

Limpert Bay to Nash Point (5)



Recommendations:

Long Term Plan

This frontage is largely undeveloped, with a few, isolated lengths of defence. The plan is to maintain the natural landscape along the majority of the shoreline. The recommendations will ensure that geological exposures, for which the cliffs are designated, are not obscured and that the natural landscape, which is designated as part of the Glamorgan Heritage Coast, is maintained.

Existing defences will be maintained at Llantwit Major beach. In the long term it is envisaged that the defences should be realigned inshore, which will require relocation of existing facilities, including a lifeguard station, café, toilets and car park. In the medium term alternative options for managed realignment should be developed and assessed, which may include the creation of an area of intertidal habitat, subject to the availability of public funding for coastal erosion and flood risk management.

Maintaining existing defences at Tresilian and St Donat's Atlantic College is not considered to impose a significant constraint on the long term plan for this frontage, due to the indented nature of the frontage and poor littoral sediment connectivity. The plan does not, therefore, preclude such works assuming: private funding, defences are maintained along the existing alignment and appropriate consents, licences and approvals are obtained.

Location (Policy Unit)		Preferred SMP2 policy and approach to implementing the Plan		
		0-20 years	20-50 years	50-100 years
5.1	Limpert Bay to Cwm Col-huw east	There are currently no defences along this frontage and the long term policy is to allow the coast to evolve and retreat naturally through no active intervention .		
5.2	Llantwit Major (Cwm Col-huw)	Defences have already been set back along the car park, and the short term aim is to maintain these defences, and those to the west, through a hold the line policy.	Whilst options for a second phase of managed realignment are considered, the medium term policy is to continue to hold the line , through maintenance of the existing defences.* This policy would allow continuation of natural processes, but would allow time for any relocation of assets and also allow measures to be undertaken to address any change in flood risk to the village. <i>* Consider managed realignment of defences to the west of the river so that defences are in line with the previously set back (car park) defences to the east.</i>	Consider a second phase of managed realignment , whilst ensuring that sufficient storage is maintained for the storage of surface water run-off from the village during periods of high tide to manage the risk of flooding. This policy is subject to the availability of public funding for coastal erosion and flood risk management.
5.3	Cwm Col-huw to Nash Point	The majority of the shoreline is undefended and therefore the long term policy is to allow the coast to evolve and retreat naturally through no active intervention . This does not preclude the potential for private landowners to maintain the existing defences at Tresilian and St Donat's Atlantic College. However, over time these defences may become unsustainable and more expensive to maintain in their current alignment. Any defence improvements or additional works would be subject to obtaining the necessary consents, licences and approvals.		

A review of the impacts of the preferred SMP2 policies on coastal evolution and behaviour is provided in Appendix E: Policy Development and Appraisal, Section E1.3.

Policy sensitivities and key uncertainties (further detail is included in Appendix K)

Policy unit 5.2 - continued monitoring would be necessary in order to assess whether further realignment should be implemented and to assess the risk of flooding to the village, subject to the availability of public funding for coastal erosion and flood risk management.

Changes from present management / SMP1 policy¹

Policy units 5.1 and 5.3 – no change from present management practice or SMP1 policy.

Policy unit 5.2 - SMP1 recommended 'hold or advance in west and managed retreat in east'. This is not considered sustainable in the long term, see SMP2 policy above.

¹ The SMP1 documents should be referred to for more details as unit boundaries do not always align with SMP2 policy units and the policies refer to different time periods.

Limpert Bay to Nash Point (5) (this is a summary of impacts, for full details see Appendix G SEA Report)	
Issue	Appraisal
Receptor: Property, population and human health There are few, small settlements along this mainly undeveloped frontage. These include Llantwit Major (although the village is sufficiently far inland not to be affected), Hafod, Tresilian and St Donat's Atlantic College.	
Will SMP policy maintain coastal settlements and manage the impact of coastal flood and erosion?	<ul style="list-style-type: none"> - Potential risk to isolated cliff top properties, although risk is minimal and dependent upon future rates of coastal erosion and cliff falls. - Risk to part of St Donat's Atlantic College should defences not be privately maintained.
Will SMP policy directly increase the actual or potential coastal erosion or flood risk to communities?	<ul style="list-style-type: none"> - Along the majority of this shoreline there are currently no defences. There will, however, be an increased risk of coastal erosion and flooding at St Donat's Atlantic College and Tresilian should defences not be privately maintained and are allowed to fail.
Is SMP policy sufficiently flexible to take account of dynamic coastal change?	<ul style="list-style-type: none"> + The SMP policy recognises dynamic coastal change, with policies of no active intervention along most of the shoreline. At Llantwit Major, the long term aim to further realign the defences recognises likely future coastal change and would allow the shoreline to continue to evolve naturally locally, as sea level rises.
Could there be a detrimental impact on the fabric of coastal communities?	<ul style="list-style-type: none"> x There would be no impact on the fabric of coastal communities due to the largely undeveloped nature of the coastline and the low erosion rates.
Receptor: Land use, infrastructure and material assets This frontage is mainly undeveloped, but there are a number of key assets including the Seawatch Centre at Hafod, lifeguard station, café, toilets and car park at Llantwit Major and St Donat's Atlantic College.	
Will SMP policy maintain key industrial, commercial and economic assets and manage the impact of coastal flooding and erosion?	<ul style="list-style-type: none"> - Managed realignment at Llantwit Major would result in loss of car park, lifeguard station, café and toilets, unless they are relocated inshore. x The Seawatch Centre is sufficiently far inland to be unaffected by coastal flood and erosion risk. - Risk to some of St Donat's Atlantic College's assets, unless existing defences are privately maintained or improved (subject to obtaining the necessary consents, licences and approvals).
Will the SMP policy ensure critical services and infrastructure remain operational, for as long as required?	<ul style="list-style-type: none"> x There is no major infrastructure along this section of coast. - Car park, lifeguard station, café and toilets at Llantwit Major beach would be lost once managed realignment was implemented, unless they are relocated inshore.
Will there be an impact on marine operations and activities?	<ul style="list-style-type: none"> x There are no large scale marine operations along this frontage.
Will SMP policy impact coastal flooding or erosion on agricultural activities?	<ul style="list-style-type: none"> - Risk of loss of small areas of cliff top agricultural land, dependent on rates of coastal erosion. Areas lost would not be expected to be significant.
Will the SMP policy ensure that MoD (Qinetiq) ranges remain operational?	<ul style="list-style-type: none"> x There are no MoD (Qinetiq) assets along this shoreline.
Receptor: Amenity and recreational use The main recreational value of this coastline is in its natural and undeveloped nature. Llantwit Major is a popular beach access point and there is a car park, lifeguard station, café and toilets. The Valeways Millennium Heritage Trail follows the coastal footpath along much of this frontage.	
Could the SMP policy have an impact on tourism in the area?	<ul style="list-style-type: none"> - Implementation of managed realignment at Llantwit Major would result in loss of amenity facilities, unless they are relocated inshore. + The remainder of the coast will be allowed to remain undisturbed, thereby maintaining the natural landscape, which is an element of the tourist interest.
Will SMP policy affect coastal access along, or to, the coast?	<ul style="list-style-type: none"> - There is a small risk to the coastal footpath, due to cliff erosion or localised cliff falls. This risk is expected to increase over time. There is potential for the footpath to be relocated or realigned slightly inshore, if there is sufficient notice. The Valeways Millennium Heritage Trail follows the footpath along much of this frontage.
Receptor: Historic environment There are a range of nationally important sites, including Castle Ditches SM at Llantwit Major and Summerhouse Camp SM, along with numerous listed buildings. Locally important archaeology includes actively eroding military structures and fish traps.	
Will SMP policy maintain the fabric and setting of key historic listed buildings, cultural heritage assets and conservation areas?	<ul style="list-style-type: none"> - There is a risk of erosion to the cliff top Scheduled Monuments which have already been eroding. This may lead to loss of small areas of the site, although this is dependent on erosion rates. - Risk to listed buildings at St Donat's if existing defences are not maintained privately. - Risk of erosion and submergence to local foreshore archaeology including fish traps.
Will the SMP provide sustainable protection of archaeological and palaeo-environmental features or ensure adequate time for monitoring, assessment and mitigation measures to be devised in response to ongoing	<ul style="list-style-type: none"> o Along currently undefended sections there is no intent to provide new defences, as this would not be economically justified and is considered unsustainable. However, rates of coastal erosion tend to

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(this is a summary of impacts, for full details see Appendix G SEA Report)	
Issue	Appraisal
and future erosion.	be low which should allow time for monitoring, assessment and mitigation measures to be developed, where appropriate. Assets on the foreshore would be subject to risk of flooding and erosion, although rates would be dependent on foreshore evolution and rates of sea level rise and would not be affected by SMP policy.
Receptor: Landscape character and visual amenity	
This frontage is part of the Glamorgan Heritage Coast, for its plunging cliffs and secluded coves, along with the presence of several Celtic hill forts on the cliff tops; the area is also noted for its dramatic rocky foreshores.	
Will SMP policy maintain a range of key natural, cultural and social features critical to the integrity of the coastal landscape?	+ Allowing natural coastal evolution will enable the character of the coast to be maintained.
Could SMP policy lead to the introduction of features which could be unsympathetic to the character of the landscape?	+ There is no intent to provide any additional defences along the majority of the shoreline. At Llantwit Major, managed realignment could lead to new defences, although these would only be localised and would replace existing defences.
Receptor: Biodiversity, flora and fauna	
Nash Lighthouse Meadow SSSI is a small unploughed limestone pasture located just south of Nash Point.	
Will SMP policy enable a sustainable approach to habitat management?	+ There are no new defences proposed in currently undefended areas, therefore this is considered a sustainable approach to natural evolution of the coastline and its habitats.
Will SMP policy maintain or enhance any international, national or local sites of natural conservation interest?	● Natural cliff erosion could lead to some loss of limestone pasture, dependent on erosion rates. However, the low erosion rates mean that losses are likely to be small.
Will SMP policy <u>accelerate</u> intertidal narrowing (coastal squeeze) and will this affect designated habitats?	+ The coast along the designated frontage would be allowed to evolve naturally, with no artificial backshore constraints. In places natural intertidal narrowing may still occur as the resistant cliffs may not retreat at the same rate as sea level rise. This is dependent upon future rates of sea level rise. However, the resistant nature of the cliffs is such that intertidal narrowing would not be expected to increase cliff erosion rates and therefore this would not affect Nash Lighthouse Meadow SSSI.
Will there be a net loss of BAP habitat within the SMP timespan as a result of SMP policy?	+ Potential extension of <i>Sabellaria alveolata</i> reefs as the shoreline is allowed to move inland through natural evolution. This extension would be allowed in the short, medium and long term.
Receptor: Earth heritage, soils and geology	
There are no designated sites for geological exposures or earth heritage along this frontage; however the region is noted for the plunging cliffs and rocky intertidal foreshores.	
Does SMP policy work with natural processes and enhance or maintain natural features?	+ Much of the coastline is undefended, and the recommended policy is for the coastline to continue evolving naturally. At Llantwit Major, a long term aim to realign the shoreline would enable natural processes to continue as sea level rises.
Will SMP policy maintain or enhance the visibility of coastal geological exposures, where designated?	+ Where the shoreline is currently undefended, there is no intention to build new defences, therefore geological exposures in the cliffs will be maintained. Realignment of the defences at Llantwit Major could be beneficial to earth heritage and geology locally.
Receptor: Water	
There are numerous coastal, freshwater, transitional (areas of water near river mouths, which are partially saltwater but are influenced by freshwater) and groundwater bodies in the SMP2 area that have the potential to be affected by SMP2 policies.	
Will SMP policy manage the risk of pollution from contaminated sources?	x There are no known contamination issues along this shoreline.
Will SMP policy adversely affect water bodies in the coastal zone?	● HTL policy in the short to medium term (PU5.2) could have localised adverse effects on biological quality elements, but with NAI elsewhere and considering that the Bristol Channel Inner North water body is already at good status, the WFD objectives not at risk. ● The Thaw & Cadoxton Jurassic Lias and Swansea Jurassic Lias groundwater bodies and river water bodies associated with the policy scenario area will be unaffected.

Impact colour key	+ Positive	● Neutral	- Negative	x Not applicable
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ACTION PLAN						
Action	Action Ref	Policy Unit	Action Description (to be approved)	Potential source for funding (subject to approval)	Responsibility Lead partner * (supporting partners)	When by (subject to funding)
1. Studies for Scenario Area			-			
2. Studies for Policy Units	2.1	5.2	Undertake a feasibility study to develop and assess the technical, socio-economic and environmental viability of a coastal erosion and flood risk management plan which may involve further managed realignment at Llantwit Major to enable the creation of an area of inter-tidal habitat. Consider alternative funding options where it is not possible to justify public investment in coastal erosion and flood risk management.	WAG	VoG	0 to 5 years
3. Strategy			-			
4. Scheme work			-			
5. Monitoring (data collection)	5.1	All	Undertake beach and coastal defence asset monitoring to inform further studies and future SMP reviews. In particular cliff erosion rates should be monitored. This information should not only be used in future coastal management, but also to assist in stakeholder liaison by use of data in public education campaigns.	WAG	VoG (Wales Coastal Monitoring Centre)	0 to 20 years
	5.2	All	Continue with existing beach profile monitoring programme and provide information to Wales Coastal Monitoring Centre for storage and analysis. Use beach profile data to identify the future risk of undermining and overtopping of existing defences.	WAG	Coastal Group/ Wales Coastal Monitoring Centre	0 to 100 years
	5.3	5.2 & 5.3	Undertake periodic defence inspection, including condition assessment and photographs. Confirm defence crest levels.	WAG	VoG (Wales Coastal Monitoring Centre)	0 to 100 years
	5.4	All	Undertake further studies and associated monitoring, to better understand sediment regimes in the SMP area and inform future coastal management.	WAG	Coastal Group	0 to 20 years
	5.5	All	Monitor risk to the coastal footpath and investigate potential routing of the path where appropriate.	WAG	VoG	Ongoing
6. Asset management	6.1	5.2 & 5.3	Ensure that extents of public and privately owned defences are defined and mapped to inform future management decisions.	WAG	VoG (Wales Coastal Monitoring Centre)	0 to 20 years
	6.2	5.2 & 5.3	Undertake an appraisal of asset inspection and beach profile monitoring data to assess the existing and future risk of undermining and overtopping of existing structures.	WAG	Coastal Group/ Wales Coastal Monitoring Centre	0 to 20 years
7. Communication	7.1	All	Undertake consultation with the local community, key stakeholders and general public during the development of the coastal erosion and flood risk management plan, which may involve further managed realignment, at Llantwit Major and wherever appropriate to ensure an acceptable approach is developed and adopted.	WAG	VoG	0 to 20 years
	7.2	All	Undertake monitoring and management of Action Plans to ensure SMP policies are put into practice.	WAG	Coastal Group	0 to 100 years
8. Interface with planning and land management	8.1	5.2	Continue with risk-based improvements to flood risk maps to provide an appraisal of likely future projected sea level rise.	WAG	EAW	0 to 20 years
	8.2	All	Ensure SMP policies and flood and erosion risks are accounted for in the next revisions of land use plans in order to help manage residual risks from coastal erosion and flooding, and to inform future planning decisions.	WAG	VoG planning	0 to 20 years
9. Emergency response	9.1	5.2	Development, monitoring and review of emergency response plans to prepare for storm events which are likely to exceed existing defence standards of protection or lead to failure of existing defences (for example following breach or overtopping).	WAG	VoG	0 to 20 years
10. Adaptation/ resilience			-			
11. Flood forecasting and warning	11.1	5.2	Continue with risk-based improvements to flood risk maps and inundation modelling to provide improved flood warning services.	WAG	EAW	0 to 20 years
12. Habitat creation and environmental mitigation			-			

* Note: It is recommended that the lead partner/s investigate the potential for local partnerships and alternative sources of funding.

