolution of King's Quay. Benefits for habitats of nature conservation importance and associated bird populations.	✓	Return to more 'natural' landscape.	O	Some loss (not significant) of grade 3 and 4 agricultural soils due to erosion.	O	No change to water quality.	✖	Increasing loss of historic gardens and some Listed Buildings relating to Osborne House (Registered Park and Garden) to erosion.
50-100 years	NAI	✖✖	Coastal erosion to impact 2 properties near King's Quay between 2nd and 3rd epoch.	✖	Erosion to impact slipways and coastal tracks - no significant losses.	✓✓	Natural coastal roll back enabled, allowing for more natural intertidal sandflats with seagrass beds in the shallows and natural evolution of King's Quay. Benefits for habitats of nature conservation importance and associated bird populations.	✓	Return to more 'natural' landscape.	O	Some loss (not significant) of grade 3 and 4 agricultural soils due to erosion.	O	No change to water quality.	✖✖	Increasing loss of historic gardens and some Listed Buildings relating to Osborne House (Registered Park and Garden) to erosion.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Consider relocation of pathways and maintenance requirements for slipways.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor and record all features.

PDZ:	2	**Policy Unit Name:**	Woodside
MU:	MAN2A	**Policy Unit Reference:**	PU2A.2

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	✖✖	6 properties at Ghapal lost to erosion, and a portion of the Holiday Park.	✖	Minor losses of wooded coastline to erosion.	O	Coast allowed to roll back naturally; no significant changes to nature conservation features.	O	Natural evolution of landscape.	O	Some loss (not significant) of grade 3 and 4 agricultural soils due to erosion.	O	No change to water quality.	O	No noted features.

20-50 years	NAI	✖	Loss of one further property at Ghapal.	✖	Minor losses of wooded coastline to erosion.	O	Coast allowed to roll back naturally; no significant changes to nature conservation features.	O	Natural evolution of landscape.	O	Some loss (not significant) of grade 3 and 4 agricultural soils due to erosion.	O	No change to water quality.	O	No noted features.
50-100 years	NAI	O	No further losses expected.	✖	Minor losses of wooded coastline to erosion.	O	Coast allowed to roll back naturally; no significant changes to nature conservation features.	O	Natural evolution of landscape.	O	Some loss (not significant) of grade 3 and 4 agricultural soils due to erosion.	O	No change to water quality.	O	No noted features.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.

PDZ:	2	**Policy Unit Name:**	Western Wootton Creek
MU:	MAN2B	**Policy Unit Reference:**	PU2B.1

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	✖	Creek margins subject to inundation. Impacts on several properties off New Road (though private defences may prevent this).	✖	Inundation to impact slipways, moorings and boatyard sites, portions of the Holiday Village and possibly Wootton Bridge (though private defences may prevent this).	✔✔	Natural evolution of features of conservation interest. Intertidal flats have potential to expand, around Lambsleaze Copse and Holiday Village.	O	Local changes as a result of inundation of creek margins, though no change to broad landscape character or AONB.	O	Supports the natural evolution of the geologically unique Chapel Point. Some loss (not significant) of grade 3 and 4 agricultural soils due to inundation.	O	No change to water quality.	O	No noted features.
20-50 years	NAI	✖✖	Creek margins subject to inundation. Impacts on several additional properties off New Road, particularly near the Holiday Village (though private defences may prevent this).	✖	Inundation to impact slipways, moorings and boatyard sites, portions of the Holiday Village and possibly Wootton Bridge (though private defences may prevent this).	✔✔	Natural evolution of features of conservation interest. Intertidal flats have potential to expand, around Lambsleaze Copse and Holiday Village.	O	Local changes as a result of inundation of creek margins, though no change to broad landscape character or AONB.	O	Supports the natural evolution of the geologically unique Chapel Point. Some loss (not significant) of grade 3 and 4 agricultural soils due to inundation.	O	No change to water quality.	O	No noted features.
50-100 years	NAI	✖✖	Creek margins subject to inundation. Impacts on several additional properties off New Road, particularly near the Holiday Village (though private defences may prevent this).	✖	Inundation to impact slipways, moorings and boatyard sites, portions of the Holiday Village and possibly Wootton Bridge (though private defences may prevent this).	✔✔	Natural evolution of features of conservation interest. Intertidal flats have potential to expand, around Lambsleaze Copse and Holiday Village.	O	Local changes as a result of inundation of creek margins, though no change to broad landscape character or AONB.	O	Supports the natural evolution of the geologically unique Chapel Point. Some loss (not significant) of grade 3 and 4 agricultural soils due to inundation.	O	No change to water quality.	O	No noted features.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Consider opportunities for relocation of shoreline assets and maintance of moorings and slipways.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.

PDZ:	2	**Policy Unit Name:**	South-west Wootton Creek
MU:	MAN2B	**Policy Unit Reference:**	PU2B.2

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✔✔	Properties near Wootton Bridge protected assuming upgrade of defences.	✔✔	Assets protected assuming upgrade of defences.	✖	Coastal squeeze and loss of intertidal habitat.	O	Inundation prevented - no change to to landscape. Minor changes associated with defence upgrades.	O	Natural evolution of coastline prevented. No change to soils / geology.	✖	Temporary and minor impacts on water quality during defence works.	✔	Listed Buildings protected.

20-50 years	HTL	✓✓	Properties near Wootton Bridge protected assuming upgrade of defences.	✓✓	Assets protected assuming upgrade of defences.	✖	Coastal squeeze and loss of intertidal habitat.	O	Inundation prevented - no change to to landscape. Minor changes associated with defence upgrades.	O	Natural evolution of coastline prevented. No change to soils / geology.	✖	Temporary and minor impacts on water quality during defence works.	✓	Listed Buildings protected.
50-100 years	HTL	✓✓	Properties near Wootton Bridge protected assuming upgrade of defences.	✓✓	Assets protected assuming upgrade of defences.	✖	Coastal squeeze and loss of intertidal habitat.	O	Inundation prevented - no change to to landscape. Minor changes associated with defence upgrades.	O	Natural evolution of coastline prevented. No change to soils / geology.	✖	Temporary and minor impacts on water quality during defence works.	✓	Listed Buildings protected.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		Potential requirement to compensate for habitat losses.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	2	**Policy Unit Name:**	Old Mill Pond
MU:	MAN2B	**Policy Unit Reference:**	PU2B.3

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	MR	O	No effects on property or communities.	O	No effects on important assets.	✓✓	Gradual return to more natural conditions, with benefits for nature conservation.	✓	Gradual change to more natural landscape with inundation and change in habitats. Local changes only.	O	Minor and localised effects on grade 4 agricultural soils as a result of saline intrusion.	✓	Changes to status of water in Old Mill Pond with increasing saline intrusion - return to more natural conditions.	O	No impacts on features expected.
20-50 years	MR	O	No effects on property or communities.	O	No effects on important assets.	✓✓	Gradual return to more natural conditions, with benefits for nature conservation.	✓	Gradual change to more natural landscape with inundation and change in habitats. Local changes only.	O	Minor and localised effects on grade 4 agricultural soils as a result of saline intrusion.	✓	Changes to status of water in Old Mill Pond with increasing saline intrusion - return to more natural conditions.	O	No impacts on features expected.
50-100 years	MR	O	No effects on property or communities.	O	No effects on important assets.	✓✓	Gradual return to more natural conditions, with benefits for nature conservation.Though there will be changes in the Mill Pond salinity, changes in habitat types	✓	Gradual change to more natural landscape with inundation and change in habitats. Local changes only.	O	Minor and localised effects on grade 4 agricultural soils as a result of saline intrusion.	✓	Changes to status of water in Old Mill Pond with increasing saline intrusion - return to more natural conditions.	O	No impacts on features expected.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.

PDZ:	2	**Policy Unit Name:**	South-east Wootton Creek
MU:	MAN2B	**Policy Unit Reference:**	PU2B.4

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓	Properties near Barge Lane protected assuming upgrade of defences.	✓✓	Assets protected assuming upgrade of defences.	✖	Creek prevented from evolving naturally - continued loss of saltmarsh and intertidal habitat from coastal squeeze.	O	Inundation prevented - no change to to landscape. Minor changes associated with defence upgrades.	O	Natural evolution of coastline prevented. No change to soils / geology.	✖	Temporary and minor impacts on water quality during defence works.	O	No noted features.

20-50 years	HTL	✓✓	Properties near Barge Lane protected assuming upgrade of defences.	✓✓	Assets protected assuming upgrade of defences.	✗	Creek prevented from evolving naturally - continued loss of saltmarsh and intertidal habitat from coastal squeeze.	O	Inundation prevented - no change to to landscape. Minor changes associated with defence upgrades.	O	Natural evolution of coastline prevented. No change to soils / geology.	✗	Temporary and minor impacts on water quality during defence works.	O	No noted features.
50-100 years	HTL	✓✓	Properties near Barge Lane protected assuming upgrade of defences.	✓✓	Assets protected assuming upgrade of defences.	✗	Creek prevented from evolving naturally - continued loss of saltmarsh and intertidal habitat from coastal squeeze.	O	Inundation prevented - no change to to landscape. Minor changes associated with defence upgrades.	O	Natural evolution of coastline prevented. No change to soils / geology.	✗	Temporary and minor impacts on water quality during defence works.	O	No noted features.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		Potential requirement to compensate for habitat losses.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	2	**Policy Unit Name:**	Eastern Wootton Creek
MU:	MAN2B	**Policy Unit Reference:**	PU2B.5

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	O	Properties set back from shoreline and therefore not at risk from inundation. Some risk to properties at Barge Lane if private defences not maintained.	✗	Jetties / pontoons / slipway and area of land to west of ferry terminal (yacht club / works site) at risk from inundation.	✓✓	NAI may progressively increase the amount of unmodified water frontage, helping support the development of intertidal mudflats and saltmarsh.	O	Localised changes with inudation of low lying areas. No adverse effects on landscape character.	✗	Natural processes allowed. Minor loss of grade 3 agricultural soils to inundation.	O	No change to water quality.	O	No noted features.
20-50 years	NAI	O	Properties set back from shoreline and therefore not at risk from inundation. Some risk to properties at Barge Lane if private defences not maintained.	✗	Jetties / pontoons / slipway and area of land to west of ferry terminal (yacht club / works site) at risk from inundation.	✓✓	NAI may progressively increase the amount of unmodified water frontage, helping support the development of intertidal mudflats and saltmarsh.	O	Localised changes with inudation of low lying areas. No adverse effects on landscape character.	✗	Natural processes allowed. Minor loss of grade 3 agricultural soils to inundation.	O	No change to water quality.	O	No noted features.
50-100 years	NAI	O	Properties set back from shoreline and therefore not at risk from inundation. Some risk to properties at Barge Lane if private defences not maintained.	✗	Jetties / pontoons / slipway and area of land to west of ferry terminal (yacht club / works site) at risk from inundation.	✓✓	NAI may progressively increase the amount of unmodified water frontage, helping support the development of intertidal mudflats and saltmarsh.	O	Localised changes with inudation of low lying areas. No adverse effects on landscape character.	✗	Natural processes allowed. Minor loss of grade 3 agricultural soils to inundation.	O	No change to water quality.	O	No noted features.
Mitigation Measures/Environmental Opportunities			No mitigation required.		Consider maintance of moorings and slipways.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.

PDZ:	2	**Policy Unit Name:**	Fishborne Ferry Terminal
MU:	MAN2B	**Policy Unit Reference:**	PU2B.6

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓	Properties / community protected.	✓✓	Key transport assets protected.	O	No significant implications for features in this location.	O	Defended coastline maintained - no change to landscape character.	O	Natural evolution of coastline prevented. No change to soils / geology.	✗	Temporary and minor impacts on water quality during defence works.	O	No noted features.

20-50 years	HTL	✓✓	Properties / community protected.	✓✓	Key transport assets protected.	O	No significant implications for features in this location.	O	Defended coastline maintained - no change to landscape character.	O	Natural evolution of coastline prevented. No change to soils / geology.	✖	Temporary and minor impacts on water quality during defence works.	O	No noted features.
50-100 years	HTL	✓✓	Properties / community protected.	✓✓	Key transport assets protected.	O	No significant implications for features in this location.	O	Defended coastline maintained - no change to landscape character.	O	Natural evolution of coastline prevented. No change to soils / geology.	✖	Temporary and minor impacts on water quality during defence works.	O	No noted features.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	2	**Policy Unit Name:**	Outer Eastern Creek
MU:	MAN2B	**Policy Unit Reference:**	PU2B.7

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓	Properties / community protected.	✓✓	Key transport assets protected.	O	No significant implications for features in this location.	O	Defended coastline maintained - no change to landscape character.	O	Natural evolution of coastline prevented. No change to soils / geology.	✖	Temporary and minor impacts on water quality during defence works.	O	No noted features.
20-50 years	HTL	✓✓	Properties / community protected.	✓✓	Key transport assets protected.	O	No significant implications for features in this location.	O	Defended coastline maintained - no change to landscape character.	O	Natural evolution of coastline prevented. No change to soils / geology.	✖	Temporary and minor impacts on water quality during defence works.	O	No noted features.
50-100 years	MR	✖✖	Properties at point affected by erosion and inundation.	✖	Potential implications for the adjacent ferry terminal.	O	No significant implications for features in this location.	O	Minor localised changes - overall character retained.	O	Natural evolution of coastline encouraged. Minor loss of grade 3 agricultural soils.	O	No change to water quality.	O	No noted features.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties in long term.		Consider maintenance / relocation of ferry infrastructure in long term.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	2	**Policy Unit Name:**	Quarr and Binstead
MU:	MAN2B	**Policy Unit Reference:**	PU2B.8

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	✖✖	Coastal retreat may place a property at Pelhamfield at risk, and a single property at The Keys.	✖	Minor loss - slipways impacted.	✓	Coast allowed to roll back naturally with benefits for nature conservation. Potential for gain of intertidal habitats. Potentiall loss of coastal grazing marsh and shingle habitats.	✓	Return to more natural landscape.	✖	Natural evolution of coastline. Minor loss of grade 3 agricultural soils.	O	No change to water quality.	O	No loss of designated heritage assets (i.e. Quarr Abbey SM).
20-50 years	NAI	✖✖	Coastal retreat may place several properties on the outskirts of Pelhamfield at risk.	O	No additional loss.	✓	Coast allowed to roll back naturally with benefits for nature conservation. Potential for gain of intertidal habitats. Potentiall loss of coastal grazing marsh and shingle habitats.	✓	Return to more natural landscape.	✖	Natural evolution of coastline. Minor loss of grade 3 agricultural soils.	O	No change to water quality.	O	Loss of part of the northern edge of the designated heritage assets (i.e. Quarr Abbey SM).

50-100 years	NAI	✖✖	Coastal retreat may place several properties on the outskirts of Pelhamfield at risk.	O	No additional loss.	✓	Coast allowed to roll back naturally with benefits for nature conservation. Potential for gain of intertidal habitats. Potentiall loss of coastal grazing marsh and shingle habitats.	✓	Return to more natural landscape.	✖	Natural evolution of coastline. Minor loss of grade 3 agricultural soils.	O	No change to water quality.	O	Loss of the northern side of the designated heritage assets (i.e. Quarr Abbey SM).
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Consider maintenance of slipways.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.

PDZ:	2	**Policy Unit Name:**	Ryde
MU:	MAN2C	**Policy Unit Reference:**	PU2C.1

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓	Maintenance of the existing defences will ensure the residential properties are protected from coastal erosion and flooding.	✓✓	The defences will provide adequate protection against flooding which will protect the railway line, town centre roads, the pier, ferry terminal and st. John's park.	✖	Loss of important intertidal habitat to coastal squeeze. Potential for change to seagrass habitat.	O	Existing landscape maintained. Minor local changes with defence upgrades.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
20-50 years	HTL	✓✓	Maintenance of the existing defences will ensure the residential properties are protected from coastal erosion and flooding.	✓✓	The defences will provide adequate protection against flooding which will protect the railway line, town centre roads, the pier, ferry terminal and st. John's park.	✖	Loss of important intertidal habitat to coastal squeeze. Potential for change to seagrass habitat.	O	Existing landscape maintained. Minor local changes with defence upgrades.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
50-100 years	HTL	✓	Increasing risk of flooding and overtopping of defences. Maintenance and improvement of the existing defences imperative as it will ensure the residential properties are protected from coastal erosion and flooding.	✓	Increasing risk of flooding and overtopping of defences. Maintenance and improvement of the existing defences imperative to provide adequate protection of the railway line, town centre roads, the pier, ferry terminal and st. John's park.	✖	Loss of important intertidal habitat to coastal squeeze. Potential for change to seagrass habitat.	O	Existing landscape maintained. Minor local changes with defence upgrades.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
Mitigation Measures/Environmental Opportunities			No mitigation required		No mitigation required		Potential requirement to compensate for habitat losses.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	2	**Policy Unit Name:**	Appley and Puckpool
MU:	MAN2C	**Policy Unit Reference:**	PU2C.2

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓	Properties protected.	✓✓	Assets protected.	✖	Loss of important intertidal habitat to coastal squeeze. Potential for change to seagrass habitat.	O	Existing landscape maintained. Minor local changes with defence upgrades.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	✓	Features protected.

20-50 years	HTL	✓✓	Properties protected.	✓✓	Assets protected.	✖	Loss of important intertidal habitat to coastal squeeze. Potential for change to seagrass habitat.	O	Existing landscape maintained. Minor local changes with defence upgrades.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
50-100 years	HTL	✓✓	Properties protected.	✓✓	Assets protected.	✖	Loss of important intertidal habitat to coastal squeeze. Potential for change to seagrass habitat.	O	Existing landscape maintained. Minor local changes with defence upgrades.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		Potential requirement to compensate for habitat losses.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	2	**Policy Unit Name:**	Springvale to Seaview
MU:	MAN2C	**Policy Unit Reference:**	PU2C.3

			SEA Receptors											
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓	Spring Vale and Seaview community maintained by the defences.	✓✓	Assets and infrastructure maintained.	O	No significant effects expected.	O	Existing landscape maintained. Minor local changes with defence upgrades.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
20-50 years	HTL	✓✓	Spring Vale and Seaview community maintained by the defences.	✓✓	Assets and infrastructure maintained.	O	No significant effects expected.	O	Existing landscape maintained. Minor local changes with defence upgrades.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
50-100 years	HTL	✓	Greater risk of coastal flooding and overtopping of defences.	✓	Greater risk of coastal flooding of the coastal road.	O	No significant effects expected.	O	Existing landscape maintained. Minor local changes with defence upgrades.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	2	**Policy Unit Name:**	Seagrove Bay
MU:	MAN2C	**Policy Unit Reference:**	PU2C.4

			SEA Receptors											
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓	Properties protected.	✓✓	Assets protected.	O	No significant effects expected.	O	Existing landscape maintained. Minor local changes with defence upgrades.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
20-50 years	HTL	✓✓	Properties protected.	✓✓	Assets protected.	O	No significant effects expected.	O	Existing landscape maintained. Minor local changes with defence upgrades.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
50-100 years	HTL	✓✓	Properties protected.	✓✓	Assets protected.	O	No significant effects expected.	O	Existing landscape maintained. Minor local changes with defence upgrades.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

Annex F-IV Table 3 Assessment of Preferred Policy Options for PDZ 3 (Bembridge and Sandown Bay)

PDZ:	3	**Policy Unit Name:**	Priory Bay
MU:	MAN3A	**Policy Unit Reference:**	PU3A.1

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	✓	No features lost.	✓	No features lost.	✓	Natural evolution of features. No significant effects expected.	✓	Localised changes to landscape as a result of natural coastal retreat. No change to character.	✖	Coastal erosion to impact the geological SSSI - potential loss of features.	O	No change to water quality.	✖	Loss of Palaeolithic deposits in Priory Woods.
20-50 years	NAI	✓	No features lost.	✓	No features lost.	✓	Natural evolution of features. No significant effects expected.	✓	Localised changes to landscape as a result of natural coastal retreat. No change to character.	✖	Coastal erosion to impact the geological SSSI - potential loss of features.	O	No change to water quality.	✖	Loss of Palaeolithic deposits in Priory Woods.
50-100 years	NAI	✓	No features lost.	✓	No features lost.	✓	Natural evolution of features. No significant effects expected.	✓	Localised changes to landscape as a result of natural coastal retreat. No change to character.	✖	Coastal erosion to impact the geological SSSI - potential loss of features.	O	No change to water quality.	✖	Loss of Palaeolithic deposits in Priory Woods.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor and record changes.		No mitigation required.		Survey, monitor and record all features; may need to develop exit plan for specific features.

PDZ:	3	**Policy Unit Name:**	The Duver
MU:	MAN3A	**Policy Unit Reference:**	PU3A.2

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓	Defences will protect properties and assets from erosion, though would require significant upgrading to continue to do so. Inundation would continue to impact properties and assets.	✓	Defences will protect properties and assets from erosion, though would require significant upgrading to continue to do so. Inundation would continue to impact properties and assets.	O	No affect on the intertidal habitat in the short term	O	Existing landscape maintained.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	O	The remains of the St Helen's Church (Listed Building) will be protected by the defences.
20-50 years	HTL	✓	Defences will protect properties and assets from erosion, though would require significant upgrading to continue to do so. Inundation would continue to impact properties and assets.	✓	Defences will protect properties and assets from erosion, though would require significant upgrading to continue to do so. Inundation would continue to impact properties and assets.	✖	Potential loss of intertidal habitat to coastal squeeze.	O	Existing landscape maintained.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	O	The remains of the St Helen's Church (Listed Building) will be protected by the defences.
50-100 years	MR	✖	Potential for loss or damage to properties on the end of spit.	✖	Potential for loss or damage to community assets on the end of spit.	✓	Potential for gain of intertidal habitat.	✖	Potential for loss of spit feature - significant local change.	✖	Potential for loss of spit feature.	O	No change to water quality.	O	The remains of the St Helen's Church (Listed Building) could sustain damage from coastal erosion if the defences are not maintained during the MR.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties in long term.		Need to develop exit plan for affected properties in long term.		No mitigation required.		Monitor and record changes. Consider MR options that will retain the feature.		Monitor and record changes. Consider MR options that will retain the feature.		Monitor water quality during works as required.		No mitigation required.

PDZ:	3	**Policy Unit Name:**	St Helens
MU:	MAN3A	**Policy Unit Reference:**	PU3A.3

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✖	With defences kept at current level, inundation of properties would continue.	✖	With defences kept at current level, inundation of assets would continue.	✖	Loss of intertidal flats and saltmarsh as a result of coastal squeeze.	O	Existing landscape maintained.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	O	No noted features.
20-50 years	HTL	✖	With defences kept at current level, inundation of properties would continue.	✖	With defences kept at current level, inundation of assets would continue.	✖	Loss of intertidal flats and saltmarsh as a result of coastal squeeze.	O	Existing landscape maintained.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	O	No noted features.
50-100 years	HTL	✖	With defences kept at current level, inundation of properties would continue.	✖	With defences kept at current level, inundation of assets would continue.	✖	Loss of intertidal flats and saltmarsh as a result of coastal squeeze.	O	Existing landscape maintained.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	O	No noted features.
Mitigation Measures/Environmental Opportunities			Private defences will need to increase protection.		Private defences will need to increase protection.		Potential requirement to compensate for habitat losses.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	3	**Policy Unit Name:**	Embankment Road
MU:	MAN3A	**Policy Unit Reference:**	PU3A.4

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓	Access to residential properties at Bembridge and Forelands maintained.	✓	Road protected	✓	Designated habitats largely protected. Some loss in the intertidal as a result of coastal squeeze.	O	Existing landscape maintained.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	O	No noted features.
20-50 years	HTL	✓	Increasing the height of the road will ensure that access to properties in Bembride and Foreland Point can still be maintained.	✓	Increasing the height of the road will ensure that access to properties in Bembride and Foreland Point can still be maintained.	✓	Designated habitats largely protected. Some loss in the intertidal as a result of coastal squeeze.	O	Existing landscape maintained.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	O	No noted features.
50-100 years	HTL	✓	Increasing the height of the road will ensure that access to properties in Bembride and Foreland Point can still be maintained.	✓	Increasing the height of the road will ensure that access to properties in Bembride and Foreland Point can still be maintained.	✓	Designated habitats largely protected. Some loss in the intertidal as a result of coastal squeeze.	O	Existing landscape maintained.	O	No changes expected.	✖	Temporary and minor impacts on water quality during defence works.	O	No noted features.
Mitigation Measures/Environmental Opportunities			No mitigation required		No mitigation required		No mitigation required.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	3	**Policy Unit Name:**	Bembridge Point
MU:	MAN3A	**Policy Unit Reference:**	PU3A.5

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	**O**	No flood risk to properties since they are behind Embankment Road at Bembridge Point.	**O**	The defences will fail to protect some elements of infrastructure including links to Bembridge Harbour which is a National Trust area.	✓	Coastal erosion and roll back expected, resulting in potential for gain of intertidal habitat but potentialfor loss of dune habitat.	**O**	Coastal erosion and flooding would see significant local change to landscape as a result of inundation.	**O**	Loss of land to flooding, though no 'sensitive' soil/geology features to be impacted.	**O**	No known impacts on water quality.	✖	Potential for loss of protected historic assets (i.e. Spithead Hotel).
20-50 years	NAI	**O**	No flood risk to properties since they are behind Embankment Road at Bembridge Point.	**O**	The defences will fail to protect some elements of infrastructure including links to Bembridge Harbour which is a National Trust area.	✓	Coastal erosion and roll back expected, resulting in potential for gain of intertidal habitat but potentialfor loss of dune habitat.	**O**	Coastal erosion and flooding would see significant local change to landscape as a result of inundation.	**O**	Loss of land to flooding, though no 'sensitive' soil/geology features to be impacted.	**O**	No known impacts on water quality.	✖	Potential for loss of protected historic assets (i.e. Spithead Hotel).
50-100 years	NAI	**O**	No flood risk to properties since they are behind Embankment Road at Bembridge Point.	**O**	The defences will fail to protect some elements of infrastructure including links to Bembridge Harbour which is a National Trust area.	✓	Coastal erosion and roll back expected, resulting in potential for gain of intertidal habitat but potentialfor loss of dune habitat.	**O**	Coastal erosion and flooding would see significant local change to landscape as a result of inundation.	**O**	Loss of land to flooding, though no 'sensitive' soil/geology features to be impacted.	**O**	No known impacts on water quality.	✖	Potential for loss of protected historic assets (i.e. Spithead Hotel).
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Consider options for reinstatement of slipways and wharfs.		Potential requirement to compensate for habitat losses.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	3	**Policy Unit Name:**	Bembridge
MU:	MAN3B	**Policy Unit Reference:**	PU3B.1

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	✓✓	Existing defences continue to protect property.	✓✓	Existing defences continue to protect assets.	✓✓	Natural evolution of designated features allowed. Potential for gain of intertidal habitat.	✓	Natural evolution allowed. Erosion of cliff - localised changes only.	**O**	Natural evolution of coastline. No change to soils / geology.	**O**	No change to water quality.	✖	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI
20-50 years	NAI	✓✓	Existing defences continue to protect property.	✓✓	Existing defences continue to protect assets.	✓✓	Natural evolution of designated features allowed. Potential for gain of intertidal habitat.	✓	Natural evolution allowed. Erosion of cliff - localised changes only.	**O**	Natural evolution of coastline. No change to soils / geology.	**O**	No change to water quality.	✖	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI
50-100 years	NAI	✓✓	Existing defences continue to protect property.	✓✓	Existing defences continue to protect assets.	✓✓	Natural evolution of designated features allowed. Potential for gain of intertidal habitat.	✓	Natural evolution allowed. Erosion of cliff - localised changes only.	**O**	Natural evolution of coastline. No change to soils / geology.	**O**	No change to water quality.	✖	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Survey, monitor and record all features; may need to develop exit plan for specific features.

PDZ:	3	**Policy Unit Name:**	Lane End
MU:	MAN3B	**Policy Unit Reference:**	PU3B.2

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**

0-20 years	HTL	✓✓	Existing defences continue to protect property.	✓✓	Existing defences continue to protect assets.	✗	Natural coastal erosion and succession prevented, but no significant effects expected.	O	Existing landscape maintained.	O	No changes expected.	O	No change to water quality.	✓	Palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI protected
20-50 years	HTL	✓✓	Existing defences continue to protect property.	✓✓	Existing defences continue to protect assets.	✗	Natural coastal erosion and succession prevented, but no significant effects expected.	O	Existing landscape maintained.	O	No changes expected.	O	No change to water quality.	✓	Palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI protected
50-100 years	MR	✓✓	No loss of property.	✓✓	No loss of assets.	✓	No significant effects expected.	✓	Erosion of cliff - localised changes only.	O	Minor loss of land.	O	No change to water quality.	✗	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Survey, monitor and record all features; may need to develop exit plan for specific features.

PDZ:	3	**Policy Unit Name:**	Foreland
MU:	MAN3B	**Policy Unit Reference:**	PU3B.3

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	MR	✓✓	No loss of property.	✓✓	No loss of assets.	✓	No significant effects expected.	✓	Erosion of cliff - localised changes only.	✗	Minor loss of land.	O	No change to water quality.	✗	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI
20-50 years	MR	✓✓	No loss of property.	✓✓	No loss of assets.	✓	No significant effects expected.	✓	Erosion of cliff - localised changes only.	✗	Minor loss of land.	O	No change to water quality.	✗	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI
50-100 years	MR	✓✓	No loss of property.	✓✓	No loss of assets.	✓	No significant effects expected.	✓	Erosion of cliff - localised changes only.	✗	Minor loss of land.	O	No change to water quality.	✗	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Survey, monitor and record all features; may need to develop exit plan for specific features.

PDZ:	3	**Policy Unit Name:**	Foreland Fields
MU:	MAN3B	**Policy Unit Reference:**	PU3B.4

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓	Existing defences continue to protect property.	✓✓	Existing defences continue to protect assets.	✗	Natural coastal erosion and succession prevented, but no significant effects expected.	O	Existing landscape maintained.	O	No changes expected.	O	No change to water quality.	✓	Palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI protected
20-50 years	HTL	✓✓	Existing defences continue to protect property.	✓✓	Existing defences continue to protect assets.	✗	Natural coastal erosion and succession prevented, but no significant effects expected.	O	Existing landscape maintained.	O	No changes expected.	O	No change to water quality.	✓	Palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI protected

50-100 years	MR	✓✓	No loss of property.	✓✓	No loss of assets.	✖	No significant effects expected.	✓	Erosion of cliff - localised changes only.	O	Minor loss of land, and natural changes to geological SSSI.	O	No change to water quality.	✖	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Survey, monitor and record all features; may need to develop exit plan for specific features.

PDZ:	3	**Policy Unit Name:**	Whitecliff Bay
MU:	MAN3B	**Policy Unit Reference:**	PU3B.5

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	✓✓	No loss of property - gardens at risk from erosion.	✓✓	No loss of assets.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Natural evolution allowed. Erosion of cliff - localised changes only.	O	Minor loss of land, and natural changes to geological SSSI.	✖	Transient effects on bathing water quality associated with erosion / suspended sediments.	✖	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI, and the Bembridge School and Cliffs SSSI (Steyne Wood Clay)
20-50 years	NAI	✓✓	No loss of property - gardens at risk from erosion.	✓✓	No loss of assets.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Natural evolution allowed. Erosion of cliff - localised changes only.	O	Minor loss of land, and natural changes to geological SSSI.	✖	Transient effects on bathing water quality associated with erosion / suspended sediments.	✖	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI, and the Bembridge School and Cliffs SSSI (Steyne Wood Clay)
50-100 years	NAI	✓✓	No loss of property - possible stability issues near two properties.	✓✓	No loss of assets.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Natural evolution allowed. Erosion of cliff - localised changes only.	O	Minor loss of land, and natural changes to geological SSSI.	✖	Transient effects on bathing water quality associated with erosion / suspended sediments.	✖	Potential for erosion of palaeoenvironmental deposits relating to the Whitecliff Bay and Bembridge Ledges SSSI, and the Bembridge School and Cliffs SSSI (Steyne Wood Clay)
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Ongoing Bathing Water Quality monitoring will detect effects.		Survey, monitor and record all features; may need to develop exit plan for specific features.

PDZ:	3	**Policy Unit Name:**	Culver Cliff & Red Cliff
MU:	MAN3C	**Policy Unit Reference:**	PU3C.1

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	✓✓	No loss of property.	✖	Loss of sections of pathway to erosion - no significant losses.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Return to more natural landscape.	O	Minor loss of grade 3 and 4 agricultural soils, and natural changes to geological SSSI.	✖	Transient effects on bathing water quality associated with erosion / suspended sediments.	✓	Yaverland Battery SM is likely to remain unaffected.

20-50 years	NAI	✓✓	No loss of property.	✗	Loss of sections of pathway to erosion - no significant losses.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Return to more natural landscape.	O	Minor loss of grade 3 and 4 agricultural soils, and natural changes to geological SSSI.	✗	Transient effects on bathing water quality associated with erosion / suspended sediments.	✓	It is likely that there will be some damage to Yaverland Fort SM from coastal erosion.
50-100 years	NAI	✗	Erosion to impact single property near Sailing Club.	✗	Loss of sections of pathway to erosion - no significant losses.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Return to more natural landscape.	O	Minor loss of grade 3 and 4 agricultural soils, and natural changes to geological SSSI .	✗	Transient effects on bathing water quality associated with erosion / suspended sediments.	✓	There will be loss and damage to Yaverland Fort SM.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Ongoing Bathing Water Quality monitoring will detect effects.		No mitigation required.

PDZ:	3	**Policy Unit Name:**	Yaverland and Eastern Yar Valley
MU:	MAN3C	**Policy Unit Reference:**	PU3C.2

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓	Fluvial and coastal flood defences will protect a significant number of built assets.	✓	The defences will protect important infrastructure including including a sewage works, railway line, main road, museum and potential agricultural land.	✗	Natural erosion and succession of cliffs prevented. No significant effects.	O	Existing landscape maintained.	O	No change expected.	✗	Temporary and minor impacts on water quality during defence works.	O	No effect on features.
20-50 years	HTL	✓	Fluvial and coastal flood defences will protect a significant number of built assets.	✓	The defences will protect important infrastructure including including a sewage works, railway line, main road, museum and potential agricultural land.	✗	Natural erosion and succession of cliffs prevented. No significant effects.	O	Existing landscape maintained.	O	No change expected.	✗	Temporary and minor impacts on water quality during defence works.	O	No effect on features.
50-100 years	HTL	✓	Fluvial and coastal flood defences will protect a significant number of built assets.	✓	The defences will protect important infrastructure including including a sewage works, railway line, main road, museum and potential agricultural land.	✗	Natural erosion and succession of cliffs prevented. No significant effects.	O	Existing landscape maintained.	O	No change expected.	✗	Temporary and minor impacts on water quality during defence works.	O	No effect on features.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	3	**Policy Unit Name:**	Sandown and Shanklin
MU:	MAN3C	**Policy Unit Reference:**	PU3C.3

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓	Property protected.	✓✓	Assets protected.	✗	Natural erosion and succession of cliffs prevented. No significant effects.	O	Existing landscape maintained.	O	No change expected.	✗	Temporary and minor impacts on water quality during defence works.	O	No effect on features.
20-50 years	HTL	✓✓	Property protected.	✓✓	Assets protected.	✗	Natural erosion and succession of cliffs prevented. No significant effects.	O	Existing landscape maintained.	O	No change expected.	✗	Temporary and minor impacts on water quality during defence works.	O	No effect on features.

50-100 years	HTL	✓✓	Property protected.	✓✓	Assets protected.	✗	Natural erosion and succession of cliffs prevented. No significant effects.	O	Existing landscape maintained.	O	No change expected.	✗	Temporary and minor impacts on water quality during defence works.	O	No effect on features.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	3	**Policy Unit Name:**	Luccombe
MU:	MAN3C	**Policy Unit Reference:**	PU3C.4

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	✓✓	No loss of property.	✓✓	No loss of assets.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Natural evolution of landscape continues - no changes to character.	✗	Minor loss of grade 4 and 5 agricultural soils.	O	No change to water quality.	O	No features noted.
20-50 years	NAI	✓✓	No loss of property.	✓✓	No loss of assets.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Natural evolution of landscape continues - no changes to character.	✗	Minor loss of grade 4 and 5 agricultural soils.	O	No change to water quality.	O	No features noted.
50-100 years	NAI	✓✓	No loss of property.	✓✓	No loss of assets.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Natural evolution of landscape continues - no changes to character.	✗	Minor loss of grade 4 and 5 agricultural soils.	O	No change to water quality.	O	No features noted.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.

Annex F-IV Table 4 Assessment of Preferred Policy Options for PDZ 4 (Ventnor and the Undercliff)

PDZ:	4	**Policy Unit Name:**	Dunnose
MU:	MAN4A	**Policy Unit Reference:**	PU4A.1

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	✓✓	No loss of property.	✗	Coastal pathway impacted by erosion - no significant losses.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Natural evolution of landscape continues - no changes to character.	✗	Minor loss of grade 4 and 5 agricultural soils.	O	No change to water quality.	O	No features noted.
20-50 years	NAI	✓✓	No loss of property.	✗	Coastal pathway impacted by erosion - no significant losses.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Natural evolution of landscape continues - no changes to character.	✗	Minor loss of grade 4 and 5 agricultural soils.	O	No change to water quality.	O	No features noted.
50-100 years	NAI	✓✓	No loss of property.	✗	Coastal pathway impacted by erosion - no significant losses.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Natural evolution of landscape continues - no changes to character.	✗	Minor loss of grade 4 and 5 agricultural soils.	O	No change to water quality.	O	No features noted.
Mitigation Measures/Environmental Opportunities			No mitigation required.		Consider re-routing of pathway.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.

PDZ:	4	**Policy Unit Name:**	Ventnor & Bonchurch
MU:	MAN4A	**Policy Unit Reference:**	PU4A.2

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓	No loss of property.	✓✓	No loss of assets.	O	Natural erosion and succession of cliffs prevented. Coastal habitats inland of defences protected.	O	Existing landscape maintained.	O	No change expected.	✗	Temporary and minor impacts on water quality during defence works.	✓✓	Features protected.
20-50 years	HTL	✓✓	No loss of property.	✓✓	No loss of assets.	O	Natural erosion and succession of cliffs prevented. Coastal habitats inland of defences protected.	O	Existing landscape maintained.	O	No change expected.	✗	Temporary and minor impacts on water quality during defence works.	✓✓	Features protected.
50-100 years	HTL	✓✓	No loss of property.	✓✓	No loss of assets.	O	Natural erosion and succession of cliffs prevented. Coastal habitats inland of defences protected.	O	Existing landscape maintained.	O	No change expected.	✗	Temporary and minor impacts on water quality during defence works.	✓✓	Features protected.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	4	**Policy Unit Name:**	St Lawrence Undercliff
MU:	MAN4B	**Policy Unit Reference:**	PU4B.1

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	✓✓	No loss of property.	✖	Coastal pathway impacted by erosion - no significant losses.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Natural evolution of landscape continues - no changes to character.	O	Minor loss of grade 5 agricultural soils, and natural changes to geological SSSI.	O	No change to water quality.	✓	No impact on designated heritage assets.
20-50 years	NAI	✓✓	No loss of property.	✖	Coastal pathway impacted by erosion - no significant losses.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Natural evolution of landscape continues - no changes to character.	O	Minor loss of grade 3 and 4 agricultural soils, and natural changes to geological SSSI.	O	No change to water quality.	✖	Erosion to impact botanical gardens.
50-100 years	NAI	✖	Loss of three properties near Woody Point to erosion.	✖	Coastal pathway impacted by erosion - no significant losses.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Natural evolution of landscape continues - no changes to character.	O	Minor loss of grade 3 and 4 agricultural soils, and natural changes to geological SSSI.	O	No change to water quality.	✖	Erosion to impact botanical gardens.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Consider re-routing of pathway.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.

PDZ:	4	**Policy Unit Name:**	Castlehaven
MU:	MAN4B	**Policy Unit Reference:**	PU4B.2

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓	No loss of property.	✓✓	No loss of assets.	O	Natural erosion and succession of cliffs prevented. No significant effects.	O	Existing landscape maintained.	O	No change expected.	✖	Temporary and minor impacts on water quality during defence works.	✓	Listed Buildings protected.
20-50 years	HTL	✓✓	No loss of property.	✓✓	No loss of assets.	O	Natural erosion and succession of cliffs prevented. No significant effects.	O	Existing landscape maintained.	O	No change expected.	✖	Temporary and minor impacts on water quality during defence works.	✓	Features protected.
50-100 years	MR	✖	Potential for loss of several properties to erosion.	O	Erosion, though no loss of significant assets.	✓	Return to more natural conditions, with rapid coastal retreat and succession.	✓	Natural evolution of landscape continues - no changes to character.	O	Minor loss of grade 5 agricultural soils, and natural changes to geological SSSI.	O	No change to water quality.	✖	Potential for loss of Listed Buildings to erosion.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		Monitor and record all features; may need to develop exit plan for specific features.

PDZ:	4	**Policy Unit Name:**	St Catherines and Blackgang
MU:	MAN4B	**Policy Unit Reference:**	PU4B.3

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**

0-20 years	NAI	✖	Coastal erosion to result in loss of small number of properties.	O	No loss of significant assets.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Natural evolution of landscape continues - no changes to character.	O	Minor loss of grade 5 agricultural soils, and natural changes to geological SSSI.	O	No change to water quality.	O	No loss of designated heritage assets.
20-50 years	NAI	✖	Coastal erosion to result in further loss of properties.	✖✖	Erosion to threaten coast road, portion of theme park and coastal pathways.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Natural evolution of landscape continues - no changes to character.	O	Minor loss of grade 3 and 4 agricultural soils, and natural changes to geological SSSI.	O	No change to water quality.	O	No losses.
50-100 years	NAI	✖	Coastal erosion to result in further loss of properties.	✖✖	Erosion to threaten coast road, portion of theme park and coastal pathways.	✓	Natural evolution of coastline encouraged. No significant effects.	✓	Natural evolution of landscape continues - no changes to character.	O	Minor loss of grade 3 and 4 agricultural soils, and natural changes to geological SSSI.	O	No change to water quality.	✖	Potential for loss of Listed Building to erosion.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Consider options for relocation of assets.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor and record all features; may need to develop exit plan for specific features.

Annex F-IV Table 5 Assessment of Preferred Policy Options for PDZ 5 (South-West Coastline)

PDZ:	5	**Policy Unit Name:**	Central Chale Bay to Compton Bay
MU:	MAN5	**Policy Unit Reference:**	PU5.1

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	O	No loss of property or effect on community as a result of erosion.	✖✖	Coastal erosion in all epochs to result in loss of sections of the A3055 road. No other important assets affected.	✓✓	Nature conservation features (reefs and cliffs) to respond naturally to erosion and sea level rise.	✓	Natural evolution of coastline with unique geology allowed. No change to broad landscape character.	O	Erosion will naturally alter the form/features of a geological SSSI. Minor loss of grade 3 agricultural soils to erosion.	O	No change to water quality.	✖	Erosion will impact sites of interest, although no designated heritage assets will be affected
20-50 years	NAI	✖	Coastal erosion in second and third epochs to result in loss of several properties. Most significant loss involves loss of approx. 5 properties at Brookgreen.	✖✖	Coastal erosion in all epochs to result in loss of sections of the A3055 road. No other important assets affected.	✓✓	Nature conservation features (reefs and cliffs) to respond naturally to erosion and sea level rise.	✓	Natural evolution of coastline with unique geology allowed. No change to broad landscape character.	O	Erosion will naturally alter the form/features of a geological SSSI. Minor loss of grade 3 agricultural soils to erosion.	O	No change to water quality.	✖	Erosion will impact sites of interest, although no designated heritage assets will be affected
50-100 years	NAI	✖	Coastal erosion in second and third epochs to result in loss of several additional properties.	✖✖	Coastal erosion in all epochs to result in loss of sections of the A3055 road. No other important assets affected.	✓✓	Nature conservation features (reefs and cliffs) to respond naturally to erosion and sea level rise.	✓	Natural evolution of coastline with unique geology allowed. No change to broad landscape character.	O	Erosion will naturally alter the form/features of a geological SSSI. Minor loss of grade 3 agricultural soils to erosion.	O	No change to water quality.	✖	Erosion will impact sites of interest, although no designated heritage assets will be affected
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Consider options for relocation of assets.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Survey, monitor and record all features; may need to develop exit plan for specific features.

Annex F-IV Table 6 Assessment of Preferred Policy Options for PDZ 6 (West Wight)

PDZ:	6	**Policy Unit Name:**	Freshwater Bay
MU:	MAN6A	**Policy Unit Reference:**	PU6A.1

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓	No loss of property.	✓✓	No loss of assets.	O	Natural evolution of coastline prevented. No significant effects on designated features expected.	O	Existing landscape maintained.	O	No change expected.	✗	Temporary and minor impacts on water quality during defence works.	✓	Designated features protected.
20-50 years	HTL	✓✓	No loss of property.	✓✓	No loss of assets.	O	Natural evolution of coastline prevented. No significant effects on designated features expected.	O	Existing landscape maintained.	O	No change expected.	✗	Temporary and minor impacts on water quality during defence works.	✓	Designated features protected.
50-100 years	HTL	✓✓	No loss of property.	✓✓	No loss of assets.	O	Natural evolution of coastline prevented. No significant effects on designated features expected.	O	Existing landscape maintained.	O	No change expected.	✗	Temporary and minor impacts on water quality during defence works.	✓	Designated features protected.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	6	**Policy Unit Name:**	Tennyson Down, Alum Bay and Headon Warren
MU:	MAN6A	**Policy Unit Reference:**	PU6A.2

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	O	No losses.	✗	Minor pathways and open land lost to erosion - no major losses.	✓	Natural evolution of cliffs, reefs and sea caves with benefits for nature conservation interests.	✓	Natural evolution of coastal landscape - no change to character.	✓	Natural evolution of unique geological features (The Needles) continues.	O	No change to water quality.	✗	Erosion to threaten Scheduled Monuments and Listed Buildings.
20-50 years	NAI	✗	Loss of small number of properties on the outskirts of Totland to erosion.	✗	Minor pathways and open land lost to erosion - no major losses.	✓	Natural evolution of cliffs, reefs and sea caves with benefits for nature conservation interests.	✓	Natural evolution of coastal landscape - no change to character.	✓	Natural evolution of unique geological features (The Needles) continues.	O	No change to water quality.	✗	Erosion to threaten Scheduled Monuments and Listed Buildings.
50-100 years	NAI	✗	Loss of small number of properties on the outskirts of Totland to erosion.	✗	Minor pathways and open land lost to erosion - no major losses.	✓	Natural evolution of cliffs, reefs and sea caves with benefits for nature conservation interests.	✓	Natural evolution of coastal landscape - no change to character.	✓	Natural evolution of unique geological features (The Needles) continues.	O	No change to water quality.	✗	Erosion to threaten Scheduled Monuments and Listed Buildings.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Consider re-routing of pathways.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Survey, monitor and record all features; may need to develop exit plan for specific features.

PDZ:	6	**Policy Unit Name:**	Totland and Colwell
MU:	MAN6B	**Policy Unit Reference:**	PU6B.1

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓	Some properties could be lost if cliff slumps occur, though the majority of them will be protected.	✓✓	Some assets could be damaged or lost if cliff slumps occur, though the majority of them will be protected.	O	No important features.	O	Existing landscape maintained.	✗✗	HTL will ensure the cliffs cannot be eroded, however the occasional cliff slumping will ensure that the geological SSSI continues to be disturbed.	✗	Temporary and minor impacts on water quality during defence works.	O	Designated asset protected.
20-50 years	HTL	✓✓	Some properties could be lost if cliff slumps occur, though the majority of them will be protected.	✓✓	Some assets could be damaged or lost if cliff slumps occur, though the majority of them will be protected.	O	No important features.	O	Existing landscape maintained.	✗✗	HTL will ensure the cliffs cannot be eroded, however the occasional cliff slumping will ensure that the geological SSSI continues to be disturbed.	✗	Temporary and minor impacts on water quality during defence works.	O	Designated asset protected.
50-100 years	HTL	✓✓	Some properties could be lost if cliff slumps occur, though the majority of them will be protected.	✓✓	Some assets could be damaged or lost if cliff slumps occur, though the majority of them will be protected.	O	No important features.	O	Existing landscape maintained.	✗✗	HTL will ensure the cliffs cannot be eroded, however the occasional cliff slumping will ensure that the geological SSSI continues to be disturbed.	✗	Temporary and minor impacts on water quality during defence works.	O	Designated asset protected.
Mitigation Measures/Environmental Opportunities			Investigations into cliff stability. Action plan and risk assessment for relocating assets.		Investigations into cliff stability. Action plan and risk assessment for relocating assets.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		

PDZ:	6	**Policy Unit Name:**	Central Colwell Bay
MU:	MAN6B	**Policy Unit Reference:**	PU6B.2

			SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	✗✗	Loss of accommodation to erosion at Linstone Chine Holiday Park.	✗	Minor pathways and open land lost to erosion - no major losses.	O	No important features.	✓	Local changes resulting from loss of defences and coastal retreat, though no change to broad landscape character.	✓	Erosion will naturally alter the form/features of the geological SSSI. Minor loss of grade 3 agricultural soils.	O	No change to water quality.	O	No features noted.
20-50 years	NAI	✗✗	Further loss of accommodation at Holiday Park.	✗	Minor pathways and open land lost to erosion - no major losses.	O	No important features.	✓	Local changes resulting from loss of defences and coastal retreat, though no change to broad landscape character.	✓	Erosion will naturally alter the form/features of the geological SSSI. Minor loss of grade 3 agricultural soils.	O	No change to water quality.	O	No features noted.
50-100 years	NAI	✗✗	Further loss of accommodation at Holiday Park.	✗	Minor pathways and open land lost to erosion - no major losses.	O	No important features.	✓	Local changes resulting from loss of defences and coastal retreat, though no change to broad landscape character.	✓	Erosion will naturally alter the form/features of the geological SSSI. Minor loss of grade 3 agricultural soils.	O	No change to water quality.	O	No features noted.

Mitigation Measures/Environmental Opportunities		Need to develop exit plan for affected properties.		Consider re-routing of pathways.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.			

PDZ:	6	**Policy Unit Name:**	Fort Albert
MU:	MAN6B	**Policy Unit Reference:**	PU6B.3

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓	No loss of property.	✓✓	No loss of assets.	O	No important features.	O	Natural evolution of landscape prevented - no change expected.	O	No change expected.	O	No change to water quality.	✓✓	Fort Albert protected
20-50 years	HTL	✓✓	No loss of property.	✓✓	No loss of assets.	O	No important features.	O	Natural evolution of landscape prevented - no change expected.	O	No change expected.	O	No change to water quality.	✓✓	Fort Albert protected
50-100 years	NAI	✖	Potential for loss of residences at Fort Albert to erosion.	✖	Loss of minor pathways and open land to erosion - no major losses.	O	No important features.	✓	Return to more natural landscape over time - localised changes though no alteration of broad character.	O	Minor losses of grade 3 agricultural soils to erosion.	O	No change to water quality.	✖✖	Loss of Fort Albert Listed Building to erosion.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Consider re-routing of pathways.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Survey, monitor and record all features; may need to develop exit plan for specific features.

PDZ:	6	**Policy Unit Name:**	Fort Victoria Country Park
MU:	MAN6B	**Policy Unit Reference:**	PU6B.4

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	O	No properties / community at risk.	✖	Erosion to result in loss of amenity land in Fort Victoria Country Park.	O	No important features.	✓	Natural evolution of cliffed coastline - no significant change to broad character.	✖	Minor losses of grade 3 agricultural soils to erosion.	O	No change to water quality.	O	No loss of designated features, though effects on Country Park.
20-50 years	NAI	O	No properties / community at risk.	✖	Erosion to result in loss of amenity land in Fort Victoria Country Park.	O	No important features.	✓	Natural evolution of cliffed coastline - no significant change to broad character.	✖	Minor losses of grade 3 agricultural soils to erosion.	O	No change to water quality.	O	No loss of designated features, though effects on Country Park.
50-100 years	NAI	O	No properties / community at risk.	✖	Erosion to result in loss of amenity land in Fort Victoria Country Park.	O	No important features.	✓	Natural evolution of cliffed coastline - no significant change to broad character.	✖	Minor losses of grade 3 agricultural soils to erosion.	O	No change to water quality.	O	No loss of designated features, though effects on Country Park.
Mitigation Measures/Environmental Opportunities			No mitigation required.		Consider opportunities for extension of ameninty areas inland.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.

PDZ:	6	**Policy Unit Name:**	Fort Victoria and Norton
MU:	MAN6B	**Policy Unit Reference:**	PU6B.5

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**

0-20 years	HTL	✓✓	No loss of property.	✓✓	No loss of assets.	O	Natural evolution of cliff feature prevented - no significant changes.	O	Natural evolution of landscape prevented. No change to broad landscape character or AONB features.	O	No change expected.	O	No change to water quality.	O	Designated asset protected.
20-50 years	NAI	✗	Defences would fail with erosion affecting several properties and holiday cottages.	✗	Defences would fail with erosion affecting local access road and tourism businesses.	✓	Natural evolution of cliff feature - no significant changes.	✓	Natural evolution of landscape allowed. No change to broad landscape character or AONB features.	✗	Minor losses of grade 3 agricultural soils to erosion.	O	No change to water quality.	O	Designated feature protected (whilst the life of the defences continue).
50-100 years	NAI	✗	Coastal inundation and erosion to impact several properties.	✗	Inundation and erosion to impact pier and slipways, coastal access road and visitor parking.	✓	Natural evolution of cliff features - no significant changes.	✓	Natural evolution of landscape allowed. No change to broad landscape character or AONB features.	✗	Minor losses of grade 3 agricultural soils to erosion.	O	No change to water quality.	O	Fort Victoria LB will be at risk of damage/loss from erosion.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Consider opportunities for relocation of assets.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	6	**Policy Unit Name:**	Norton Spit
MU:	MAN6C	**Policy Unit Reference:**	PU6C.1

		SEA Receptors													
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	O	Coastal erosion prevented, though area at is still at risk from inundation - several properties impacted by flooding.	O	A3054 impacted by flooding.	O	Sand dune, saline lagoon and vegetated shingle designated habitats maintained. Potential for loss of saltmarsh and intertidal habitat to coastal squeeze.	O	Natural evolution of landscape prevented. No change to broad landscape character or AONB features.	O	Natural evolution of coastline prevented. Spit feature maintained.	✗	Temporary and minor impacts on water quality during defence works.	O	No features noted.
20-50 years	HTL	O	Coastal erosion prevented, though area at risk from inundation - several properties impacted by flooding.	O	A3054 impacted by flooding.	O	Sand dune, saline lagoon and vegetated shingle designated habitats maintained. Potential for loss of saltmarsh and intertidal habitat to coastal squeeze.	O	Natural evolution of landscape prevented. No change to broad landscape character or AONB features.	O	Natural evolution of coastline prevented. Spit feature maintained.	✗	Temporary and minor impacts on water quality during defence works.	O	No features noted.
50-100 years	HTL	O	Coastal erosion prevented, though area at risk from inundation - several properties impacted by flooding.	O	A3054 impacted by flooding.	O	Sand dune, saline lagoon and vegetated shingle designated habitats maintained. Potential for loss of saltmarsh and intertidal habitat to coastal squeeze.	O	Natural evolution of landscape prevented. No change to broad landscape character or AONB features.	O	Natural evolution of coastline prevented. Spit feature maintained.	✗	Temporary and minor impacts on water quality during defence works.	O	No features noted.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Need to consider ways of protecting the road.		Potential requirement to compensate for habitat losses.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	6	**Policy Unit Name:**	Western Yar Estuary - west
MU:	MAN6C	**Policy Unit Reference:**	PU6C.2

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	✖	Two properties at risk from inundation.	✖	Boatyard and pontoons at risk from inundation.	✓✓✓	Potential for substantial change to estuary dynamics with implications for designated habitats. Natural evolution of habitats enabled. Potential alteration of lagoon habitats to saline intrusion. Opportunities for gain of intertidal habitat in specific locations, though restricted by estaury slopes and rising sea levels.	✓	Natural evolution of landscape allowed. Potential for significant change to character as inundation may lead to permanent flood breach of the Yar valley.	O	Natural evolution allowed. Minor losses of grade 3 agricultural soils to inundation.	✓	Potential for significant changes to water quality if permanent flood breach of valley occurs.	✖✖	Listed Buildings at risk from inundation.
20-50 years	NAI	✖	Two properties at risk from inundation.	✖	Boatyard and pontoons at risk from inundation.	✓✓✓	Potential for substantial change to estuary dynamics with implications for designated habitats. Natural evolution of habitats enabled. Potential alteration of lagoon habitats to saline intrusion. Opportunities for gain of intertidal habitat in specific locations, though restricted by estaury slopes and rising sea levels.	✓	Natural evolution of landscape allowed. Potential for significant change to character as inundation may lead to permanent flood breach of the Yar valley.	O	Natural evolution allowed. Minor losses of grade 3 agricultural soils to inundation.	✓	Potential for significant changes to water quality if permanent flood breach of valley occurs.	✖✖	Listed Buildings at risk from inundation.
50-100 years	NAI	✖	Two properties at risk from inundation.	✖	Boatyard and pontoons at risk from inundation.	✓✓✓	Potential for substantial change to estuary dynamics with implications for designated habitats. Natural evolution of habitats enabled. Potential alteration of lagoon habitats to saline intrusion. Opportunities for gain of intertidal habitat in specific locations, though restricted by estaury slopes and rising sea levels.	✓	Natural evolution of landscape allowed. Potential for significant change to character as inundation may lead to permanent flood breach of the Yar valley.	O	Natural evolution allowed. Minor losses of grade 3 agricultural soils to inundation.	✓	Potential for significant changes to water quality if permanent flood breach of valley occurs.	✖✖	Listed Buildings at risk from inundation.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Consider opportunities for relocation of assets.		No mitigation required.		No mitigation required.		No mitigation required.		Consider effects on WFD objectives.		Survey, monitor and record all features; may need to develop exit plan for specific features.

PDZ:	6	**Policy Unit Name:**	The Causeway
MU:	MAN6C	**Policy Unit Reference:**	PU6C.3

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓	Causeway Bridge maintained - no risk to property or community.	✓✓	Causeway Bridge maintained - no risk to assets.	✖	Coastal squeeze will result in local loss of designated intertidal mudflat habitat.	O	Existing landscape maintained.	O	No change expected.	✖	Temporary and minor impacts on water quality during defence works.	✓✓	Listed Buildings protected.
20-50 years	HTL	✓✓	Causeway Bridge maintained - no risk to property or community.	✓✓	Causeway Bridge maintained - no risk to assets.	✖	Coastal squeeze will result in local loss of designated intertidal mudflat habitat.	O	Existing landscape maintained.	O	No change expected.	✖	Temporary and minor impacts on water quality during defence works.	✓✓	Listed Buildings protected.
50-100 years	HTL	✓✓	Causeway Bridge maintained - no risk to property or community.	✓✓	Causeway Bridge maintained - no risk to assets.	✖	Coastal squeeze will result in local loss of designated intertidal mudflat habitat.	O	Existing landscape maintained.	O	No change expected.	✖	Temporary and minor impacts on water quality during defence works.	✓✓	Listed Buildings protected.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		Potential requirement to compensate for habitat losses.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	6	**Policy Unit Name:**	Western Yar Estuary - east
MU:	MAN6C	**Policy Unit Reference:**	PU6C.4

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	O	No properties / communities at risk.	✖	Parts of cycleway impacted by inundation.	✓✓✓	Natural habitat evolution enabled, with benefits for nature conservation interest. Gain of intertidal habitat.	✓	Natural evolution of landscape allowed. Potential for significant change to character as inundation may lead to permanent flood breach of the Yar valley.	O	Natural evolution allowed. Minor losses of grade 3 agricultural soils to inundation.	✓	Potential for significant changes to water quality if permanent flood breach of valley occurs.	O	No features noted.
20-50 years	NAI	O	No properties / communities at risk.	✖	Parts of cycleway impacted by inundation.	✓✓✓	Natural habitat evolution enabled, with benefits for nature conservation interest. Gain of intertidal habitat.	✓	Natural evolution of landscape allowed. Potential for significant change to character as inundation may lead to permanent flood breach of the Yar valley.	O	Natural evolution allowed. Minor losses of grade 3 agricultural soils to inundation.	✓	Potential for significant changes to water quality if permanent flood breach of valley occurs.	O	No features noted.
50-100 years	NAI	O	No properties / communities at risk.	✖	Parts of cycleway impacted by inundation.	✓✓✓	Natural habitat evolution enabled, with benefits for nature conservation interest. Gain of intertidal habitat.	✓	Natural evolution of landscape allowed. Potential for significant change to character as inundation may lead to permanent flood breach of the Yar valley.	O	Natural evolution allowed. Minor losses of grade 3 agricultural soils to inundation.	✓	Potential for significant changes to water quality if permanent flood breach of valley occurs.	O	No features noted.
Mitigation Measures/Environmental Opportunities			No mitigation required.		Consider re-routing of cycleway.		No mitigation required.		No mitigation required.		No mitigation required.		Consider effects on WFD objectives.		No mitigation required.

PDZ:	6	**Policy Unit Name:**	Thorley Brook and Barnfields Stream
MU:	MAN6C	**Policy Unit Reference:**	PU6C.5

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	O	No properties / communities at risk.	✓	Cycleway will still be protected along defended section.	O	Coastal squeeze not expected in the short term but this will result in loss of intertidal habitat.	O	Natural evolution of landscape prevented - maintain current status of Freshwater locale.	O	Natural evolution prevented - maintain current landscape.	O	No known impact	O	No features noted.
20-50 years	MR (allow controlled saline inundation)	O	No properties / communities at risk.	✓	Cycleway will still be protected along defended section.	O	Controlled saline intrusion will ensure no coastal squeeze in the short term and will allow freshwater species to slowly adapt to saline inundation.	O	Existing landscape maintained.	O	No change expected.	✖	Temporary and minor impacts on water quality.	O	No features noted.
50-100 years	NAI	O	No properties / communities at risk.	✖	Parts of cycleway impacted by inundation.	✓✓	Natural evolution of features allowed. Opportunity for gain of intertidal mudflat habitat around Barnfields Stream. Potential loss of grazing marsh to inundation.	O	Natural evolution of landscape prevented. No change to broad landscape character or AONB features.	O	Natural evolution allowed. Minor losses of grade 3 agricultural soils to inundation.	O	No change to water quality.	O	No features noted.
Mitigation Measures/Environmental Opportunities			No mitigation required.		Consider re-rotuing cycleway.		No mitigation required.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

PDZ:	6	**Policy Unit Name:**	Yarmouth to Port la Salle
MU:	MAN6C	**Policy Unit Reference:**	PU6C.6

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	HTL	✓✓✓	No loss of property.	✓✓✓	No loss of assets.	O	Coastal squeeze of designated intertidal mudlfats and saltmarsh expected. Grazing habitats maintained.	O	Existing landscape maintained.	O	No change expected.	✖	Temporary and minor impacts on water quality during defence works.	✓✓	Listed Buildings and SM protected.
20-50 years	HTL	✓✓✓	No loss of property.	✓✓✓	No loss of assets.	O	Coastal squeeze of designated intertidal mudlfats and saltmarsh expected. Grazing habitats maintained.	O	Existing landscape maintained.	O	No change expected.	✖	Temporary and minor impacts on water quality during defence works.	✓✓	Listed Buildings and SM protected.
50-100 years	HTL	✓✓✓	No loss of property.	✓✓✓	No loss of assets.	O	Coastal squeeze of designated intertidal mudlfats and saltmarsh expected. Grazing habitats maintained.	O	Existing landscape maintained.	O	No change expected.	✖	Temporary and minor impacts on water quality during defence works.	✓✓	Listed Buildings and SM protected.
Mitigation Measures/Environmental Opportunities			No mitigation required.		No mitigation required.		Potential requirement to compensate for habitat losses.		No mitigation required.		No mitigation required.		Monitor water quality during works as required.		No mitigation required.

ANNEX F-IV –Assessment of Preferred Policy Options for PDZ 7 (North-West Coastline)

PDZ:	7	**Policy Unit Name:**	Bouldnor Copse and Hamstead
MU:	MAN7	**Policy Unit Reference:**	PU7.1

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	O	Initially no loss of property or effect on community resulting from erosion.	✖	No major loss - minor pathways impacted by erosion.	✓✓	Natural evolution of features of conservation interest.	✓	Natural evolution of landscape. No change to Northern Coastal Cliffs landscape character / AONB features.	O	Some loss (not significant) of grade 4 and 5 agricultural soils due to erosion. Natural evolution of geological SSSI.	O	No change to water quality.	O	No loss of features.
20-50 years	NAI	✖✖	Loss of two properties on the outskirts of Cranmore to erosion.	✖	No major loss - minor pathways impacted by erosion.	✓✓	Natural evolution of features of conservation interest.	✓	Natural evolution of landscape. No change to Northern Coastal Cliffs landscape character / AONB features.	O	Some loss (not significant) of grade 4 and 5 agricultural soils due to erosion. Natural evolution of geological SSSI.	O	No change to water quality.	O	No loss of features.
50-100 years	NAI	✖✖	Loss of one further property on the outskirts of Cranmore to erosion.	✖	No major loss - minor pathways impacted by erosion.	✓✓	Natural evolution of features of conservation interest.	✓	Natural evolution of landscape. No change to Northern Coastal Cliffs landscape character / AONB features.	O	Some loss (not significant) of grade 4 and 5 agricultural soils due to erosion. Natural evolution of geological SSSI.	O	No change to water quality.	O	No loss of features.
Mitigation Measures/Environmental Opportunities			Need to develop exit plan for affected properties.		Consider re-routing of pathways.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.

PDZ:	7	**Policy Unit Name:**	Newtown Estuary
MU:	MAN7	**Policy Unit Reference:**	PU7.2

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	O	No loss of property / effects on community.	✖	Periodic inundation of local access roads. No major losses.	✓✓✓	Natural evolution of estuary with overall nature conservation benefits. Creation of new intertidal habitat. Potential changes to grazing marsh, lagoons and shingle habitats as a result of inundation.	✓	Local change to landscape as a result of further inundation of estuary margins. No change to broad landscape character or AONB.	O	Some loss (not significant) of grade 4 and 5 agricultural soils due to inundation.	O	No change to water quality.	✖✖	Portion of Newtown medieval settlement (Scheduled Monument) and Newtown Bridge Listed Building affected by inundation.
20-50 years	NAI	O	No loss of property / effects on community.	✖	Periodic inundation of local access roads. No major losses.	✓✓✓	Natural evolution of estuary with overall nature conservation benefits. Creation of new intertidal habitat. Potential changes to grazing marsh, lagoons and shingle habitats as a result of inundation.	✓	Local change to landscape as a result of further inundation of estuary margins. No change to broad landscape character or AONB.	O	Some loss (not significant) of grade 4 and 5 agricultural soils due to inundation.	O	No change to water quality.	✖✖	Portion of Newtown medieval settlement (Scheduled Monument) and Newtown Bridge Listed Building affected by inundation.

50-100 years	NAI	O	No loss of property / effects on community.	✖	Periodic inundation of local access roads. No major losses.	✓✓✓	Natural evolution of estuary with overall nature conservation benefits. Creation of new intertidal habitat. Potential changes to grazing marsh, lagoons and shingle habitats as a result of inundation.	✓	Local change to landscape as a result of further inundation of estuary margins. No change to broad landscape character or AONB.	O	Some loss (not significant) of grade 4 and 5 agricultural soils due to inundation.	O	No change to water quality.	✖✖	Portion of medieval feature and Newtown Bridge Listed Building affected by inundation.
Mitigation Measures/Environmental Opportunities			No mitigation required.		Consider opportunities for relocation of assets.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		Survey, monitor and record all features; may need to develop exit plan for specific features.

PDZ:	7	**Policy Unit Name:**	Thorness Bay and southern Gurnard Bay
MU:	MAN7	**Policy Unit Reference:**	PU7.3

			SEA Receptors												
Time Period	**Management Activities**		**Population and Communities**		**Land Use, Infrastructure & Material Assets**		**Biodiversity, Habitats and Species**		**Landscape**		**Geology & Soils**		**Water**		**Cultural Heritage**
0-20 years	NAI	O	Erosion and inundation not expected to impact any residential community.	✖	No major losses - small sections of pathway lost to erosion.	✓✓	Natural evolution of coastline with overall nature conservation benefits. Potential for gain of intertidal habitats, particularly within Thorness Bay where retreat will occur.	✓	Local and natural changes to landscape, though no change to broad landscape character or AONB.	O	Some loss (not significant) of grade 3 and 4 agricultural soils due to erosion and inundation. Natural evolution of geological SSSI.	O	No change to water quality.	O	No loss of features.
20-50 years	NAI	O	Erosion and inundation not expected to impact any residential community.	✖	No major losses - small sections of pathway lost to erosion.	✓✓	Natural evolution of coastline with overall nature conservation benefits. Potential for gain of intertidal habitats, particularly within Thorness Bay where retreat will occur.	✓	Local and natural changes to landscape, though no change to broad landscape character or AONB.	O	Some loss (not significant) of grade 3 and 4 agricultural soils due to erosion and inundation. Natural evolution of geological SSSI.	O	No change to water quality.	O	No loss of features.
50-100 years	NAI	O	Erosion and inundation not expected to impact any residential community.	✖	No major losses - small sections of pathway and part of Holiday Park lost to erosion.	✓✓	Natural evolution of coastline with overall nature conservation benefits. Potential for gain of intertidal habitats, particularly within Thorness Bay where retreat will occur.	✓	Local and natural changes to landscape, though no change to broad landscape character or AONB.	O	Some loss (not significant) of grade 3 and 4 agricultural soils due to erosion and inundation. Natural evolution of geological SSSI.	O	No change to water quality.	O	No loss of features.
Mitigation Measures/Environmental Opportunities			No mitigation required.		Consider opportunities for relocation of assets.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.		No mitigation required.

ANNEX F-V: SUMMARY OF THE ENVIRONMENTAL EFFECTS OF THE PREFERRED PLAN

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Annex F-V Table 1 Environmental Effects of the Preferred Plan on each Management Unit. Significant (i.e. national or international designations) effects are given in bold text.

Policy Unit	Policy Summary	Environmental Effects	Mitigation Measures / Opportunities
MAN1A Gurnard Luck, Gurnard Cliff, Gurnard to Cowes Parade, West Cowes, East Cowes, and East Cowes Outer Esplanade	• HTL at Gurnurd Luck in the short – medium term (allow small scale private defences to be maintained, moving to NAI in the long term increasing risks and need for increasing adaptation (NAI would not preclude maintenance of private defences) (A.1). • NAI for all three epochs along Gurnard Cliff to allow natural evolution of the coast (A.2). • HTL all three epochs for the rest of the MU to protect the community from coastal erosion and landslide activation. Recognised that HTL may be difficult to achieve with sea level rise for Cowes and East Cowes and the community may need to consider coastal adaptation. This will be examined further in the Strategy Study. • East Cowes Outer Esplanade - HTL by maintenance of the existing seawall until the end of its effective life, gradually removing the influence of management.	**Positive Effects:** • Holding of the defences at Gurnard in the first epoch will continue to provide protection to recreation play area, properties and road, whilst the second and third epochs could see the creation of internationally and nationally important intertidal habitat in inundated areas but failure to protect some properties, access and recreational areas from flooding and erosion. • NAI along Gurnard Cliff will allow natural processes to operate along the frontage. • With significant improvement of existing defences around Cowes and East Cowes will ensure there are reduced damages/losses to community properties and assets, Listed Buildings, and the roads and infrastructure along these frontages. • Allowing natural roll back of the coast on the East Cowes headland will ensure the sandflats are maintained in the medium to long term. • **Allowing the majority of the estuary to function naturally will help ensure the integrity of the SAC, SPA, Ramsar and SSSI are maintained.** **Negative Effects:** • Potential for properties along Marsh Road, Gurnard Bridge and grazing land around Gurnard Luck to be lost to erosion and inundation, with some loss / damage of grade 3/4 agricultural soils due to inundation of deteriorating defences. There is a pipeline outfall that may be impacted by erosion, with potential for minor effects on shellfish waters and the Ecological Potential of the Solent coastal water body. • Expected loss of coastal gardens along Gurnard Cliff due to erosion in the first 50 years, followed by the gradual loss of a small number of properties off Solent View Road due to erosion in the third epoch. Temporary and minor impacts on water quality during defence maintenance works. • **The existing defences at Cowes and East Cowes will not provide full protection from coastal flooding.** A small number of properties to the west of the ferry terminal, as well as around Cowes and East Cowes may be impacted by inundation if defences are not significantly upgraded to an adequate standard to protect from a 1 in 50 year flood. • Intertidal mudflat habitats lost through coastal squeeze and sandflats in the short term. No opportunities for habitat creation at undefended locations. **Potential impacts on the Solent Maritime SAC conservation objectives and UK BAP targets for mudflats.** • Flooding on the Outer Esplanade would be limited to the west of Spring Hill where a single residential property would be impacted, with the loss of the main waterfront access road in the medium term, and sewage works infrastructure impacted in the long term. • **Partial loss of Norris Castle through erosion, which is a designated Historic Park and Garden.**	• Potential for the need to develop adaptation and exit strategies for the affected properties and infrastructure. • **Will need to compensate for the loss of coastal grazing habitat at Gurnard Luck when the flood plain becomes more brackish, with the colonisation of saltmarsh species and erosion to mudflats. Compensatory habitat will be identified through the Regional Habitat Creation Programme (RHCP).** • No mitigation identified for loss / damage of agricultural soils. • Consider works required to protect/maintain the outfall. • **The small losses of habitat from the entrance of the Medina Estuary will need to be compensated for through the RHCP.** • Monitor and record all historic features - may need to develop exit plan for specific features.
MAN1B Central Medina NW, West Medina Mills, Central SW and East, and Newport Harbour	• NAI would not preclude maintenance of private defences for the majority of the estuary, except HTL through private and public defences at Medina Mills and Newport Harbour.	**Positive Effects:** • **NAI would allow the natural evolution of features (e.g. mudflat and saltmarsh) of international nature conservation importance (Solent Maritime SAC, Solent and Southampton Water SPA and Ramsar site), which would support internationally important bird populations, particularly wader roost sites.** • Potential for alteration of swamp and reedbed habitats on the east side of the Medina estuary as a result of more frequent and extensive saline inundation, though there are less topographic restrictions than on the west side of the estuary for the habitats to migrate inland. • The maintenance of private defences would ensure that important commercial properties and nearby residential properties are protected from risk of flooding in the short to medium term, whilst the surrounding areas are allowed to adapt naturally. In the long-term natural adaptation of the coast and tidal inundation of is likely to result in a more natural evolution of the coastline. • Function of Newport harbour and town maintained. • **A large number of Listing Buildings would be protected by holding the line.** **Negative Effects:** • NAI will in time cause inundation of the cycle path that runs adjacent to the Medina estuary and some loss of grade 3 agricultural soils due to saline inundation. • Inundation will impact parts of the estuary cycle way and some depots. • **Loss of small pockets of internationally designated intertidal habitats as a result of coastal squeeze caused by sea level rise and being constrained by privately maintained defences.** • Club rush swamp south of Medina Valley Centre to be altered and eventually lost under indundation. • Tidal flooding under the viaduct will cause inundation of farmland and the coastal pathway. • Tidal inundation of Dodnor Cottages and properties at Riverview Park are likely to occur in the long-term, deeming relocation likely. In the short-term maintaining the defences will result in **small areas of internationally designated intertidal mudflats being lost through coastal squeeze.** • A small number of residences at Island Harbour would be impacted in the short-term by tidal flooding if private defences are not maintained, as would Island Harbour, with the Folly Works being lost to tidal flooding. If private defences are not maintained north of the Folly Lane Industrial Works) there could be partial inundation of an old closed landfill site, posing a risk to the stability of the site and contamination of the estuarine water. Inundation will also result in loss of relatively poor grade (1, 2 and 3) agricultural soils. • **There is one Listed Building (Medina House) that is subject to damage / loss as a result of tidal flooding in the medium – long term.**	• Consider re-routing of cycle way. • **Opportunities for creation of small areas of important intertidal habitat along creeks from northern boundary down to Little Werrar Wood**. • **Where compensation habitat is required for habitat losses this will be secured through the Southern Region RHCP.** • May need to develop exit plan for affected properties if private maintenance is not an option. • Consider liaison with landowners. • **Opportunities for habitat creation under the Viaduct near Dodnor Cottages.** • Liaison with landowners regarding loss of high quality agricultural land. • **Need to investigate potential contamination issues.** • Monitor and record all features of the Listed Building; may need to develop exit plan for specific features.
MAN2A Osborne Bay and Woodside	NAI for all three epochs	**Positive Effects:** • Natural coastal roll back enabled, allowing for more natural intertidal sandflats with seagrass beds in the shallows and natural evolution of King's Quay. • **Benefits for the sand and muflats, saltmarsh and vegetated shingle (and associated bird populations) within King's Quay Shore SSSI, Solent Maritime SAC and Solent and Southampton Water SPA and Ramsar sites, in that they can continue to evolve naturally with sea level rise and not be constrained by defences.**	• Need to develop exit plan for affected properties in the medium to long term. • Consider opportunities for relocation of shoreline assets and maintance and raising of moorings and slipways.

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		• **Potential for small amount of habitat gain in King's Quay Shore SSSI if private defence across Palmer's Brook completely fails – though loss of terrestrial habitat (Broadleaved woodland).** • Return to a more 'natural' landscape. **Negative Effects:** • Coastal erosion to impact two properties near King's Quay in the medium to long term. • Erosion to impact slipways and coastal pathways, though of no significant loss. • **Partial loss of the gardens of both Norris Castle (Grade II Registered Park and Garden) and Osborne (Grade II* Registered Park and Garden) through erosion in the long term, with some loss/damage of the associated Listed Buildings.** • Appropriate protection against erosion will not be afforded for Woodside - six houses at Ghapal will be lost in the short term if private defences are allowed to fail. Part of Woodside Holiday would also be lost. • Minor losses of wooded coastline and coastal pathways to erosion.	• Recording/maintance of historic gardens. • **Potential for small amount of habitat gain up Palmer's Brook for saltmarsh and grazing habitat.**
MAN2B Wootton Creek and Old Mill Pond, Quarr and Binstead	• Central area of Wootton Creek to be allowed to act naturally (though NAI would not preclude maintenance of private waterside access structures and minor defences fronting the narrow individual properties and gardens, subject to normal approvals (B.1 and B.5). • HTL policy of private and public defences for the community around Wootton Bridge (B.2 and B.4), the ferry terminal (B.6) and to the east of the ferry terminal to assist protection of the ferry terminal at the mouth of Wootton Creek (B.7) gradually realigning in the third epoch. • Undertake no specific defence within the Mill Pond and accept increased saline intrusion. Continue to maintain use of the road (B.3). • Quarr and Binstead frontage to evolve naturally (NAI for all three epochs) (B.8).	**Positive Effects:** • **NAI would allow for the natural evolution of internationally and nationally important mudflats and saltmarsh of conservation interest (Solent and Southampton Water SPA and Ramsar, Ryde Sands and Wootton Creek SSSI, BAP intertidal mudflats).** • **Intertidal mudflats have the potential to expand to a certain degree**, **particularly around Lambsleaze Copse and Holiday Village**, though constrained by topographic surroundings and at the Yacht Club and around Ashlake Creek on the east side of the Creek. • Tidal flooding already affects assets (minor roads, jetties) near Wootton Bridge and would occur more frequently if defences are maintained solely at their current levels. HTL would protect the community and assets of Wootton Bridge, particularly properties near Barge Lane, including **three Grade II Listed Buildings**. • **Gradual return to more natural conditions within the Old Mill Pond, with significant benefits for nature conservation.** Gradual and controlled saline intrusion and exposure of the muflats of the Old Mill Pond will ensure the adaptation of more natural conditions, with overall benefits by increasing biodiversity and create a range of habitats of conservation interest. More regular exposure of the mudflats south of Wootton Bridge would attract greater numbers of wetland birds. There will be changes in the species of the saltmarshes within the Mill Pond over time - gain of more brackish species (middle and lower communities). • Changes to status of water in Old Mill Pond with increasing saline intrusion - return to more natural conditions. • Maintaining the coastline infront of the ferry terminal will ensure that a key regional ferry link between the Isle of Wight and Portsmouth is maintained. Maintaining defences to the east of the ferry terminal in the short to medium term will ensure the seafront properties and ferry terminal are protected. • The coast from Quarr to Binstead will be allowed to continue to erode and adjust naturally to sea level rise. As long as there is continued sediment accretion of the shingle spit at Quarr the coastal grazing marsh may be maintained. Allowing erosion will ensure there is continued sediment to source Ryde Sands. **Negative Effects:** • Creek margins are subject to inundation. • Impacts on several properties off New Road, particularly near the Holiday Village in the medium to long term (though private defences may prevent this in the short to medium term). • Inundation to impact slipways, moorings and boatyard sites, portions of the Holiday Village and possibly Wootton Bridge (though private defences may prevent this in the short to medium term). • **Loss and damage to the north of Quarr Abbey Scheduled Monument through flooding in the medium to long term (i.e. second and third epochs).** Though there would not be any loss of New Quarr Abbey Grade I Listed Building. • **Coastal squeeze and loss of relatively small areas of intertidal mudflats (a feature of the Solent and Southampton Water SPA and Ramsar sites and BAP habitat) in central Wootton Creek where private defences are maintained.** • **Area around Wootton Bridge will continue to be prevented from evolving naturally, with continued loss of saltmarsh and intertidal habitat from coastal squeeze.** • **Minor adverse effect on the integrity of the Briddlesford Copse SAC (feature is Bechstein's bat) and Briddlesford Copse SSSI because of saline intrusion** • **Shingle spit feature and small area of saltmarsh near the Royal Victoria Yacht Club may be lost as a result of erosion and sea level rise.** • Jetties / pontoons / slipway and area of land to west of ferry terminal (yacht club / works site) at risk from inundation. • Minor loss of grade 3 agricultural soils to inundation around the eastern headland of the creek and from Quarr to Binstead. • In the short to medium term, there is potential for some coastal squeeze of habitats around the eastern end of Wootton Creek (i.e. ferry terminal), though not of significance. • In the long term the properties at the Outer Eastern Creek may begin to loose their gardens to erosion as the coast is realigned. • Coastal retreat may place one property at Pelhamfield and one property at The Keys at risk in the short term, with more being lost at Pelhamfield in the medium to long term. • **In the medium term NAI will allow erosion that would cause the slumping of the soft cliffs surrounding the shingle bank in front of Quarr Abbey, leaving the coastal grazing marsh in the narrow low lying vally to be vulnerable to saline inundation, with the likelihood of saline lagoons forming. There would be an affect the condition of the Ryde Sands & Wootton Creek SSSI.**	• Need to develop exit plan and adaptation for affected properties, particularly in the long term. • **Compensation for the habitat losses will be needed. Will need to secure opportunities through the RHCP.** • Research required into the control of the saline intrusion into the Old Mill Pond. • **Opportunity for habitat re-creation site as identified in the Isle of Wight Mitigation Strategy (2006).** • Consider maintance of moorings and slipways. • Consider maintenance / relocation of ferry infrastructure in long term. • Need to further asses the condition of the coastal grazing marsh and vegetated shingle spit within Ryde Sands and Wootton Creek SSSI at Quarr.
MAN2C Ryde, Appley and Puckpool,	• Along the majority of frontage HTL by seawall encasement and revetment. • Opportunity along the central section of	**Positive Effects:** • Ensuring that the present defences are maintained to a suitable standard **will protect the important residential, commercial (i.e. tourism) and heritage assets from Ryde to Seagrove Bay from coastal flooding**.	• Potential requirement to compensate for habitat losses. • May need to plan adaptation strategies

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Springvale to Seaview and Seagrove Bay	Seagrove Bay to investigate offshore breakwaters.	• **Regionally important infrastructure will also be protected (e.g. ferry link to the mainland) as will many tourism assets.** • Providing cliff erosion continues along the coast to the west Ryde Sands will continue to accrete, and though they will not be able to naturally migrate back. • Appley Park sewage works would be protected, as well as **heritage assets such as Appley Tower LB and Puckpool Mortar Battery SM.** • Maintaining the current defences will offer adequate protection to Spring Vale community, assets and heritage features in the medium term. **Negative Effects:** • **The coastline will be unable to naturally erode back over time, which could affect the sediment supply of the surrounding sandflats.** • **Furthermore, there will be narrowing of the existing beach through coastal squeeze, which would affect the integrity of the internationally designated sandflats.** • In the long term, there will be risk of losing the coastal access road at Spring Vale, which links to a B-road and coastal properties. • **There may also be a risk of greater saline inundation into the saline lagoons and coastal grazing marsh at Spring Vale in the long term, which would change the species present and thus affect the integrity of Ryde Sands and Wootton Sands SSSI, Solent and Southampton Water SPA and Ramsar sites.** • **Intertidal reefs (a designated feature of the Solent and Southampton SPA and Ramsar sites) off of Seagrove Bay may experience erosion and coastal squeeze under rising sea level and increasing storminess**.	to the communities. • May need to re-route the coastal road.
MAN3A Priory Bay, St Helens Duver, St Helens, Embankment Road, Bembridge Point	• NAI along Priory Bay (A.1). • HTL for The Duver with the view to realign in the third epoch in line with the plan for the management of the harbour entrance (A.2). • HTL for St Helens and Embankment Road (A.3 and A.4). • During epoch one a new defence alignment to be defined that links with Embankment Road and higher ground at the back of Bembridge Point (A.5). This will provide a continuous defence around the point that will be held in future epochs (*Eastern Yar Strategy 2010). No intervention will be undertaken seaward of this defence line allowing the groyne to collapse/disappear and continuation of natural coastal processes along the shoreline and the sand dunes.	**Positive Effects:** • Coastal retreat in Priory Bay will result in no losses to properties. • **Natural evolution of coastline at Priory Bay so that the limestone rocky ledges and seagrass areas will be maintained (features of the Brading Marshes to St Helen's Ledges SSSI (rocky ledges) and Solent and Southampton Water Ramsar site (seagrass beds)) and erosion of Priory Woods SSSI would maintain the geological features (Pleistocene gravels) and thus the SSSI in favourable condition.** • The Duver defences will protect properties and assets from erosion in the short term, though would require significant upgrading to continue to do so. • The managed realignment of the Duver would allow for a more natural system with the creation of further sandflats and sand dunes, also modifying the landscape to become more natural. • Allowing the frontage of St. Helens to be maintained will ensure that the properties will be protected from coastal flooding in the short to medium term. • The continued maintenance of Embankment Road will ensure the protection of the three commercial properties (e.g. G P Motor Works) on the landward side of the road, as well as a further seven commercial properties on the Bembridge side of Embankment Road. • HTL at Embankment Road will maintain access to the Foreland at Bembridge. It is predicted that after 30 years the existing road will need to be raised to both maintain access and the integrity of the Solent and Isle of Wight Lagoons SAC. • **Maintaining Embankment Road also means that the landward designated saline lagoons and saltmarsh will continue to be protected, even if they are not sustainable.** • Existing landscape will be maintained (i.e. the harbour). • The new defence alignment at Bembridge Point will protect properties and assets in the medium to long term. **Negative Effects:** • In the medium to long term managed realignment will mean increasing damage and eventually loss of the temporary beach huts along the front of the Duver. • Maintaining The Duver in the short to medium term will result in the loss of intertidal habitat as a result of coastal squeeze on the outer frontage, but sustaining the sand dunes, mudflats and saltmarsh on the harbour side, since the harbour is an accreting system. • **There is potential for there to be losses (due to coastal squeeze) and changes in the morphology of the mudflats and saltmarshes at St. Helens and seaward of The Embankment in the long term.** • Maintaining defences in and around Bembridge Harbour is not the most sustainable option for managing this area, but is necessary in the short to medium term. • New defence alignment will put some properties, slips and wharfs at Bembridge Point at risk from inundation in the short term. • **Potential for loss of intertidal sandflats and dunes in the long term associated with coastal squeeze around Bembridge Point.** • Potential for loss of Palaeolithic artefacts within the Pleistocene gravels, some of which are in mint condition suggesting an in situ flint-working site, which could potentially be of national or international importance.	• Monitor and record geological changes • Survey, monitor and record all historic features, may need to develop exit plan for some features. • Monitor and record changes in landscape and geology and consider MR options that will retain the feature. • Potential requirement to compensate for habitat losses, however the changes due to MR needs to be researched further to ensure the chosen actions are the most sustainable. • Need to develop exit plan for affected properties. • Consider options for reinstatement of slipways and wharfs. • Potential requirement to compensate for habitat losses.
MAN3B Bembridge, Lane End, Foreland, Foreland Fields and Whitecliff Bay	• The majority of the coastline is being left to evolve naturally (B.1 and B.5). • HTL policies in the short to medium term for Land End and Foreland Fields (B.2 and B.4) with MR in the long term. • Foreland is to have a policy of MR for all three epochs.	**Positive Effects:** • **Allowing large sections of the coast in this Management Unit to be eroded naturally (i.e. NAI) ensures the paleoenvironmental deposits, a geological feature of the Whitecliff Bay and Bembridge Ledges SSSI are maintained in favourable condition and biodiversity features such as the limestone bedrock ledges (a feature of the South Wight Maritime SAC) evolve naturally.** • The Bembridge frontage (3B.1) is predicted to erode but at a slow pace and therefore no properties or infrastructure assets are predicted to be lost in the long term, though Swains House will be at greater risk in the future. • NAI will allow steady coastal erosion to continue, ensuring continued sediment supply; this could result in the increase of beach levels infront of these cliffs. No signifcant effect on intertidal and subtidal bedrock ledges or seagrass features expected. • HTL policies at Land End and Foreland Fields will ensure that properties and assets are protected in the short to medium term. • Using beach recharge (MR) to slow erosion along the Foreland frontage will ensure the Bembridge Hotel is maintained in the short to medium term. **Negative Effects:** • Natural coastal erosion and succession will be prevented in the short to medium term where the private defences are maintained, though it is not expected to be of significance.In the long term it is more than likely that there could be damage to the grounds of the Bembridge Hotel.	• Survey, monitor and record all historic features. • Need to develop exit plan for affected properties.

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MAN3C Culver Cliff & Red Cliff, Yaverland and Eastern Yar Valley, Sandown and Shanklin, and Luccombe	• The majority of this management unit is to be held for the duration of the plan - Yaverland and Eastern Yar Valley, Sandown and Shanklin (C.2 and C.3). • The boundaries of the MU are to be allowed to evolve naturally (NAI for all three epochs) for Culver Cliff, Red Cliff and Luccombe (C.1 and C.4).	**Positive Effects:** • **Allowing the continued natural erosion of Culver and Red Cliff ensures the nature conservation features (e.g. paleoenvironmental deposits) are maintained within the Whitecliff Bay and Bembridge Ledges SSSI**, the natural landscape is retained and for the source of the sediment supply for Sandown Bay to continue. • HTL policies along the majority of this management unit will ensure that the communities of Shanklin and Sandown are protected from coastal erosion and flooding, along with important infrastructure (e.g. sewage works, railway line and coastal road i.e. Yaverland Road, Culver Parade, Esplanade, Cliff Path) and tourism assets (e.g. Esplanade Gardens Café, Carlton Hotel, Royal Hadleigh Hotel, Lake Cliff Gardens, museum and the Isle of Wight Zoo). • **HLT policies will ensure that historic assets are protected - Sandown Barrack Battery SM and two Grade LB's - the Hot Brine Bath and the Chalet Café.** **Negative Effects:** • **NAI policy along Culver Cliff and Red Cliff will result in the loss and damage to Yaverland Fort Battery SM in the second and third epochs from coastal erosion.** • There will be large sections of the coastal pathway along the High Culver and Red Cliffs lost due to erosion along the cliffs as they are eroded away. • In the long term there will be the loss of one property near the Sailing club (C.1) and one above Luccombe Bay on the boundary of Policy Unit 4A.1. • Minor loss of grade 4 and 5 agricultural soils above the Luccombe cliffs. • Natural erosion and succession of cliffs is prevented by maintaining the defences, though this is unlikely to affect the integrity of the South Wight Maritime SAC.	• Need to develop exit plan for affected property. • **Survey, monitor and record all historic features**
MAN4A Dunnose, Ventnor & Bonchurch	• NAI for all three epochs along Dunnose (A.1) • HTL all epochs for Ventnor & Bonchurch (A.2)	**Positive Effects:** • NAI along the cliffs of Dunnose will result in the natural evolution of the coastline and no loss of properties, infrastructure or heritage assets. • Where the policy is HTL for Ventnor and Bonchurch this will ensure the residential and commercial properties, infrastructure (roads), community assets (e.g. restaurants along the Esplanade, Bonchurch Pottery, The Beach Café at Bonchurch and The Breakwaters) and one heritage asset (The Beach Hotel Listed Building) are maintained. **Negative Effects:** • The coastal path will be lost in places and need relocating over time so that it remains safe. • Minor loss of grade 4 and 5 agricultural soils.	• Consider re-routing of pathway.
MAN4B St Lawrence Undercliff, Castlehaven, St. Catherines & Blackgang	• HTL at Castlehaven for first two epochs and in epoch three it will be dependent on the slope stability conditions in the area at the time and whether the cliff retreat can be minimised through MR (B.2). • NAI all three epochs along the rest of the coast in this MU (B.1 & B.3).	**Positive Effects:** • **The community, assets (Coachmans Cottage and Castlehaven Lane) and heritage assets (the gatepiers to Reith Lodge Grade II LB and Puckaster Grade II LB) of Castlehaven will be protected** by maintaining and improving the existing defences, though there will be some slope failure and retreat around the boundaries of the policy unit, with no significant effects on subtidal marine habitats in short term. • NAI policies will result in the natural evolution of the coastline i.e. cliff erosion and slumping, which will ensure a continued supply of sediment for the island, including Castlehaven beach and eroding back of cliffs for exposure of rocky reefs. **Continued maintenance of the features of South Wight SAC and Compton Chine to Steephill Cove SSSI (includes being designated for its geological importance**), as well as the formidable landscape. • No loss of properties and infrastructure assets in the short to medium term along the rest of the MU. No changes in landscape character. **Negative Effects:** • Natural erosion and succession of the cliffs which are designated for their geological importance as a SSSI (Compton Chine to Steephill SSSI) would be prevented under HTL at Castlehaven, though this is only a small area of the MU and the SSSI is currently in 100% favourable condition with present coastal management. • Likely to be loss / damage of the the coastal path in places where it is NAI. • Likely to be loss of three properties near Woody Point, and twelve properties and part of Castlehaven Road in Castlehaven in the long term. • **Damage/loss of heritage assets due to erosion - Ventnor Botanical Garden (Registered Park and Garden) and five Grade II LBs - the gatepiers to Reith Lodge, Puckaster, St Catherine's Lighthouse, Lighthouse Keepers Quarters and Shakespeare Memorial in the grounds of South View.** • At Blackgang, 13 properties, including the Ship Ashore Inn will be at risk of damage or loss between 30 – 50 years with part of the **main coastal road at risk of being lost in the medium to long term.**	• Need to develop exit plan for affected properties and consider re-routing of the coastal path. • Monitor and record all historic features in the long term. • **Need to develop exit plan for affected properties and the options for relocation of the coastal road.**
MAN5 Central Chale Bay to Compton Bay	• Allow cliff erosion, support the geological designation, abandon current A3055 and re-route.	**Positive Effects:** • **Nature conservation features (reefs and cliffs) of the South Wight Maritime SAC, Compton Chine to Steephill Cove SSSI and Compton Down SSSI to respond naturally to erosion and sea level rise.** • Natural evolution of coastline with unique geology allowed. • No change to broad landscape character. • Erosion will naturally alter the form/features of the geological SSSI with time. **Negative Effects:** • Coastal erosion in second and third epochs to result in loss of several properties. Most significant loss involves loss of approx. 5 properties at Brookgreen. • **Coastal erosion in all epochs to result in loss of sections of Military road.**	• Need to develop exit plan for affected properties and **consider options for relocation of transport infrastructure where necessary.** • Survey, monitor and record all heritage assets - may need to develop exit plan for specific features.
MAN6A Freshwater Bay, Tennyson Down, Alum Bay and Headon Warren	• Short section of HTL at Freshwater Bay provides flood defence for the West Yar Valley (A.1 with PU6C.3). Maintain the road and support or enhance the protective beach. NAI for all three epochs for the rest of the MU (A.2).	**Positive Effects:** • The defences around Freshwater Bay will continue to provide appropriate protection against flooding for the community, tourism assets (two Hotels e.g. Albion Hotel), transport infrastructure - Gate Lane and where it links with the coastal road (A3055) of Freshwater Bay. • No significant effects are expected on Compton Down SSSI, since the boundary to maintain the defences starts at the end of the SSSI boundary. • **There are no features of the South Wight Maritime SAC infront of the defended area of the bay.** • The rest of the coastline will continue undergo natural change with episodic rock falls along resistant cliff line followed by periods of inactivity.	• Monitor and record all historic features in the long term.

Policy Unit	Policy Summary	Environmental Effects	Mitigation Measures / Opportunities
		• **Natural evolution of internationally designated reefs, sea caves and vegetated cliffs (South Wight Maritime SAC and Headon Warren & West High Down SSSI) to continue, with limited change expected.** **Negative Effects:** • Natural evolution of the coastline will be prevented around Freshwater Bay, however, it is likely there will be continued slumping of the cliffs around the boundaries; it is not expected to have a significant effect on the South Wight Maritime SAC. • Loss/damage of heritage assets from erosion, such as Fort Redoubt in the second epoch (though not designated), **damage to Mortuary Enclosure on Tennyson Down SM by 2100, loss and damage to Lower Needles Point Battery SM (1st/2nd epochs), Round Barrows SM and Tennyson's Beacon a Grade II Listed Building.**	
MAN6B Totland and Colwell, Central Colwell Bay, Fort Albert, Fort Victoria Country Park, Fort Victoria and Norton	• HTL for Totland and Colwell for all three epochs (B.1) and Fort Albert in the short and medium term. • NAI for Central Colwell Bay (B.2) and Fort Victoria Park (B.4) • Maintain existing structures along Fort Victoria and Norton in the short to medium term and NAI in the long term	**Positive Effects:** • Maintaining the defences along Totland and Colwell will prevent erosion at the toe of the cliffs but cannot guarantee some localised slumping. **The majority of properties, infrastructure (residential roads and access to the beach) and assets (e.g. Captains Cabin Café and coastal path) in Totland and Colwell will be protected**. • Natural evolution of the soft cliffs will occur where the toe is not protected from erosion – **this will ensure the parts of the geological SSSI (Colwell Bay) that are in favourable condition remain that way.** • Residential properties within the historic Listed Building of Fort Albert will be maintained in the short-medium term. • Allowing the cliffs to erode and slump naturally from Fort Albert to Sconce Point (B.4) ensures a vital source of sediment continues (not internationally or nationally designated) • HTL around Sconce Point and Norton ensures that the few properties and assets are protected in the short term until adaptation strategies can be implemented. • Allowing the cliffs from Sconce Point to Norton to erode ensures the beach (designated feature of the Solent Maritime SAC) is built up at the toe of the cliffs, which has since narrowed with the defences – thus improving the international designation over time. **Negative Effects:** • **Natural erosion of the cliffs will be prevented at Totland and Colwell, which could result in Colwell Bay geological SSSI being adversely affected which would keep it in unfavourable condition due to inappropriate coastal management** – occasional slumping of the cliffs will ensure that the features of the designation remain visible. • Central Colwell Bay is only presently defended with old wooden groynes which have been rendered ineffective – this area of coast will be left to erode back naturally, however this will result in parts of Linstone Chine holiday accommodation at threat of being lost. • Residential property within and landward of Fort Albert, as well as the associated pathways and gardens will be at risk of damage in the long term as the policy is to have no active intervention once the life of the existing defences fail. • **Fort Albert (Grade II* Listed Building) and Fort Victoria (Grade II Listed Building) will be at risk of damage/loss in the 3rd epoch when the existing defences begin to fail**. • NAI of the Victoria Country Park (SINC) frontage will result in some loss of this land – however, since it is not a nationally important area and the slumping will maintain the mixed sediment beach below it is not significant. • Loss of a few properties, holiday cottages and local road from cliff slumping in the medium to long term once the life of the existing defences begin to fail.	• Investigations into cliff stability. Action plan and risk assessment for relocating assets. • **Monitor the condition of Colwell Bay SSSI to ensure that the condition is not made worse because of maintaining the defences at the toe of the cliffs.** • Survey, monitor and record heritage assets - develop an exit plan for specific features.
MAN6C Norton Spit, Western Yar Estuary – west, The Causeway, Western Yar Estuary – east, Thorley Brook and Barnfields Stream, Yarmouth to Port la Salle	• HTL for Norton Spit, The Causeway and Yarmouth to Port la Salle for all three epochs. • NAI for the western and eastern sides of the 'Western Yar Estuary' • HTL in first epoch at Thorley Brook and Barnfields Stream to allow time for habitat adaptation.	**Positive Effects:** • **The mudflat and saltmarsh habitats landward of Norton Spit will be maintained, and the sand dunes and vegetated shingle will be held static with a HTL policy – this would mean the conservation objectives of the Solent Maritime SAC, Yar Estuary SSSI, and Solent and Southampton Water SPA and Ramsar site will not be significantly compromised.** • Maintaining and improving the defences around Yarmouth will reduce the risk of coastal flooding which can be a regular and catastrophic occurrence. • Few properties to be affected by the NAI policy that supports the natural evolution of the large portions of the east and west sides of Western Yar Estuary. • **Potential for habitat gain of saltmarsh and intertidal mudflats in restricted locations – South of Mill Copse and Barnfields Stream** • **HTL policy at The Causeway will maintain the freshwater habitats that are nationally important (Freshwater Marshes SSSI)**, as well as **prevent a tidal breach between Yarmouth and Freshwater.** • Causeway bridge maintained, with flood risk reduced and ensures important transport route remains open. • Potential for creation of further coastal grazing marsh from Grade 3 farmland in the medium to long term as the old Western Yar railway is overtopped with saline water – gradual adaptation of existing habitats. • Landscape and visual amenity is maintained and even improved in some places. • HTL at Thorley Brook for the first epoch will ensure that the landward coastal grazing marshes can adapt to increasing saline inundation, so that when the defences are no longer maintained in the long term there will not be a sudden breach. • Cycle way landward of Thorley Brook will be protected for the first epoch. • **Habitat evolution in the medium to long term at Thorley Brook enabling expansion of intertidal habitats.** • HTL around Yarmouth to Port la Salle will ensure there is not a breach over the A3064, protect the important community of Yarmouth and its assets, which include the ferry to Lymington. • Improving and maintaining defences around Yarmouth ensure that the numerous Listed Buildings within Yarmouth and Yarmouth Castle Scheduled Monument will be protected from loss and damage by coastal flooding. • **HTL at Yarmouth with ensure the ferry link with the mainland is sustained.**	• Majority of the estuary is in relatively steep-sided valleys which restrict landward inundation and migration – therefore reduced opportunities for habitat creation as would be expected. • Survey, monitor and record all heritage assets (Manor House Farm) - may need to develop exit plan. • Develop exit plan or relocation of properties and assets where necessary. • Potential requirement to compensate for habitat losses from coastal squeeze. • **Opportunity for creation of further coastal grazing marsh in the medium to long term** along the eastern upper reaches of the Western Yar estuary (Barnsfields Stream and south of this area). • Need to consider re-routing the cycle path that runs along the old Western Yar railway as it is an important tourist attraction.

Policy Unit	Policy Summary	Environmental Effects	Mitigation Measures / Opportunities
		Negative Effects: • Over time the Norton Spit defences will be increasingly overtopped by waves resulting in greater saline intrusion, which will result in changes in the extent and species of the saltmarsh backing the sand dunes and defences. • **Potential for squeeze of the internationally important mudflats landward of Norton Spit as the A3054 prevents landward inundation and mudflat migration as sea levels rise.** • Coastal infrastructure (e.g. boat yard, landing stage, Quay cottage) near Saltern Wood likely to lost to flooding under a NAI policy. • **Coastal squeeze of the internationally and nationally designated mudflats and saltmarshes that occur in front of the old Western Yar railway embankment and The Causeway, as this will act as a barrier to landward inundation and migration, so in combination with sea level rise there will be some loss of habitats (10% mudflats, landward migration of lower and middle marshes and narrowing of upper marshes).** • Increasing sea levels will result in greater saline intrusion of the saline lagoons north of Saltern Wood – these would adapt over time and are as a result of natural evolution rather than man-induced. • **Five Grade II Listed Buildings could be lost or damaged due to flooding – Buddles Butt, The Old Sand House, Yarmouth Mill, the 'Former Stabling and Hayloft and Wall to South of Kings Manor Farm' and 'Stable to South of Kings Manor'.** • Loss and damage of cycleway (which runs along the old Western Yar railway) with increased flood risk over time. • **Coastal grazing marsh (a designated feature of Yar Estuary SSSI and Solent and Southampton SPA and Ramsar sites) lost to inundation around Thorley Brook – however with increasing saline inundation there is potential for landward migration and thus gain of the lost coastal grazing marshes.** • **Short term coastal squeeze of internationally designated mudflats (designated feature of Yar Estuary SSSI, Solent Maritime SAC and Solent and Southampton SPA and Ramsar sites) seaward of the concrete defence at Thorley Brook.** • Some coastal squeeze of mudflats and saltmarsh around the Yarmouth headland as the cannot migrate landwards with increasing sea level rise because they will be restrained by defences – however, since there are opportunities to create habitat elsewhere this is not significant.	
MAN7 Bouldnor Copse and Hamstead, Newtown Estuary, Thorness Bay and southern Gurnard Bay	Allow cliff erosion, supporting the natural habitats from Bouldnor Copse to Hampstead. At Newtown Estuary allow tidal flooding and erosion. This would not preclude local management by the landowner during the first epoch to maintain limited quay structures and access walkways. Thorness Bay and southern Gurnard Bay allow cliff erosion, supporting the natural habitats.	**Positive Effects:** • Coastal slopes from Bouldnor Copse to Hamstead would continue to evolve naturally with erosion of the cliff toe and cliff foot debris triggering mudslides. • **Allowing the natural evolution would maintain the features of nature conservation interest (Bouldnor & Hamstead Cliffs SSSI presently in 100% favourable condition, and Solent Maritime SAC)**, ensure continued sources of sediments for transport pathways, as well as maintain and improve the important coastal cliffs landscape and AONB features. • **Continued natural evolution of Newtown estuary with overall nature conservation benefits for the Solent Maritime SAC, Solent and Southampton SPA and Ramsar sites and Newtown Harbour SSSI.** There is potential for changes to grazing marsh, lagoons and shingle habitats as a result of inundation, though this would be natural change as the area has been undefended for some time. • Local change to landscape as a result of further inundation of Newtown estuary margins. No change to broad landscape character or AONB. • **Potential for gain of intertidal habitats within Thorness Bay (designated as Thorness Bay SSSI) where retreat will occur allowing more appropriate levels and thus improving the condition of the SSSI.** **Negative Effects:** In the medium to long term there will be loss of two properties on the outskirts of Cranmore due to erosion and slumping of the soft coastal cliffs. Small loss / damages of coastal paths due to cliff erosion. **Portion of settlement of Newtown (Scheduled Monument) and Newton Bridge Listed Building affected by inundation.** Periodic inundation of local access roads - no major losses.	• Need to develop exit plan for affected properties. • Move the coastal paths landward where possible. • **Survey, monitor and record all heritage assets and assets - may need to develop exit plan for specific features.**

- End of Document -

Isle of Wight Shoreline Management Plan 2

Annex F-VI: Addendum to the SEA Environmental Report

Isle of Wight Council

December 2010

Final Report

9V8288 / 01

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Version 01 - Draft	Elizabeth Jolley	Pete Thornton	06.12.10	Internal Review
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CONTENTS

List of Tables

1 INTRODUCTION TO ADDENDUM

This Addendum has been produced in response to comments from the Quality Review Group (QRG) in order that the SEA ER provides further clarification on three issues; these are as follows:

1. A clearer demonstration of the significance of the Final SMP2 policies (which have not changed from those published in the July 2010 draft SMP2) on the SEA receptors and objectives. This can found in **Section 2** of this Addendum;

2. Following consultation with Natural England, there has been a change to the number of *Natura 2000* sites that will be significantly adversely affected by the SMP2 policies. This can be found in **Section 3** of this Addendum, along with the process following the identification of such sites (i.e. Stage 4 of the Habitats Regulations Assessment); and

3. The provision of a table stating exactly which designated historic assets will be damaged and/or lost as a result of the SMP2 policies, as well as a discussion of the mitigation measures and monitoring that will be required. This can be found in **Section 4** of this Addendum.

Addendum Consultation Comments

This Addendum is available for public consultation for a **3 week period** from the **7th to the 30th December** (though please be aware that both the Isle of Wight Council and Royal Haskoning will be closed over the Christmas period and will be resuming normal office hours on the 4th January 2011).

If you have any comments with regards to any of the information contained within this Addendum (an Annex to the SEA Environmental Report) please either email them to Dr Elizabeth Jolley on e.jolley@royalhaskoning.com, copying in Jenny Jakeways (Jenny.Jakeways@IOW.gov.uk) or send them by post to:

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How will your comments be dealt with?

Once comments have been received regarding this Addendum they will be considered and addressed in the **Statement of Environmental Particulars** (SoEP), which is a document that accompanies the Final SMP2 (Appendix M). The SoEP indicates how the findings of the SEA have been taken into account and how environmental views expressed during the consultation period have been considered as Isle of Wight SMP2 has been finalised. The SoEP is a requirement under the SEA Directive 2001/42/EC, and which is transposed into United Kingdom law by the Environmental Assessment of Plans and Programmes Regulations (SI 1633) 2004.

2 SIGNIFICANCE SUMMARY OF THE LONG TERM PLAN OF THE SMP2 POLICIES

2.1 Introduction

The detailed assessment of the effects of SMP2 policies was provided in **Annexes F-III and F-IV of the SEA Environmental Report (ER)** that was published in July 2010. Each policy option was assessed for each policy unit (grouped by management area and PDZ) against the scoped in SEA receptors using the SEA assessment criteria. In the main ER, these were summarised into the positive and negative environmental outcomes of policy for each management area (rather than policy unit level) within each PDZ. On the basis of the assessment provided in the ER, the Isle of Wight SMP2 was considered to have been successful in providing an overall balance of considering the range of environmental values. However, it was felt that the resultant summary policy tables (using 'achieved', partly achieved' and 'not achieved') and summary text were not clear enough in the ER with regard to the significance level of negative and positive effects expected. This has been clarified further within this Addendum below, with tables summarising the average effects or best and worst case scenarios at the management area level.

It has not been necessary to re-assess any of the SEA assessments on the basis of policy changes as **there have been no policy changes following public consultation**, only the clarification of some of the wording of the preferred draft policies. However, due to detailed discussions with key stakeholders (e.g. Natural England and English Heritage), the assessments have also been updated to reflect these discussions (for example, with Natural England over internationally designated sites, which resulted in some changes to the HRA). The significance criteria used for the assessment are shown in **Table 2.1**.

Table 2.1 Significance Criteria Used in the Assessment of Effects

Score	Description
Major (Significant) Beneficial ✓✓✓	The policy is likely to lead to a beneficial effect on nationally (or internationally) important parameters, or a significant achievement of the SEA objectives. The positive effects may be short-term large-scale or long-term and national in scale. In addition, significant cumulative and indirect positive effects are likely within and outside the Isle of Wight SMP2 area.
Moderate Beneficial ✓✓	The policy is likely to lead to a beneficial effect on regionally important parameters, or a moderate achievement of the SEA objectives, or a significant positive effect of local scale. The positive effects may be short-term large-scale or long-term and regional in scale. Positive cumulative effects would arise between local areas or a number of parameters.
Minor Beneficial ✓	The policy is likely to lead to a beneficial effect to locally important parameters, or a minor achievement of the SEA objectives. Effects would be short and long-term, or could be moderate negative effects in the short-term. There may be limited if any cumulative or indirect effects within the Isle of Wight SMP2 area.
Neutral O	The policy would have no positive or negative effects or change to the objective in either the short or long-term. A neutral score arises when there is a fair degree of certainty that no positive or negative effect is predicted, or where an effect would be dependent on the location of the measures of such a policy.
Minor Adverse ✗	The policy is likely to lead to an adverse effect to locally important parameters, or a minor reduction to the SEA objectives. Effects would be short and long-term, or could be moderate negative effects in the short-term. There may be limited if any cumulative or indirect effects within the Isle of Wight SMP2 area.

Score	Description
Moderate Adverse --	The policy is likely to lead to an adverse effect on regionally important parameters, or a moderate reduction of the SEA objectives. Effects would be short and long-term, or could be significant negative effects in the short-term. The policy may have limited cumulative and indirect effects within a project area.
Major (Significant) Adverse ---	The policy is likely to have an adverse effect on nationally (or internationally) important parameters or a series of long-term small scale (cumulative) effects. The policy is likely to significantly disrupt the achievement of the SEA objectives. Indirect effects may also extend outside the Isle of Wight SMP2 area.

2.2 PDZ 1 - Cowes and the Medina Estuary

2.2.1 MAN 1A: Gurnard Luck to East Cowes Outer Esplanade

Policy Unit	Final Policy	Policy Unit	Final Policy
1A.1	**HTL, NAI, NAI**	**1A.4**	**HTL, HTL, HTL**
1A.2	**NAI, NAI, NAI**	**1A.5**	**HTL, HTL, HTL**
1A.3	**HTL, HTL, HTL**	**1A.6**	**HLT, NAI, NAI**

Overall, the long-term policy plan for this stretch of coastline is to ensure the continued protection around and within the mouth of the Medina Estuary through **HTL**, whilst allowing natural processes to continue along some of the coast through **NAI**. The policy plan of **HTL** will continue to provide protection to the recreation play area, properties and road around Gurnard (PU1A.1) in the short term, whilst around Cowes and East Cowes (PU's 1A.3, 1A.4 and 1A.4) the existing defences will not provide full protection from coastal flooding. Therefore, a policy of **HTL** that will require significant improvement (to withstand a 1 in 50 year flood) will have major positive effects by ensuring community properties and assets, Listed Buildings, and roads and infrastructure along these frontages are protected. The HTL policies will however, potentially impact upon the beaches and mudflat BAP habitats through coastal squeeze, though the amount is small over the 100 year period so that it is not expected to affect the integrity of the Solent Maritime SAC conservation objectives but may affect the UK BAP targets for mudflats.

NAI will allow natural erosion and flooding and encourage natural geomorphological evolution, with the potential to maintain the sandy intertidal foreshore (UK BAP habitat), ensure the integrity of the Solent Maritime SAC, maintain and improve the natural environmental features of the Isle of Wight AONB and for the creation of internationally and nationally important intertidal habitat (e.g. saltmarsh and mudflat) in newly inundated areas. **NAI** will however, result in the failure in the protection of some properties along Marsh Road and Solent View Road, access along Gurnard Bridge, coastal gardens along Gurnard Cliff, recreational areas and grazing land from flooding and erosion. There will also be some minor effects on grade 3/4 agricultural soils due to saline inundation, whilst there is a pipeline outfall at Gurnard and sewage works infrastructure along the Outer Esplanade that may be impacted by erosion unless private measures to protect and stabilise these are taken, as if not there would be an effect on the shellfish waters and the Ecological Potential of the Solent coastal water body. Under **NAI**, the Grade II Listed Building at 37 Lower Church Road is not at risk from flooding, however, there will be the partial loss of Norris Castle Registered Park and Garden through erosion.

MAN 1A summary: Collectively, the policies for this MA will benefit the natural and built environment; in particular the designated heritage assets (refer to **Table 2.2**). However, minor adverse effects may occur associated with BAP mudflat habitats and the loss of some of the Norris Castle Registered Park and Garden.

2.2.2 MAN 1B: Central Medina NW, West Medina Mills, Central SW and East, and Newport Harbour

Policy Unit	Final Policy	Policy Unit	Final Policy
1B.1	NAI, NAI, NAI	1B.4	HTL, HTL, HTL
1B.2	HTL, HTL, HTL	1B.5	NAI, NAI, NAI
1B.3	NAI, NAI, NAI		

For the central and inner parts of the Medina Estuary, the long-term policy is **NAI** across the wider estuary with **HTL** used selectively at West Medina Mills and Newport Harbour to provide continued defence to maintain the important industrial and commercial properties and protect Newport harbour and town from tidal flooding. **NAI** will ensure nature conservation interests associated with mudflat, saltmarsh and club rush BAP habitats (also features of the Solent Maritime SAC and support important bird populations that are features of the Solent and Southampton Water SPA and Ramsar sites) are maintained through promoting natural processes, which enable adaptation to sea level rise. Erosion and roll-back will occur in places, however, due to the rising topography this is only likely to occur in the tributaries and on the east side of the estuary. A major positive effect is the large number of Listing Buildings within Newport town that will be protected by **HTL**.

NAI in the long term will cause the flooding of Dodnor Cottages, properties at Riverview Park, Island Harbour, and the Folly Works, as well as the cycle path that runs adjacent to the Medina Estuary and some loss of medium to poor grade agricultural soils (1, 2 and 3) due to saline inundation. Any flooding of the Folly Lane Industrial Works where there is an old closed landfill site poses a risk to the stability of the site and contamination of the estuarine waters. There will be a minor loss of BAP mudflat habitat (also a feature of Solent Maritime SAC and Medina Estuary SSSI) as a result of coastal squeeze caused by sea level rise, however, over the 100 year period it has been deemed that it will be difficult to distinguish from the natural fluctuations of the estuary and the natural loss due to the rising topography. Club rush swamp (BAP habitat) south of Medina Valley Centre will be altered by the opening up of the sluices and eventually lost under inundation. There is one Listed Building (Medina House) that is subject to damage / loss as a result of tidal flooding in the medium to long term (PU1B.5).

MAN 1A summary: Collectively, the policies for this MA will benefit the natural and built environment, in particular the town of Newport, designated heritage assets and designated nature conservation sites (refer to **Table 2.2**). However, there will be some minor adverse effects associated with loss of a small number of residential properties, BAP mudflat and club rush habitats, water quality if contaminants are leached from a closed landfill site due to flooding, and damage / loss of Medina House Listed Building (refer to **Section 4 of this Addendum**).

Table 2.2 PDZ 1: Summary of the Significance of the Long-Term Plan against the SEA Objectives

PDZ 1: COWES AND THE MEDINA ESTUARY		
SEA Objective	**Management Areas**	
	1A	**1B**
POPULATION, COMMUNITIES AND HUMAN HEALTH		
A - To prevent or minimise loss / damage to residential properties from coastal erosion and flooding	✓✓/ x	✓✓/ x
B - To prevent or minimise coastal erosion and flooding to key community assets (doctors, hospitals) and recreation and tourism assets (leisure areas, beaches)	✓✓/ x	✓✓
C - To prevent or minimise the loss / disruption to public footpaths and cycle routes	✓✓/ x	x
LAND USE, MATERIAL ASSETS / INFRASTRUCTURE		
D - To prevent or minimise the loss / damage / disruption to commercial properties and industrial sites	✓✓	✓✓/ x
E - To prevent or minimise the loss / damage / disruption to agricultural land	x	O / x
F - Prevent the loss / damage / disruption to transport and service infrastructure	✓✓/ x	✓✓
WATER QUALITY AND RESOURCES		
G - To achieve the Environmental Objectives of the EC Water Framework Directive	✓/ x	✓/ x
GEOLOGY & SOILS		
H - To prevent or minimise coastal erosion / flood management works that cause the loss / damage to designated geomorphological or geological interest features or significantly interrupt the supply of sediment to other areas around the island	O	O
LANDSCAPE		
I - To protect and enhance the character and quality of the landscape and visual amenity from flooding and flood risk management works[1]	✓✓	O
BIODIVERSITY, HABITATS AND SPECIES		
J - Identify and promote biodiversity opportunities to maintain, improve and avoid net loss of internationally and nationally important sites and habitats by sustainably managing coastal erosion and flood risk	✓/ x	✓✓/ x
K - Promote a balanced approach when maintaining, improving and avoiding net loss of terrestrial, freshwater and coastal habitats	O	O
HISTORIC ENVIRONMENT		
L - To prevent heritage assets (e.g. Scheduled Monuments, Historic Parks and Gardens, Listed Buildings and Conservation Areas) from being lost / damaged by coastal erosion or flooding without implementing appropriate mitigation measures or preservation of evidence by record.	✓✓✓/ xxx	✓✓✓/ xxx

PDZ 1 Summary: Overall, the effects of the policies on PDZ 1 will be minor to major positive, with some minor negatives impacting upon population and communities, land use, recreational, biodiversity and water quality, whilst there are major adverse effects on designated heritage assets in which appropriate mitigation / monitoring is to be implemented (refer to **Section 4 of this Addendum**).

[1] The target for this objective as stated in the SEA ER is "No decrease in the quality of the landscape character or visual amenity attributed to natural coastal processes or the management thereof" – however, this does not include where natural processes could result in a loss of landscape value which is not controllable by coastal management.

2.3 PDZ 2 – Ryde and the North-East Coastline

2.3.1 MAN 2A: Osbourne Bay to Woodside

Policy Unit	Final Policy	Policy Unit	Final Policy
2A.1	NAI, NAI, NAI	2A.2	NAI, NAI, NAI

The policy for Osbourne Bay to Woodside in the long-term is for **NAI** for the entire length, which will benefit biodiversity interests including nature conservation features of the Solent Maritime SAC (mudflat, sandflat and seagrass), Solent and Southampton Water SPA and Ramsar sites (associated bird populations), King's Quay Shore SSSI, BAP habitats (e.g. ancient woodland, ancient woodland plantation, sandflats, mudflats, saltmarsh, vegetated shingle, coastal scrub and swamps), as well as the Isle of Wight AONB (including the Osbourne Coast and Traditional Enclosed Pasture Land LCA) by allowing them to respond naturally to erosion and sea level rise without the constraint of defences. As saline intrusion extends along King's Quay, BAP habitats such as mudflat, saltmarsh and club rush swamps will adapt and increase, particularly as private defences begin to completely fail across Palmer's Brook (partially failed at present), though this will result in the loss of some broadleaved woodland (BAP habitat).

Coastal erosion in the medium to long-term will result in the loss of ancient woodland and parkland (designated as Registered Park and Gardens) of Norris Castle (Grade II) and Osbourne House (Grade I), as well as associated buildings such as the damage / loss of the Pier Landing House, Queen's Alcove, loss of parts of Pier Wood and Barton Wood, paths to the south along past the Bathing Pavilion and the Boating House. A small number of residential properties (e.g. Kingsquay Cottage, six properties at Ghapal and part of Woodside Holiday Park) will be damaged and lost in the long term, as well as loss of sections of footpaths and slipways along much of this coastal frontage.

MAN 2A summary: The policies for this management area will benefit the natural environment, with some loss of residential properties and designated heritage features and assets (refer to **Table 2.3**).

2.3.2 MAN 2B: Western Wootton Creek to Quarr and Binstead (includes Wootton Creek)

Policy Unit	Final Policy	Policy Unit	Final Policy
2B.1	NAI, NAI, NAI	2B.5	NAI, NAI, NAI
2B.2	HTL, HTL, HTL	2B.6	HTL, HTL, HLT
2B.3	MR, MR, MR	2B.7	HTL, HTL, MR
2B.4	HTL, HTL, HTL	2B.8	NAI, NAI, NAI

The long-term policy plan for Wootton Creek is to allow the estuary to evolve as naturally as possible through policies of **NAI** and **MR**, with **HTL** policy used selectively around the village of Wootton (particularly properties near Barge Lane, including three Grade II Listed Buildings), the Fishbourne ferry (a key regional ferry link between the Isle of Wight and Portsmouth), and to the east of the ferry terminal in the short to medium term to ensure the continued protection of residential properties, assets and infrastructure are protected. **HTL** has the potential to result in the loss of mudflats within the estuary; however, the naturally

steep topography means that there will be natural loss of mudflats (Solent and Southampton Water SPA and Ramsar site, and Ryde Sands and Wootton Creek SSSI) in the long term due to coastal squeeze with rising sea levels. The amount has been calculated and deemed indeterminable from the natural fluctuations of the system and will not have a significant effect on the interest features of the internationally and nationally important designations.

Tidal flooding already affects assets (minor roads, jetties) near Wootton Bridge and would occur more frequently if defences are maintained solely at their current levels. The **MR** policy at Wootton Bridge will allow for the gradual return to a more sustainable natural environment within the Old Mill Pond, with significant benefits for nature conservation (i.e. mudflats and saltmarsh). Gradual and controlled saline intrusion and exposure of the mudflats of the Old Mill Pond will ensure the adaptation of more natural conditions, with overall benefits by increasing biodiversity and create a range of habitats of conservation interest. More regular exposure of the mudflats south of Wootton Bridge would attract greater numbers of wetland birds. It has been deemed there will be no adverse effect on the integrity of the Briddlesford Copse SAC (feature is Bechstein's bat), though there is potential for some minor loss in extent of the Briddlesford Copse SSSI due to saline intrusion.

NAI[2] is the chosen policy in the central estuary to represent that the gardens fronting the residential properties along this stretch do not meet the criteria for publicly funded defences, and that private funding would be needed if these garden are to be protected from flooding. There is potential for several properties off New Road (particularly near the Holiday Village), gardens, slipways, moorings and boatyard sites in long term to be flooded. **NAI** will however, benefit the internationally and nationally important mudflats (a BAP habitat) of conservation interest for the Solent and Southampton Water SPA and Ramsar sites, and Ryde Sands and Wootton Creek SSSI. To the east of Wootton Creek, the coast from Quarr to Binstead will be allowed to continue to erode and adjust naturally to sea level rise with a policy of **NAI** which will not only benefit the nature conservation interests (SPA, Ramsar and SSSI) and Isle of Wight AONB by allowing the coastline to evolve naturally, but will ensure continued sediment accretion of the shingle spit at Quarr, as well as to Ryde Sands to the east. The **NAI** policy does, however, mean there will be damage and loss to the northern extent of the Quarr Abbey Scheduled Monument (i.e. the fish ponds and northern Precint Walls – Grade II LB) through flooding in the medium to long term, though there would not be any loss of New Quarr Abbey Grade I Listed Building. Furthermore, there will be some minor loss of grade 3 agricultural soils and footpaths around the eastern headland of the creek and from Quarr to Binstead, whilst coastal retreat may place some properties at Pelhamfield and The Keys at risk of damage and loss in the long term.

MAN 2B summary: Collectively, the policies for this management unit will both benefit the natural, historic and built environments, as well as there being minor adverse effects to a small number of residential properties, water quality, agricultural land, footpaths and the natural environment (refer to **Table 2.3**). The potential loss of designated heritage assets associated with Quarr Abbey (major adverse), which will need to be closely monitored, is in order to allow for natural processes to continue along an undefended coastline, and thus enable the integrity of the nature conservation interests to be maintained.

[2] NAI does not preclude the right for private defences to protect properties.

2.3.3 MAN 2C: Ryde to Seagrove Bay

Policy Unit	Final Policy	Policy Unit	Final Policy
2C.1	HTL, HTL, HTL	2C.3	HTL, HTL, HTL
2C.2	HTL, HTL, HTL	2C.4	HTL, HTL, HTL

The long-term policy of **HTL** along the Ryde frontage around to Seagrove Bay is to continue to provide protection for the residential and commercial (in particular tourism) properties and associated infrastructure (ferry, rail and road) and assets (e.g. Appley Park sewage works) from coastal flooding, which in turn maintains the integrity of the water quality along the coast. Furthermore, it will provide protection to a number of designated heritage assets (e.g. Appley Tower Listed Building and Puckpool Mortar Battery Scheduled Monument) and the landward saline lagoons and coastal grazing marsh at Spring Vale (as long as the defences are increased in line with sea level rise).

Providing cliff erosion continues along the coast to the west (i.e. Osbourne Bay to Woodside, and Quarr and Binstead), then Ryde Sands will continue to accrete, and though it will not be able to naturally migrate back naturally, it has been deemed that HTL will not significantly affect the integrity of the bird populations that feed upon this resource and which are designated under the Solent and Southampton Water SPA and Ramsar site. However, there is potential for these sandflats, a feature of the Ryde Sands and Wootton Creek SSSI, and the rocky intertidal shore off of Seagrove Bay (a designated feature of the Solent and Southampton Water SPA and Ramsar sites), both of which are BAP habitats, to reduce in extent in the long term as a result of sea level rise and coastal squeeze against the defences. The potential reduction of foreshore width and elevation due to coastal squeeze could reduce the extent of the beach at certain tide states available for beach use.

MAN 2C summary: Collectively, the policies for this management unit will benefit the built and historic environment, with the potential (dependent on continuing sediment supply) for there to be minor adverse effects in the long term on the natural environment, and tourism and recreation regarding the integrity of beaches (refer to **Table 2.3**).

Table 2.3 PDZ 2: Summary of the Significance of the Long Term Plan against the SEA Objectives

PDZ 2: RYDE AND NORTH-EAST COASTLINE			
SEA Objective	**Management Areas**		
	2A	**2B**	**2C**
POPULATION, COMMUNITIES AND HUMAN HEALTH			
A - To prevent or minimise loss / damage to residential properties from coastal erosion and flooding	x	✓✓/x	✓✓✓
B - To prevent or minimise coastal erosion and flooding to key community assets (doctors, hospitals) and recreation and tourism assets (leisure areas, beaches)	O	✓✓	✓✓✓/x
C - To prevent or minimise the loss / disruption to public footpaths and cycle routes	x	x	✓✓
LAND USE, MATERIAL ASSETS / INFRASTRUCTURE			
D - To prevent or minimise the loss / damage / disruption to commercial properties and industrial sites	O	O	✓
E - To prevent or minimise the loss / damage / disruption to agricultural land	O	x	O

PDZ 2: RYDE AND NORTH-EAST COASTLINE			
SEA Objective	**Management Areas**		
	2A	**2B**	**2C**
F - Prevent the loss / damage / disruption to transport and service infrastructure	O	✓✓✓	✓✓✓
WATER QUALITY AND RESOURCES			
G - To achieve the Environmental Objectives of the EC Water Framework Directive	O	x	✓✓✓
GEOLOGY & SOILS			
H - To prevent or minimise coastal erosion / flood management works that cause the loss / damage to designated geomorphological or geological interest features or significantly interrupt the supply of sediment to other areas around the island	✓✓	x	O
LANDSCAPE			
I - To protect and enhance the character and quality of the landscape and visual amenity from flooding and flood risk management works	O	✓	O
BIODIVERSITY, HABITATS AND SPECIES			
J - Identify and promote biodiversity opportunities to maintain, improve and avoid net loss of internationally and nationally important sites and habitats by sustainably managing coastal erosion and flood risk	✓✓✓	✓✓✓/ x	x
K - Promote a balanced approach when maintaining, improving and avoiding net loss of terrestrial, freshwater and coastal habitats	✓✓✓	✓✓/ x	O
HISTORIC ENVIRONMENT			
L - To prevent heritage assets (e.g. Scheduled Monuments, Historic Parks and Gardens, Listed Buildings and Conservation Areas) from being lost / damaged by coastal erosion or flooding without implementing appropriate mitigation measures or preservation of evidence by record.	xx	✓✓✓/ xxx	✓✓✓

PDZ 2 Summary: Overall the SMP2 policies for this PDZ will have no moderate or major negative effects other than on the historic environment; those places where policies will have an effect on designated heritage assets, appropriate mitigation / monitoring is to be implemented (refer to **Section 4 of this Addendum**).

2.4 PDZ 3 – Bembridge and Sandown Bay

2.4.1 MAN 3A: Priory Bay to Bembridge Point (including Bembridge Harbour)

Policy Unit	Final Policy	Policy Unit	Final Policy
3A.1	**NAI, NAI, NAI**	**3A.4**	**HTL, HTL, HTL**
3A.2	**HTL, HTL, MR**	**3A.5**	**NAI, NAI, NAI**
3A.3	**HTL, HTL, HTL**		

The long-term policy for Priory Bay is to allow the coastline to naturally evolve with a policy of **NAI**. This section of the coastline will undergo significant erosion (up to 200m in places), which will benefit the intertidal and marine nature conservation interests. The limestone rocky ledges and seagrass areas will be able to be move landward with exposure of more

intertidal with erosion, thus maintaining features of the Brading Marshes to St Helen's Ledges SSSI (rocky ledges) and Solent and Southampton Water Ramsar site (sandflats and seagrass beds)), and BAP habitats (coastal scrub, sandflats and rocky shores). The erosion of Priory Woods SSSI would maintain the geological features (Pleistocene gravels), though in the medium to long term it will mean the eventual loss of current Priory Woods SSSI (geological) designation, however, there is potential for the exposure of further areas of geological importance as the coastline erodes back, which will need to be closely monitored. The **NAI** policy will result in no losses to properties or designated historic assets.

The long-term policy for Bembridge Harbour is to predominantly **HTL**, with **MR** in the long term for St. Helen's Duver, and **NAI** at Bembridge Point allowing the groyne to collapse and disappear and continuation of natural coastal processes along the beach and the sand dunes, though during Epoch 1 a new defence alignment will be defined that links Embankment Road (PU 3A.4) with higher ground at the back of Bembridge Point; this will provide a continuous defence to protect the residential and commercial properties that will be held in future epochs. The Duver defences will protect properties and assets from erosion, and though there is potential for the loss of intertidal habitat as a result of coastal squeeze on the outer frontage, this area is accreting and so would result in a negative effect. **HTL** does, however, sustain the mudflats and saltmarsh on the harbour side, whilst keeping the sand dune stationary. In the long-term the **MR** of the spit would allow for a more natural system with the creation of further sandflats enable the sand dunes to move landward. This would benefit Brading Marshes to St Helen's Ledges SSSI, the Solent and Southampton Water SPA and Ramsar sites, and BAP habitats (sandflats, sand dunes, vegetated shingle, mudflats and saltmarsh), though there would be increasing risk of loss of the beach huts along the front of the Duver and the remains of St. Helen's Church (now a Seamark).

The long-term **HTL** policy along St. Helen's and Embankment Road will ensure the protection of the residential and commercial properties on both the landward sides of the harbour, as well as maintaining access to the Foreland at Bembridge. Raising and maintaining Embankment Road means that the landward designated saline lagoons (Solent and Isle of Wight Lagoons SAC), coastal grazing marsh and freshwater habitats (conservation interests of the Brading Marshes to St Helen's Ledges SSSI, and Solent and Southampton Water SPA and Ramsar sites), all of which are BAP habitats will continue to be protected from saline inundation. Though the harbour is an accreting system, there is still potential in the long-term for there to be losses (due to coastal squeeze) and changes in the morphology of the mudflats and saltmarshes at St. Helens and seaward of The Embankment in the long term. This will not affect the integrity of the SPA and Ramsar sites; however, it does have the potential to affect the SSSI. However, the NAI policy around Bembridge Point and the MR of St Helen's Duver in the long term will allow the harbour to function more sustainably and continue to evolve and accrete more naturally.

MAN 3A summary: Collectively, the policy for this management unit will have mixed benefits for the natural, historic and built environment (refer to **Table 2.4**). Minor adverse effects on the mudflats and saltmarsh within the harbour are in order for the saline lagoons, coastal grazing marsh and freshwater habitats to prevail and thus enable the integrity of the nature conservation interests to be maintained.

2.4.2 MAN 3B: Bembridge Point to Whitecliff Bay

Policy Unit	Final Policy	Policy Unit	Final Policy
3B.1	**NAI, NAI, NAI**	**3B.4**	**HTL, HTL, MR**
3B.2	**HTL, HTL, MR**	**3B.5**	**NAI, NAI, NAI**
3B.3	**MR, MR, MR**		

The long-term policy is for the majority of the coastline is **NAI** so that it can evolve naturally (PUs 3B.1 & 3B.5), with selective **HTL** policies in the short to medium term for Land End and Foreland Fields (PUs 3B.2 & 3B.4) with **MR** in the long term. Foreland is to have a policy of **MR** for all three epochs. The NAI policy with benefit various sites designated for either geological or nature conservation interest which are reliant on natural processes, including, South Wight Maritime SAC, Solent and Southampton SPA and Ramsar site, Whitecliff Bay and Bembridge Ledges SSSI, Bembridge School and Cliffs SSSI, Bembridge Down SSSI, BAP habitats (rocky intertidal shores, sandflats and coastal scrub) and the Isle of Wight AONB (Chalk Downs). There are a small number of residential properties at risk of being lost in the future from coastal erosion along these currently undefended frontages; these include, six properties in Whitecliff Bay near Culver Down, Sandhills and Whitecliff Bay Holiday Parks and a significant portion of the coastal footpath, as well as potentially one property near Bembridge Point at the end of Ducie Avenue.

Where the policy is to **HTL** in the short to medium term this will ensure that properties and assets are protected though could be at increasing risk in the long term, though a policy of **MR** (potentially using beach recharge) to slow erosion could ensure the residential properties and tourism assets are maintained in the long-term. In these small HTL areas natural coastal erosion will be prevented in the short to medium term where the private defences are maintained, though it is not expected to be of significance to the geological or nature conservation interests. In the long term it is more than likely that there could be damage to the grounds of the Bembridge Hotel. No designated historic assets are at risk from any of the policies.

MAN 3B summary: Collectively, the policies for this management area will benefit the natural and built environment (refer to **Table 2.4**). Only minor adverse effects will arise from policies along this management area associated with properties and tourism assets, whilst moderate adverse effects on sections of the Sandown to Ryde coastal footpath along Whitecliff Bay, an area of coastline designated as an AONB.

2.4.3 MAN 3C: Culver Cliff to Luccombe

Policy Unit	Final Policy	Policy Unit	Final Policy
3C.1	**NAI, NAI, NAI**	**3C.3**	**HTL, HTL, HTL**
3C.2	**HTL, HTL, HTL**	**3C.4**	**NAI, NAI, NAI**

The long-term plan for this management unit is to continue to **HTL** along the built up frontages of Yaverland, Sandown, and Shanklin (3C.2 and 3C.3), whilst the outer boundaries of the area are to be allowed to evolve naturally (**NAI** for all three epochs) for Culver Cliff, Red Cliff and Luccombe (3C.1 and 3C.4). The NAI policy will allow the continued natural erosion of the cliffs of Culver, Red and Luccombe to ensure the nature conservation interests

and geological features (e.g. palaeoenvironmental deposits) are maintained within the South Wight Maritime SAC, Whitecliff Bay and Bembridge Ledges SSSI and Bembridge Down SSSI, as well as maintaining the natural landscape (Isle of Wight AONB) and the source of the sediment supply for Sandown Bay to continue. The **NAI** policy will result in the loss and damage to a mixture of assets through coastal erosion and landslide, including:

- Yaverland Fort Battery SM in the second and third epochs;
- Significant sections of the Sandown to Ryde coastal pathway along the High Culver and Red Cliffs;
- Loss of one property near the Sailing club (PU 3C.1) and potentially one above Luccombe Bay on the boundary of PU 4A.1.

The **HTL** policies along the majority of this management unit will ensure that the communities of Shanklin and Sandown are protected from coastal erosion and flooding, along with important infrastructure (e.g. sewage works, railway line and coastal road i.e. Yaverland Road, Culver Parade, Esplanade, Cliff Path) and tourism assets (e.g. Esplanade Gardens Café, Carlton Hotel, Royal Hadleigh Hotel, Lake Cliff Gardens, museum, and the Isle of Wight Zoo). Furthermore, the **HTL** policies will ensure that historic assets are protected including the Sandown Barrack Battery SM, and the Hot Brine Bath and the Chalet Café (both Grade II Listed Buildings). Natural erosion of the coastline will be prevented by maintaining the defences; however, it will not affect the integrity of the South Wight Maritime SAC, the only designation along the defended section of this management area.

MAN 3C summary: Collectively, the policies for this management area will have major adverse benefits for the natural, historic and built environments (refer to **Table 2.4**). The adverse effects on Yaverland Fort Battery, the coastal footpaths and small number of residential properties is in order to allow for natural processes to continue along undefended coastlines and thus enable the integrity of the geological and nature conservation interests to be maintained.

Table 2.4 PDZ 3: Summary of the Significance of the Long-Term Plan against the SEA Objectives

PDZ 3: BEMBRIDGE AND SANDOWN BAY			
SEA Objective	**Management Areas**		
	3A	**3B**	**3C**
POPULATION, COMMUNITIES AND HUMAN HEALTH			
A - To prevent or minimise loss / damage to residential properties from coastal erosion and flooding	✓✓/ x	✓✓/ x	✓✓✓/ x
B - To prevent or minimise coastal erosion and flooding to key community assets (doctors, hospitals) and recreation and tourism assets (leisure areas, beaches)	✓✓	✓✓/ x	✓✓✓/ x
C - To prevent or minimise the loss / disruption to public footpaths and cycle routes	O	xx	xx
LAND USE, MATERIAL ASSETS / INFRASTRUCTURE			
D - To prevent or minimise the loss / damage / disruption to commercial properties and industrial sites	✓✓	O	✓✓✓
E - To prevent or minimise the loss / damage / disruption to agricultural land	O	O	x
F - Prevent the loss / damage / disruption to transport and service infrastructure	✓✓	O	✓✓✓
WATER QUALITY AND RESOURCES			
G - To achieve the Environmental Objectives of the EC Water Framework Directive	✓✓	✓✓	✓✓

PDZ 3: BEMBRIDGE AND SANDOWN BAY			
SEA Objective	Management Areas		
	3A	3B	3C
GEOLOGY & SOILS			
H - To prevent or minimise coastal erosion / flood management works that cause the loss / damage to designated geomorphological or geological interest features or significantly interrupt the supply of sediment to other areas around the island	✓✓/ xx	✓✓✓	✓✓✓
LANDSCAPE			
I - To protect and enhance the character and quality of the landscape and visual amenity from flooding and flood risk management works	✓	✓✓✓	✓
BIODIVERSITY, HABITATS AND SPECIES			
J - Identify and promote biodiversity opportunities to maintain, improve and avoid net loss of internationally and nationally important sites and habitats by sustainably managing coastal erosion and flood risk	✓✓✓/ x	✓✓✓	✓✓✓
K - Promote a balanced approach when maintaining, improving and avoiding net loss of terrestrial, freshwater and coastal habitats	✓✓✓	O	O
HISTORIC ENVIRONMENT			
L - To prevent heritage assets (e.g. Scheduled Monuments, Historic Parks and Gardens, Listed Buildings and Conservation Areas) from being lost / damaged by coastal erosion or flooding without implementing appropriate mitigation measures or preservation of evidence by record.	O	O	✓✓✓/ xxx

PDZ 3 Summary: Overall the SMP2 policies for this PDZ will have no major negative effects other than on the historic environment; those places where policies will have an impact on designated heritage assets, appropriate mitigation / monitoring is to be implemented (refer to **Section 4 of this Addendum**). There are a few moderate negative adverse effects, however, there are also a number of moderate and major beneficial effects that outweigh these effects, and are why these final policies are in place.

2.5 PDZ 4 – Ventnor and the Undercliff

2.5.1 MAN 4A: Dunnose to Steephill Cover

Policy Unit	Final Policy	Policy Unit	Final Policy
4A.1	**NAI, NAI, NAI**	**4A.2**	**HTL, HTL, HTL**

The long term policy along the undefended Dunnose frontage is to continue with a policy of **NAI**, which will allow natural processes to prevail benefiting the Isle of Wight AONB, The Undercliff Landscape Character Area, South Wight Maritime SAC, Bonchurch Landslips SSSI and BAP habitats (e.g. coastal scrub and rocky shores). There will also be no loss of properties or infrastructure, but it is very likely that one Grade II Listed Building will be lost due to erosion and landslides (refer to **Section 4 of this Addendum** for details). There will however, be minor losses of Grade 4 agricultural land, as well as some sections of the coastal path in the long term, which will need relocating so that it remains safe.

The long term policy for the majority of this management unit along the Bonchurch and Ventnor frontage is to **HTL** so as to protect the foot of the cliffs from coastal erosion and aid in preventing any further land slides that are prevalent along this stretch. This will have a moderate positive effect by ensuring that the residential and commercial properties, infrastructure (roads), community assets (e.g. restaurants along the Esplanade, Bonchurch Pottery, The Beach Café at Bonchurch and The Breakwaters) and one heritage asset (The Beach Hotel Listed Building) are maintained. There will be no negative effects upon the natural environment, since the Solent Maritime SAC only protects the subtidal rocky environment landward of this urban stretch and not the intertidal rocky shore, whilst there are no SSSI's or BAP habitats (i.e. rocky intertidal shores)along this stretch of coast.

MAN 4A summary: Collectively, the policies for this management unit will significantly benefit the natural, built and historic environment, with only minor adverse effects associated with the loss of footpaths and agricultural land and a moderate effect to the historic environment due to the long-term loss of one Listed Building (refer to **Table 2.5**). The potential loss of these assets is in order to allow for natural processes to prevail along the currently undefended section of coastline.

2.5.2 MAN 4B: St. Lawrence Undercliff to Blackgang

Policy Unit	Final Policy	Policy Unit	Final Policy
4B.1	**NAI, NAI, NAI**	**4B.3**	**NAI, NAI, NAI**
4B.2	**HTL, HTL, MR**		

Where the coastline is currently undefended, the long-term policy for the majority of this management unit is **NAI**, which will allow natural processes to continue. Whilst for the short section of coast at Castlehaven, the policy is to **HTL** in the short to medium-term, and then to minimise cliff retreat through **MR** in the long-term. The wider **NAI** policy will allow the continued natural evolution of the maritime cliffs and associated rocky shores beneath, thus maintaining the integrity of the Isle of Wight AONB, Tennyson Heritage Coast, The Undercliff Landscape Character Area, the South Wight Maritime SAC (features include maritime cliffs and rocky shores), Compton Chine to Steephill Cove SSSI (geological and biological) and BAP habitats (coastal scrub and rocky intertidal shores). However, there will be negative effect on the built and historic environment with the loss of assets through erosion of the cliffs, in particular at Blackgang:

- The car park and associated road overlooking Rocken End;
- Sections of the Niton to Sandown coastal footpath (e.g. Woody Bay and around St. Catherine's Point;
- Three Listed Buildings (two of which are Grade II) and one Registered Park and Garden (Ventnor Botantic Garden);
- Sections of Blackgang Road (A3055) around St Catherine's Hill; and
- 15-20 residential properties and community assets above the Blackgang cliffs.

The **HTL** at Castlehaven will maintain the integrity of this community, its associated infrastructure and designated heritage assets, whilst preparing for adaptation to take place if MR is not a possibility if the slope stability conditions are not stable. If this were the case, then two designated heritage assets would be at risk of loosing elements: Puckaster and Gatepiers to Reith Lodge Grade II Listed Buildings. It is not deemed that the HTL and MR policies will have a negative effect on the South Wight Maritime SAC. However, in the short

to medium term there could be a moderate negative effect on the condition of the geologically designated SSSI along the Castlehaven frontage, which has the potential to improve with a policy of MR in the long term.

MAN 4B summary: Collectively, the policies for this management unit provide the optimum policy suite in order to attain as many of the SEA objectives by benefiting the natural, heritage and built environments (refer to **Table 2.5**). However, there are a number of minor adverse effects (built and natural environment), and major adverse effects on a number of designated heritage assets, which will need to be closely monitored (refer to **Section 4 of this Addendum**).

Table 2.5 PDZ 4: Summary of the Significance of the Long-Term Plan against the SEA Objectives

PDZ 4: VENTNOR AND THE UNDERCLIFF		
SEA Objective	**Management Areas**	
	4A	**4B**
POPULATION, COMMUNITIES AND HUMAN HEALTH		
A - To prevent or minimise loss / damage to residential properties from coastal erosion and flooding	✓✓	✓✓/x
B - To prevent or minimise coastal erosion and flooding to key community assets (doctors, hospitals) and recreation and tourism assets (leisure areas, beaches)	✓✓	✓✓/x
C - To prevent or minimise the loss / disruption to public footpaths and cycle routes	✓✓/x	✓/x
LAND USE, MATERIAL ASSETS / INFRASTRUCTURE		
D - To prevent or minimise the loss / damage / disruption to commercial properties and industrial sites	✓✓	✓✓
E - To prevent or minimise the loss / damage / disruption to agricultural land	x	O
F - Prevent the loss / damage / disruption to transport and service infrastructure	✓✓	✓✓/x
WATER QUALITY AND RESOURCES		
G - To achieve the Environmental Objectives of the EC Water Framework Directive	✓✓	✓✓
GEOLOGY & SOILS		
H - To prevent or minimise coastal erosion / flood management works that cause the loss / damage to designated geomorphological or geological interest features or significantly interrupt the supply of sediment to other areas around the island	✓✓	x
LANDSCAPE		
I - To protect and enhance the character and quality of the landscape and visual amenity from flooding and flood risk management works	O	O
BIODIVERSITY, HABITATS AND SPECIES		
J - Identify and promote biodiversity opportunities to maintain, improve and avoid net loss of internationally and nationally important sites and habitats by sustainably managing coastal erosion and flood risk	O	O
K - Promote a balanced approach when maintaining, improving and avoiding net loss of terrestrial, freshwater and coastal habitats	O	O

PDZ 4: VENTNOR AND THE UNDERCLIFF		
SEA Objective	Management Areas	
	4A	4B
HISTORIC ENVIRONMENT		
L - To prevent heritage assets (e.g. Scheduled Monuments, Historic Parks and Gardens, Listed Buildings and Conservation Areas) from being lost / damaged by coastal erosion or flooding without implementing appropriate mitigation measures or preservation of evidence by record.	✓✓✓/xxx	✓✓✓/xxx

PDZ 4 Summary: Overall, the policies for the PDZ aim to allow natural processes to continue along the presently undefended stretches of coast with benefits for geological and nature conservation areas, whilst the communities of Bonchurch, Ventnor and Castlehaven are defended by HTL policies. Appropriate mitigation / monitoring are to be implemented for lost designated heritage assets (see **Section 4 of this Addendum**).

2.6 PDZ 5 – South-West Coastline

2.6.1 MAN 5: Central Chale Bay to Afton Down

Policy Unit	Final Policy	Policy Unit	Final Policy
5.1	**NAI, NAI, NAI**		

The policy for Chale Bay to Afton Down in the long-term is for **NAI** for the entire length, which will benefit the geological and biodiversity interests including nature conservation features (reefs and cliffs) of the South Wight Maritime SAC, Compton Chine to Steephill Cove SSSI, Compton Down SSSI, BAP habitats (e.g. rocky shores, maritime grassland and coastal scrub above the cliffs), Isle of Wight AONB, and Tennyson Heritage Coast by allowing them to respond naturally to erosion and sea level rise. No designated heritage assets will be lost through the NAI policy in the long-term, though non-designated assets in the intertidal may lost.

Coastal erosion in the medium to long-term will result in the minor loss of several properties, with the most significant loss involving loss of approximately five properties at Brookgreen, Brightstone Holiday Centre, Grange Farm Camping site, Atherfield Bay Holiday Camp, and nearby sewage works, properties around Shepherd's Chine, coastguard cottages (opposite Atherfield Point). There will be a moderate negative effect on Military Road (A3055), the coast road that runs from Ventnor to Freshwater Bay, with the loss of sections in all epochs.

MAN 5 summary: Collectively, the policies for this management area will benefit the natural and recreational environment (refer to **Table 2.6**). The potential loss of some residential properties and section of Military Road is because the economics are not large enough to warrant building new defences, and also it to allow for natural processes to prevail for nature conservation interests.

Table 2.6 PDZ 5: Summary of the Significance of the Long-Term Plan against the SEA Objectives

PDZ 5: SOUTH-WEST COASTLINE	
SEA Objective	**Management Area**
	5A
POPULATION, COMMUNITIES AND HUMAN HEALTH	
A - To prevent or minimise loss / damage to residential properties from coastal erosion and flooding	x
B - To prevent or minimise coastal erosion and flooding to key community assets (doctors, hospitals) and recreation and tourism assets (leisure areas, beaches)	✓✓
C - To prevent or minimise the loss / disruption to public footpaths and cycle routes	O
LAND USE, MATERIAL ASSETS / INFRASTRUCTURE	
D - To prevent or minimise the loss / damage / disruption to commercial properties and industrial sites	O
E - To prevent or minimise the loss / damage / disruption to agricultural land	O
F - Prevent the loss / damage / disruption to transport and service infrastructure	xx
WATER QUALITY AND RESOURCES	
G - To achieve the Environmental Objectives of the EC Water Framework Directive	✓✓✓
GEOLOGY & SOILS	
H - To prevent or minimise coastal erosion / flood management works that cause the loss / damage to designated geomorphological or geological interest features or significantly interrupt the supply of sediment to other areas around the island	✓✓✓
LANDSCAPE	
I - To protect and enhance the character and quality of the landscape and visual amenity from flooding and flood risk management works	✓✓✓
BIODIVERSITY, HABITATS AND SPECIES	
J - Identify and promote biodiversity opportunities to maintain, improve and avoid net loss of internationally and nationally important sites and habitats by sustainably managing coastal erosion and flood risk	✓✓✓
K - Promote a balanced approach when maintaining, improving and avoiding net loss of terrestrial, freshwater and coastal habitats	O
HISTORIC ENVIRONMENT	
L - To prevent heritage assets (e.g. Scheduled Monuments, Historic Parks and Gardens, Listed Buildings and Conservation Areas) from being lost / damaged by coastal erosion or flooding without implementing appropriate mitigation measures or preservation of evidence by record.	O

PDZ 5 Summary: The policy for the PDZ is **NAI** over the long-term along the undefended cliffs which make up this PDZ, with moderate to major positive effects on geology, biodiversity and landscape features. There will be minor to moderate adverse effects on residential properties and transport links and the assets at risk will need to be monitored to ensure their integrity where possible is maintained and the appropriate mitigation is implemented.

2.7 PDZ 6 – West Wight

2.7.1 MAN 6A: Freshwater Bay to Headon Warren

Policy Unit	Final Policy	Policy Unit	Final Policy
6A.1	HTL, HTL, HTL	6A.4	NAI, NAI, NAI

The long-term policy for this management area is to **HTL** at Freshwater Bay, whilst allowing the remaining coast from Freshwater Bay round to Totland to be exposed to natural processes with a policy of **NAI**. The **HTL** policy will provide protection for the community and tourism assets (two Hotels e.g. Albion Hotel) of Freshwater Bay from flooding and connecting through to the Western Yar Valley (PU6A.1 connecting with PU6C.3), as well as maintaining the transport infrastructure (Gate Lane and where it links with the coastal road (A3055) of Freshwater Bay) and supporting the landward protective beach. No significant effects are expected on the nature conservation interests of Compton Down SSSI and South Wight Maritime SAC. The **NAI** policy will continue to allow natural change with episodic rock falls along the resistant cliff line followed by periods of inactivity, thus allowing the natural evolution of internationally designated reefs, sea caves and vegetated cliffs of the South Wight Maritime SAC, Headon Warren & West High Down SSSI and BAP habitats (intertidal rocky shores) to continue. This will also benefit the Isle of Wight AONB and Tennyson Heritage Coast. The **NAI** policies will however, result in the loss of some sections of the Yarmouth to Brightstone coastal footpath, and damage and/or loss of a number of designated heritage assets from erosion, including:

- Long Mortuary Enclosure on Tennyson Down (Scheduled Monument);
- Lower Needles Point Battery (Scheduled Monument); and
- Tennyson's Beacon (Grade II Listed Building).

MAN 6A summary: Collectively, the policies for this management unit will benefit the natural and built environment (refer to **Table 2.7**). However, it will result in major adverse effects on the historic environment, and therefore appropriate mitigation / monitoring measures will need to be implemented (refer to **Section 4 of this Addendum**).

2.7.2 MAN 6B: Totland to North Spit

Policy Unit	Final Policy	Policy Unit	Final Policy
6B.1	HTL, HTL, HTL	6B.4	NAI, NAI, NAI
6B.2	NAI, NAI, NAI	6B.5	HTL, NAI, NAI
6B.3	HTL, HTL, NAI		

The long-term plan for this stretch of coastline is eventually for **NAI** across the majority of the coastline with **HTL** to protect the settlements of Totland and Colwell. However, in the short to medium-term the policy is HTL to protect Fort Albert (PU6B.3) and the village of Norton (PU6B.5), but when the defences fail they will no longer be maintained in the long-term. The **HTL** policy will protect the majority of properties, infrastructure (residential roads and access to the beach), tourism assets, the Yarmouth to Brightstone coastal path and some designated historic assets such as Fort Albert (Grade II* Listed Building). However, natural erosion of the cliffs will be prevented at Totland and Colwell, which could result in Colwell

Bay geological SSSI being adversely affected, which would keep it in unfavourable condition due to inappropriate coastal management, though the occasional slumping of the cliffs will ensure that the features of the designation remain visible. **HTL** around Sconce Point and Norton ensures that the few properties and assets at risk of loss are protected in the short term until adaptation strategies can be implemented.

Geological and nature conservation interests that are dependant upon natural processes will benefit from the policies of **NAI**, particularly since allowing the cliffs to erode and slump naturally ensures a vital source of sediment continues to be supplied for areas further along the coast. The designated sites that will benefit will be Colwell Bay SSSI and the Solent Maritime SAC. For example, allowing the cliffs from Sconce Point to Norton to erode ensures the beach (a designated feature of the Solent Maritime SAC) is built up at the toe of the cliffs, which has since narrowed with the defences, thus improving the international designation over time. However, there may be potential effects to the integrity of two designated heritage assets through deterioration or loss to the site, these being Fort Albert (Grade II* Listed Building) and Fort Victoria (Grade II Listed Building). Furthermore, the Victoria Country Park (a Site of Important Nature Conservation) frontage will result in some loss of this land, however, since it is only a locally important area and the slumping will maintain the mixed sediment beach below will only have a minor adverse effect. Residential property within and landward of Fort Albert, as well as the associated pathways and gardens will be at risk of damage in the long term as the policy is to be **NAI** once the life of the existing defences fail.

MAN 6B summary: Collectively, the long-term policies for this management unit provide the best policy suite in order to attain as many of the SEA objectives by benefiting the natural, heritage and built environments (refer to **Table 2.7**). There are a number of minor adverse effects (built and natural environment), and a major adverse effect on two designated heritage assets, which will need to be closely monitored once the life of the current defences fail at the end of Epochs 1 and 2 (refer to **Section 4 of this Addendum**).

2.7.3 MAN 6C: Norton Spit to Port la Salle

Policy Unit	Final Policy	Policy Unit	Final Policy
6C.1	**HTL, HTL, HTL**	**6C.4**	**NAI, NAI, NAI**
6C.2	**NAI, NAI, NAI**	**6C.5**	**HTL, MR, NAI**
6C.3	**HTL, HTL, HTL**	**6C.6**	**HTL, HTL, HTL**

The long-term policy for the Western Yar Estuary is allow the estuary to continue to adapt naturally along undefended stretches through **NAI**, with **HTL** used selectively to protect the community of Yarmouth to Port la Salle and the entrance to the estuary (Norton Spit), as well as maintaining the tidal limit at The Causeway. A policy of suite of **HTL**, followed by **MR** and **NAI** for Thorley Brook and Barnfields Stream, is to allow the gradual opening up of these two previous tributaries of the estuary, so as to create further mudflat and saltmarsh habitats, and allow adaptation of the estuary as a whole to rising sea levels.

There will be significant beneficial effects resulting from the **HTL** policies within the estuary, including:

- Protecting the community, assets and infrastructure (including the Lymington ferry) of Yarmouth from flooding;

- Maintaining the nationally important freshwater habitats (Freshwater Marshes SSSI) landward of The Causeway (PU 6C.3);
- Preventing a tidal breach between Yarmouth and Freshwater;
- Maintaining the Causeway bridge ensuring this important transport route remains open;
- Preventing a breach over the A3064 which would cut off the important transport link between Yarmouth and Port la Salle; and
- The protection of numerous Listed Buildings within Yarmouth and Yarmouth Castle Scheduled Monument from flooding.

Furthermore, **HTL** policy will mean the mudflat and saltmarsh habitats landward of Norton Spit will be maintained, and the sand dunes and landward vegetated shingle will be held static with a HTL policy, which would mean the conservation objectives of the Solent Maritime SAC, Yar Estuary SSSI, and Solent and Southampton Water SPA and Ramsar sites will not be significantly compromised. There is the potential for some loss of mudflats and saltmarsh (both BAP habitats) through coastal squeeze against those maintained defences with rising sea levels. However, the degree of loss has been calculated (refer to **Appendix I of the SMP2**) and it has been deemed that the amount of the 100 year period will be difficult to discern from the natural fluctuations of the estuary, particularly with the opening up of Thorley Brook and Barnfields Stream, and therefore will not have an adverse effect on the international and national nature conservation designations.

The **NAI** policy will allow natural processes to prevail, benefiting the nature conservation interests of the designated sites of the Solent Maritime SAC, Solent and Southampton Water SPA and Ramsar sites, Yar Estuary SSSI, as well as the Isle of Wight AONB. Few properties will be affected by the NAI policy along the east and west sides of Western Yar Estuary, though coastal infrastructure (e.g. boat yard, landing stage, Quay cottage) near Saltern Wood and sections of the cycleway (which runs along the old Western Yar railway) are likely to be lost to flooding in the long term. Furthermore, three Grade II Listed Buildings could be damaged or lost due to flooding, which are Yarmouth Mill; The Former Stabling and Hayloft and Wall to South of Kings Manor Farm; and the Stable to South of Kings Manor.

The policy suite for Thorley Brook and Barnfields Stream (PU 6C.5), which involves **MR** of the defences, allowing the gradual saline inundation with the long-term policy of NAI. This will have a major beneficial effect on the Solent and Southampton Water SPA and Ramsar site, Yar Estuary SSSI and BAP habitats through the creation of approximately 31 hectares of mudflat and saltmarsh. In contrast, this will have a major adverse effect on these designations through the loss of approximately 31 hectares of coastal grazing marsh, which supports internationally important bird species that use the area for feeding and high water roost sites (see **Appendices I** and **L**). This habitat will need to be compensated for (refer to **Section 3 of this Addendum** for further details). There is the possibility for the creation of further coastal grazing marsh from Grade 3 farmland in the medium to long term as the old Western Yar railway is overtopped with saline water, though this will need investigating further. Furthermore, the **MR** of this policy unit will adversely affect the cycle way landward of Thorley Brook, though it will be protected for the first epoch (**HTL**) until a plan for relocating this can be implemented.

MAN 6C summary: Collectively, the policies for this management area will significantly benefit the natural, historic and built environment (refer to **Table 2.7**). However, there are some major adverse affects for the historic and natural environment; these are in order to allow for sustainable natural processes to occur in the long-term that have significant beneficial affects on the international and national nature conservation interests.

Table 2.7 PDZ 6: Summary of the Significance of the Long-Term Plan against the SEA Objectives

PDZ 6: WEST WIGHT			
SEA Objective	**Management Areas**		
	6A	**6B**	**6C**
POPULATION, COMMUNITIES AND HUMAN HEALTH			
A - To prevent or minimise loss / damage to residential properties from coastal erosion and flooding	✓✓	✓✓/ x	✓✓✓/ x
B - To prevent or minimise coastal erosion and flooding to key community assets (doctors, hospitals) and recreation and tourism assets (leisure areas, beaches)	✓✓	✓✓/ x	✓✓✓
C - To prevent or minimise the loss / disruption to public footpaths and cycle routes	x	✓✓	xx
LAND USE, MATERIAL ASSETS / INFRASTRUCTURE			
D - To prevent or minimise the loss / damage / disruption to commercial properties and industrial sites	O	O	✓✓✓
E - To prevent or minimise the loss / damage / disruption to agricultural land	O	O	x
F - Prevent the loss / damage / disruption to transport and service infrastructure	✓✓	✓✓	✓✓✓
WATER QUALITY AND RESOURCES			
G - To achieve the Environmental Objectives of the EC Water Framework Directive	✓✓	✓✓/ x	✓✓✓
GEOLOGY & SOILS			
H - To prevent or minimise coastal erosion / flood management works that cause the loss / damage to designated geomorphological or geological interest features or significantly interrupt the supply of sediment to other areas around the island	✓✓✓	✓✓/ x	✓✓
LANDSCAPE			
I - To protect and enhance the character and quality of the landscape and visual amenity from flooding and flood risk management works	✓✓✓	O	✓✓✓
BIODIVERSITY, HABITATS AND SPECIES			
J - Identify and promote biodiversity opportunities to maintain, improve and avoid net loss of internationally and nationally important sites and habitats by sustainably managing coastal erosion and flood risk	✓✓✓	✓✓	✓✓✓/ xxx
K - Promote a balanced approach when maintaining, improving and avoiding net loss of terrestrial, freshwater and coastal habitats	✓✓✓	O	✓✓✓
HISTORIC ENVIRONMENT			
L - To prevent heritage assets (e.g. Scheduled Monuments, Historic Parks and Gardens, Listed Buildings and Conservation Areas) from being lost / damaged by coastal erosion or flooding without implementing appropriate mitigation measures or preservation of evidence by record.	xxx	xxx	✓✓✓/ xxx

PDZ 6 Summary: Overall the SMP2 policies for this PDZ will have two major negative effects, one from the loss of designated heritage assets (Scheduled Monuments and Listed Buildings), and the other, from the loss of approximately 31 hectares of internationally and nationally important coastal grazing marsh (SPA, Ramsar, SSSI and BAP habitat). Those places where policies will have an effect on designated heritage assets, appropriate mitigation / monitoring is to be implemented (see **Section 4 of this Addendum**), and Stage 4 of the HRA process (seeking 'Imperative Reasons of Overriding Public Interest') has been implemented and sought from the Secretary of State (refer to **Section 3 of this Addendum**).

2.8 PDZ 7 – North-West Coastline

2.8.1 MAN 7: Bouldnor Copse to southern Gurnard Bay

Policy Unit	Final Policy	Policy Unit	Final Policy
7.1	**NAI, NAI, NAI**	**7.3**	**NAI, NAI, NAI**
7.2	**NAI, NAI, NAI**		

The policy for Bouldnor Copse, Newtown Estuary and southern Gurnard Bay in the long-term is for **NAI** for the entire length, which will benefit the biodiversity interests including nature conservation designations of the Solent Maritime SAC, Solent and Southampton Water SPA and Ramsar sites, Bouldnor and Hamstead Cliffs SSSI, Newtown Harbour SSSI, Thorness Bay SSSI, BAP habitats (e.g. sandflats, mudflats, saltmarsh, saline lagoons, coastal grazing marsh, vegetated shingle), Isle of Wight AONB, and Hamstead Heritage Coast by allowing them to respond naturally to erosion and sea level rise. No designated heritage assets will be lost through the NAI policy in the long-term, though non-designated heritage assets in the intertidal may lost.

Coastal erosion in the medium to long-term will result in the minor loss of several properties, with the most significant loss involving the risk of loss of approximately five properties along Bouldnor Cliff (though this could be more if there are landslides in this location) and Thorness Holiday Park. No roads will be affected by the **NAI** policy. There will also be the potential for flooding damage in the long-term to the edge of one Scheduled Monument (Medieval Settlement and Cultivation Remains at Newtown), which is currently already at threat of flooding from a 1 in 1yr flood, and is therefore regarded as a minor negative effect in this instance, since it is presently at risk of flooding and the increase in flooding is minimal. One Listed Building is also at risk of flooding in the long term (Fleetlands Farmhouse), which results in a moderate adverse effect.

MAN 7 summary: Collectively, the policies for this management area will benefit the natural, geological and recreational environment (refer to **Table 4.11**). There is the potential for loss of some residential properties and designated heritage assets.

Table 2.8 PDZ 7: Summary of the Significance of the Long-Term Plan against the SEA Objectives

PDZ 7: NORTH-WEST COASTLINE	
SEA Objective	**Management Area**
	7A
POPULATION, COMMUNITIES AND HUMAN HEALTH	
A - To prevent or minimise loss / damage to residential properties from coastal erosion and flooding	**x**
B - To prevent or minimise coastal erosion and flooding to key community assets (doctors, hospitals) and recreation and tourism assets (leisure areas, beaches)	**O**
C - To prevent or minimise the loss / disruption to public footpaths and cycle routes	**O**
LAND USE, MATERIAL ASSETS / INFRASTRUCTURE	
D - To prevent or minimise the loss / damage / disruption to commercial properties and industrial sites	**O**
E - To prevent or minimise the loss / damage / disruption to agricultural land	**O**

PDZ 7: NORTH-WEST COASTLINE	
SEA Objective	**Management Area**
	7A
F - Prevent the loss / damage / disruption to transport and service infrastructure	**O**
WATER QUALITY AND RESOURCES	
G - To achieve the Environmental Objectives of the EC Water Framework Directive	✓✓✓
GEOLOGY & SOILS	
H - To prevent or minimise coastal erosion / flood management works that cause the loss / damage to designated geomorphological or geological interest features or significantly interrupt the supply of sediment to other areas around the island	✓✓
LANDSCAPE	
I - To protect and enhance the character and quality of the landscape and visual amenity from flooding and flood risk management works	✓✓✓
BIODIVERSITY, HABITATS AND SPECIES	
J - Identify and promote biodiversity opportunities to maintain, improve and avoid net loss of internationally and nationally important sites and habitats by sustainably managing coastal erosion and flood risk	✓✓✓
K - Promote a balanced approach when maintaining, improving and avoiding net loss of terrestrial, freshwater and coastal habitats	**O**
HISTORIC ENVIRONMENT	
L - To prevent heritage assets (e.g. Scheduled Monuments, Historic Parks and Gardens, Listed Buildings and Conservation Areas) from being lost / damaged by coastal erosion or flooding without implementing appropriate mitigation measures or preservation of evidence by record.	xx

PDZ 7 Summary: The policy for this PDZ is **NAI** over the long-term, with moderate to major positive effects on geology, biodiversity and landscape features, which in turn benefit recreation. There will be a minor adverse effect on residential properties, and a moderate adverse effect on designated heritage assets at risk of loss from erosion and flooding and both will need to be monitored to ensure their integrity where possible is maintained and the appropriate mitigation is implemented.

2.9 Conclusion

The key drivers for the development of SMP2 policy were to support the diverse character of the landscape and seascape of the coastline through the natural evolution of the shoreline wherever possible, balanced against the desire to not constrain the ability of coastal settlements to retain their viability and core values and manage and adapt to flood and erosion risks. By maintaining the protection of designated heritage assets and coastal communities, the potential exists for negative effects on coastal habitats to arise from factors such as coastal squeeze, limiting of sediment movement along the coast, and geological exposure of cliffs. However, collectively, the proposed shoreline management plan limits where possible the constraints to natural processes from settlements and infrastructure, providing a sustainable balance between the core socio-economic and environmental values associated with Isle of Wight.

3 CHANGES TO THE IMPACT OF SMP2 POLICY ON *NATURA 2000* SITES

3.1 Introduction

The findings in the SEA ER issued for public consultation reported that for all of the preferred policies there was only a significant adverse effect on **one *Natura 2000* site**:

- **Solent and Southampton Water Ramsar site** (PU 6C.5) - 31 hectares of coastal grazing marsh.

However, following public consultation and discussions with Natural England it was deemed that in fact the Isle of Wight SMP2 will have a significant adverse effect (**xxx**) on the integrity of **two *Natura 2000* sites** as a result of the policy at Yarmouth Mill and Thorley (PU6C.5):

- **Solent and Southampton Water Special Protection Area Ramsar** site - 31 hectares of coastal grazing marsh[3]; and
- **Solent and Southampton Water Special Protection Area** (SPA) - loss of feeding grounds and high tide roosts of wader and waterfowl bird species.

Instead of it just being the **Solent & Southampton Water Ramsar site** for the loss of 31 hectares of coastal grazing marsh in the second epoch, it has also been deemed that the **Solent & Southampton Water SPA** will be adversely affected. This is due to the change in habitat type and function of feeding grounds and high tide roost sites that are used by internationally important wader and wildfowl bird species for which the site is designated.

3.2 Details of the Significant Adverse Effects on the *Natura 2000* Sites

The preferred policy for Policy Unit 6C.5 (Yarmouth Mill and Thorley) is to Hold The Line in the short term (Epoch 1), followed by Managed Realignment in the medium term (Epoch 2), and No Active Intervention in the long term (Epoch 3). The loss of habitats over the 100 year period from this policy suite is given in **Table 3.1**.

Table 3.1 Loss of habitats over the SMP2 period for the Solent and Southampton SPA/Ramsar site

Habitat Types	Loss of Habitat Area (ha)			Total (ha)
	0-20 years	20-50 years	50-100 years	
SPA: Coastal grazing marsh supporting high water roosting and feeding of wintering migratory birds (dark-bellied Brent geese, teal and black-tailed godwit). **Ramsar:** Permanent freshwater/brackish marshes (Criterion 1) supporting wintering wildfowl assemblages (Criterion 5) and wintering dark-bellied Brent geese, teal and black-tailed godwit (Criterion 6).	**0**	**31**	**0**	**31**

[3] The assessment of this *Natura 2000* site has not changed from that reported in the SEA ER and HRA that were published in July 2010. The only thing that has changed is the addition of the Solent and Southampton Water SPA site, as previously it was deemed that bird species would be able to adapt to the change in habitat type. However, following further discussion it has been agreed that this will not be the case.

The HTL policy in the first epoch is necessary in Epoch 1 so as to maintain the landward coastal grazing marsh habitats that provide important feeding and high tide roost sites for internationally important wader and wildfowl bird species, which will allow time to identify and create the replacement habitat with necessary function for support wintering feeding and roosting birds, as well as to research the Managed Realignment policy for the second epoch. The MR policy in the second epoch will however result in the loss of 31 hectares of coastal grazing marsh, which will occur between 2025 and 2050. This would occur through the controlled management of the saline water along the lower reaches of the Thorley and Barnfields Streams, though this would be carried out in a managed way to enable slow adaptation to increasing saline intrusion, there would still be a loss of this freshwater marsh habitat which is a designated feature of the Solent and Southampton Water Ramsar site. The loss of this habitat is also likely to result in an adverse effect on some of the wader and wildfowl bird species that this area supports (e.g. redshank, dark-bellied Brent goose and teal) by providing feeding and high tide roost sites, and which are designated under the Birds Directive through the Solent and Southampton Water SPA site. Though some bird species will adapt to the habitat changes from freshwater marshes to predominantly intertidal saltmarsh and mudflat (as predicted by the Isle of Wight Mitigation Strategy, Atkins 2006), which will maintain the roost function for some bird species (e.g. redshank). There will be some species that will not be able to use the area for feeding/roosting at high water, hence the functionality of the area will not be the same as previously.

3.3 What Happens Now?

Since the Appropriate Assessment concluded that the Isle of Wight SMP2 will lead to an adverse effect on the integrity of two European designated nature conservation sites through the loss of 31 hectares of coastal grazing marsh, then *Stage 4 of the Habitats Regulations Assessment* is required to be submitted to the Secretary of the State according to Regulations 62 (5) and 64 (2) of the Habitats Regulations 2010. This stage has since been drafted and will form **Appendix L** of the Final SMP2. This document was submitted on the 8th November to Defra (the Secretary of State), alongside a support letter of the SMP2 policies from Natural England.

This last stage assessed whether there are any alternative solutions or preventative measures to the policy (PU6C.5) that is resulting in the adverse effect, and to determine that the SMP2 should be permitted for Imperative Reasons of Overriding Public Interest. Compensatory habitat measures must therefore be secured to ensure that the overall coherence of the Natura 2000 network is protected. **Appendix L** records that 31 hectares of coastal grazing marsh (with the function of providing high tide roost sites and feeding areas for winter grazing birds) will need to be replacing like for like. Therefore, this amount of compensation habitat is required to be passed onto the Environment Agency's Southern Regional Habitat Creation Programme for delivery, which is the Government's recommended vehicle for delivering strategic habitat compensation and are funded in advance of policies that cause damage (refer to **Section 3.4** below for more details).

3.4 Compensatory Habitat Requirements

The compensatory habitat requirements identified in the HRA Stage 3 and 4 Reports indicates that 31ha of coastal grazing marsh will be required; the replacement habitat must ensure it is able to support high water roosting and feeding of wintering migratory birds (refer to **Appendices I** and **L** for further detail). This compensatory habitat will be sought through the Environment Agency's Southern RHCP.

The Environment Agency's Southern RHCP is a dedicated, resourced plan for delivering compensatory habitat. To date the RHCP has firm delivery plans for the first epoch (first 20 years), where the necessary compensation will be created and ecologically functional by the time it is required. It is reasonable to expect that this method of providing compensation habitat will continue for Epochs 2 and 3. Natural England themselves have agreed nationally that the Regional Habitat Creation Schemes are an appropriate mechanism for securing and delivering compensatory habitat.

Environment Agency Habitat Creation programmes are the Government's recommended vehicle for delivering strategic habitat compensation and are funded in advance of engineering works that cause damage. Therefore, no damage to a site as a result of a policy can occur, prior to compensation being secured.

The SMP2 Action Plan provides a specific programme of monitoring and evaluation to determine in detail the response of the system to SMP2 policy and to sea level rise. Actions are to be provided for each PDZ and epoch; the relevant action for the adverse effect on the integrity of these *Natura 2000* sites is:

- Develop a plan for short and medium term policies leading to MR at Thorley Brook to allow time for habitat adaptation and to assess/address consequences of tidal inundation for the properties and infrastructure at the margins of the floodplain. A specific programme of action for monitoring, consultation and studies to improve predictions of intertidal developments and understanding of the impact of loss and gain of intertidal foreshore on flood defence and habitats. The increased knowledge will inform the timing, location and extent of the saline intrusion up the lower reaches of Thorley Brook and Barnfields Stream for the MR in the second epoch and thus optimize defence sustainability and to compensate for the expected loss of freshwater habitats.

The following proposed key preventative and mitigation measures have also been suggested for the Isle of Wight *Natura 2000* sites based on the Environmental Report and HRA Report:

- A specific programme of action for monitoring, consultation and studies to improve the predictions of intertidal developments and understanding of the impact of gain in intertidal mudflat and saltmarsh and loss of coastal grazing marsh is essential. The increased knowledge will inform the timing, location and extent of the saline intrusion up the lower reaches of Thorley Brook and Barnsfield Stream for the MR in the second epoch, and thus optimise defence sustainability and to compensate for the expected loss of high water feeding functionality for the SPA and Ramsar bird feature and wetland Ramsar habitat. Furthermore, such a programme will also need to investigate the feasibility of either maintaining some of the functionality by keeping some of the coastal grazing marsh in situ or creating further coastal grazing marsh along the upstream areas of the saltmarsh; and
- Loss of habitat function, as a consequence of the recommended SMP2 policy within the Western Yar Estuary (PU 6C.5) used by migratory bird species and waterfowl assemblages as feeding and high tide roost sites, can potentially be mitigated through habitat management; for example, artificial roost sites can be substituted by use of pontoons, keeping some habitat in situ or creating habitat further upstream.

4 IMPACT OF SMP2 ON THE HISTORIC ENVIRONMENT

4.1 Introduction

The HTL policies implemented by the SMP2 will maintain the protection from erosion for numerous designated heritage assets and maintain the current level of flood protection. The aim has been to preserve designated historic environment features and assets in situ where feasible. However, potential examples were found where SMP2 policy (notably NAI) would lead to the loss or damage of designated sites/features that are important to the historic environment such as Scheduled Monuments, Listed Buildings and Registered Parks and Gardens. Therefore, sufficient time should be provided, if required, for appropriate mitigation of loss or damage to such historic assets if preservation in situ cannot be achieved.

4.2 Designated Historic Assets to be Damaged/Lost

The following key sites will be significantly adversely affected (**xxx**), being either damaged and/or lost in the long-term, where policies that allow for continued erosion such as NAI occur. These are provided in **Table 4.1**.

Table 4.1 Historic Sites at risk of flooding and coastal erosion as a result of the SMP2 policies

PDZ	Policy Unit	Name	Type
PDZ 1	**PU 1A.6**	Norris Castle	Registered Park and Garden (Grade II)
	PU 1B.5	East Medina House	Listed Buildings (Grade II)
PDZ 2	**PU 2A.1**	Norris Castle	Registered Park and Garden (Grade II)
		Osbourne House	Registered Park and Garden (Grade I)
		Piers Landing House	Listed Buildings (Grade II)
		Queen's Alcove	Listed Building (Grade II*)
		Barton Wood	part of Osbourne House Registered Park and Garden (Grade I)
		Pier Wood	part of Osbourne House Registered Park and Garden (Grade I)
	PU 2B.8	Northern Precinct Walls of Quarr Abbey	Grade II Listed Building within a Scheduled Monument
PDZ 3	**PU 3C.1**	Yaverland Fort Battery	Scheduled Monument
PDZ 4	**PU 4A.1**	Tower in Grounds of Luccombe Chine Country House	Listed Buildings (Grade II)
	PU 4B.1	Ventnor Botanic Garden	Registered Park and Garden
	PU 4B.2	Puckaster and Gatepiers to Reith Lodge[4]	Listed Buildings (Grade II)

[4] This is provided that the cliffs cannot be stabilised by MR in the long-term.

PDZ	Policy Unit	Name	Type
	PU 4B.3	Shakespeare Memorial in Grounds of South View	Listed Buildings (DL)
		St Catherine's Lighthouse and Lighthouse Keeper's Quarters	Listed Buildings (Grade II)
PDZ 6	PU 6A.2	Long Mortuary Enclosure on Tennyson Down	Scheduled Monument
		Lower Needles Point Battery	Scheduled Monument
		Tennyson's Beacon	Listed Buildings (Grade II)
	PU 6B.3	Fort Albert	Listed Building (Grade II*)
	PU 6B.5	Fort Victoria	Listed Building (Grade II)
	PU 6C.2	The Former Stabling and Hayloft and Wall to South of Kings Manor Farm	Listed Building (Grade II)
	PU 6C.2	the Stable to South of Kings Manor	Listed Building (Grade II)
	PU 6C.5	Yarmouth Mill	Listed Building (Grade II)
PDZ 7	PU 7.2	Medieval Settlement and Cultivation Remains at Newtown (already at risk from flooding)	Scheduled Monument (historical)
		Fleetlands Farmhouse	Listed Buildings (Grade II)

4.3 Mitigation Measures and Monitoring of Designated Historic Assets

A comprehensive monitoring programme for cliff top erosion has been highlighted in the SMP2 Action Plan (Action 0.7) that would include cliff or shoreline sections, in which the above heritage assets are present, so as to assess where mitigation measures may be required in future, and whether additional historic environment survey and/or desk-based assessment will be needed in some locations. Where heritage assets are threatened with unavoidable loss as a result of coastal erosion, the mitigation is to relocate them further inland. Though the feasibility and cost of relocation and the implications for the heritage values of the asset would play an important part in decision making; this is more likely to be feasible for smaller or more portable historic structures. In general, the preferred mitigation option will be recording assets prior to their loss. The detail in which assets are recorded should reflect their heritage significance and this should be determined by reference to appropriate research frameworks and by reference to expert professional judgement.

It must be accepted that other 'unknown' sites could be at risk, but would only come to light as the SMP2 is implemented and the coastline erodes. Within the SMP2 Action Plan therefore, English Heritage will be instrumental in helping to establish what the specific nature of losses may be and where losses are known, a figure for investigation established so that this funding can be sought from Government. The intent of addressing this matter within the SMP2 Action Plan will be to ensure that English Heritage is provided with the necessary funds, in advance to investigating sites at risk. This element of work would tie in with the monitoring and survey recommendations for the historic environment (e.g. the Isle of Wight Coastal Audit through the upgrading/updating of the Rapid Coastal Zone Assessment Survey (RCZSA): *Action 0.6 of the SMP2 Action Plan*) and provide a framework for flexible and rapid response to the discovery of sites or features of importance that become exposed as a result of coastal erosion.

5 OUTSTANDING REQUIREMENTS FOR THE COMPLETION OF THE SMP2

5.1 Introduction

There are two outstanding requirements with regards to the environmental aspects for the Final SMP2; both of which are summarised briefly in the sections below.

5.2 Sign off of the IROPI from the Secretary of State

The Stage 4 Habitats Regulations Report, which provides Information to the Secretary of State according to Regulations 62(5) and 64(2) of the Habitats Regulations, was submitted on the 8th November. It is expected that this will not be approved by the Secretary of State until the beginning of January 2011.

There is a chance that the Secretary of State (i.e. Defra) may not approve the need for Imperative Reasons of Overriding Public Interest (IROPI), which would therefore result in the Final SMP2 requiring to amend the policy for PU6C.5. However, since it will be possible to provide the necessary compensation habitat in Epoch 1 prior to the loss of the 31hectares of coastal grazing marsh in Epoch 2, it is unlikely that this will be case, particularly since we have the support of Natural England.

It has therefore been advised that the need for sign off from the Secretary of State will therefore not prevent the ratification of the SMP2 by the Isle of Wight Council prior to the end of December, which is the national deadline for all SMP2's to be ratified.

5.3 Production of the Statement of Environmental Particulars

The Statement of Environmental Particulars (SoEP) has been drafted, however it will not be published alongside the Final SMP2 until the consultation period for this Addendum has finished at the end of December. Any comments received will be added into the SoEP, as well as any implications or responses considered; this will be in the first week of January. Providing there are no significant comments then the SoEP will be added to the website alongside the Final SMP2 at the beginning of January.

6 REFERENCES

Atkins (2006). Isle of Wight Mitigation Strategy. Final Report. April 2006. Produced for Isle of Wight Council.

SEA Directive 2001/42/EC Environmental Assessment of Plans and Programmes Regulations (SI 1633) 2004.

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Isle of Wight Shoreline Management Plan
Post Adoption Statement

POST ADOPTION STATEMENT
ANNOUNCEMENT OF ADOPTION OF THE ISLE OF WIGHT SHORELINE MANAGEMENT PLAN
(SI 2004 1633 (England) Regulation 16 1(b) & 2)

PREPARED FOLLOWING THE PRINCIPLES OF THE ENVIRONMENTAL ASSESSMENT OF PLANS AND PROGRAMMES REGULATIONS 2004[1]

ISLE OF WIGHT SHORELINE MANAGEMENT PLAN
THE ENVIRONMENTAL ASSESSMENT REGULATIONS (SI 2004 1633)

The Isle of Wight Council gives notice that the Isle of Wight Shoreline Management Plan (SMP) was adopted on the 8th December 2010. It is available for inspection alongside its Environment Report and a Statement of Environmental Particulars (in line with Regulation 16(4)) at the locations set out below.

The Isle of Wight SMP provides a large scale assessment of the risks associated with coastal evolution and presents a policy framework to address these risks in a sustainable manner with respect to people and to the developed, historic and natural environment. The SMP covers the Isle of Wight, the largest island in England, and which sits off the coast of Hampshire, and also includes up to the tidal extent of the five estuaries (Medina, Wootton Creek, Eastern Yar, Western Yar and Newtown Harbour).

The full plan including appendices is free and available from the Isle of Wight Shoreline Management Plan website at: www.coastalwight.gov.uk/smp

Members of the public may also inspect a printed copy of the main document (inspection is free) from the following address:

Coastal Management, Isle of Wight Council, Dudley Road, Ventnor, Isle of Wight, PO38 1EJ.
Opening times: By arrangement tel. 01983 857220.

For more information please call us on 01983 857220 (Mon-Fri 9-5), or email us at: coast@iow.gov.uk

The Isle of Wight Council's contact for the Plan's implementation is:

Name: Peter Marsden
Position: Principal Coastal Engineer
Address: Isle of Wight Council, Dudley Road, Ventnor, Isle of Wight, PO38 1EJ.

[1]*The plan does not fall within the requirements of the Environmental Assessment of Plans and Programmes Regulations 2004 (SI 1633) but has been prepared within the principles of the Regulations.*