

Aberthaw (4)



Recommendations:

Long Term Plan

The key policy driver is Aberthaw coal fired power station and associated infrastructure (including the railway line). The area immediately to the east of the power station site is potentially contaminated by fly ash and other by-products. The plan is therefore to continue to manage the risk of coastal erosion and flooding to the power station and to minimise the risk of contaminants being released into the coastal zone. The highly modified nature of this coastline and estuary means that there would be very little benefit of any other policy. There are also potential environment benefits in maintaining the lagoon inshore of existing defences at the eastern edge of the power station site.

Location (Policy Unit)	Preferred SMP2 policy and approach to implementing the Plan		
	0-20 years	20-50 years	50-100 years
4.1 Aberthaw	The long term policy is to hold the line through maintaining and upgrading existing defences, subject to obtaining the necessary consents, licences and approvals. This may involve rebuilding the defences in the long term to raise and strengthen them in response to sea level rise. Currently the beach crest is up to 10m wide in places, and is often fronted by mature vegetation.		

A review of the impacts of the preferred SMP2 policy 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 4.1 - this policy depends on the future strategy with regard to the power station. However, even without the power station, there would remain a contamination issue and a hold the line policy would be recommended whilst the risk was being assessed. There are also proposals to further develop the power station site, which could involve private funded defence improvement/ extension, subject to obtaining the necessary consents, licences and approvals.

The erosion risk to the currently undefended railway at the eastern end would need to be monitored, it is possible that existing defences would need to be extended (funded privately) and the impacts of this would need to be considered as appropriate. Defence improvements would be subject to obtaining necessary consents, licences and approvals.

Changes from present management / SMP1 policy¹

Due to the industrialised nature of the site, and potential contamination, this policy represents no change from the current management practice, or the SMP1 policy.

Aberthaw (4) (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 other assets along this industrialised frontage.	
Will SMP policy maintain coastal settlements and manage the impact of coastal flood and erosion?	X No coastal settlements within the frontage.
Will SMP policy directly increase the actual or potential coastal erosion or flood risk to communities?	X No coastal settlements within the frontage.
Is SMP policy sufficiently flexible to take account of dynamic coastal change?	- The policy is inflexible due to the nature of the hinterland, and therefore as sea level rises, or natural coastal processes change, the level of defence required may alter.
Could there be a detrimental impact on the fabric of coastal communities?	X No coastal settlements within the frontage.
Receptor: Land use, infrastructure and material assets The key asset along this frontage is the operational Aberthaw coal-fired power station and associated infrastructure. The railway line is also a significant asset, both in terms of industrial use (supply of coal to the power station) and passenger services.	
Will SMP policy maintain key industrial, commercial and economic assets and manage the impact of coastal flooding and erosion?	+ The risk of coastal erosion and flooding to the power station and associated infrastructure will continue to be managed.
Will the SMP policy ensure critical services and infrastructure remain operational, for as long as required?	+ Maintenance and upgrading of the defences should ensure that the power station and associated infrastructure remain operational. There are a number of future plans for the development of the power station including use of bio-mass and carbon capture. + The risk of coastal erosion to the railway line would continue to be managed; defences will be extended if necessary in order to manage the risk to this critical transport link.
Will there be an impact on marine operations and activities?	X There are no large scale marine operations along this frontage.
Will SMP policy impact coastal flooding or erosion on agricultural activities?	X There are no agricultural activities along this shoreline.
Will the SMP policy ensure that MoD (Qinetiq) ranges remain operational?	X There are no MoD (Qinetiq) assets along this shoreline.
Receptor: Amenity and recreational use There is limited amenity and recreational use along this frontage, other than various footpaths providing access to the beach and along the shore.	
Could the SMP policy have an impact on tourism in the area?	X Little amenity and recreational use.

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.

Aberthaw (4) (this is a summary of impacts, for full details see Appendix G SEA Report)	
Issue	Appraisal
Will SMP policy affect coastal access along, or to, the coast?	<ul style="list-style-type: none"> + Continuing to maintain and improve existing defences would manage the risk of coastal erosion and flooding to the site, and potential contamination of the wider coastline, which could have an adverse impact on tourism elsewhere along the coast. + The coastal footpath is diverted inland along the eastern part of this frontage. However, west of the River Thaw it runs landward of the defences and would therefore be maintained.
Receptor: Historic environment There is an early cement works Scheduled Monument and several associated listed buildings, at the eastern end of the frontage.	
Will SMP policy maintain the fabric and setting of key historic listed buildings, cultural heritage assets and conservation areas?	X Archaeological assets are located sufficiently inland to be unaffected by the policy.
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 and future erosion.	X There is no risk to the assets due to their location inland.
Receptor: Landscape character and visual amenity There are no specific landscape designations along this heavily industrialised frontage.	
Will SMP policy maintain a range of key natural, cultural and social features critical to the integrity of the coastal landscape?	<ul style="list-style-type: none"> ● For much of this shoreline there is no proposed change from existing policy, therefore minimal change to the landscape. + Whilst defences may need to be raised in response to sea level rise, the industrial nature of the frontage means that this would not affect visual amenity or landscape character.
Could SMP policy lead to the introduction of features which could be unsympathetic to the character of the landscape?	+ Additional defences may be constructed, if the risk of coastal erosion increases at the eastern end of the frontage to manage the risk to the railway line. However, as these would be an extension of existing defences rather than introduction of new defences in a previously undefended area, this is unlikely to have a significantly adverse impact on the landscape.
Receptor: Biodiversity, flora and fauna East Aberthaw Coast SSSI extends along the foreshore east of the River Thaw outlet and includes the Andrew's Pant area of the frontage.	
Will SMP policy enable a sustainable approach to habitat management?	+ This policy would continue to manage the risk of erosion to potentially contaminated land to the east of the power station site.
Will SMP policy maintain or enhance any international, national or local sites of natural conservation interest?	<ul style="list-style-type: none"> + Maintaining and improving existing defences will continue to manage the risk of contamination to the designated features. - Along some of the frontage there would be intertidal narrowing with the shoreline fixed by the defences in places, which may lead to coastal squeeze and potential loss of designated habitat.
Will SMP policy <u>accelerate</u> intertidal narrowing (coastal squeeze) and will this affect designated habitats?	- The defended frontage would suffer accelerated coastal squeeze which would lead to loss of designated intertidal habitat.
Will there be a net loss of BAP habitat within the SMP timespan as a result of SMP policy?	- Loss of intertidal underboulder community at Watch House Point in the short, medium and long term due to sea level rise.
Receptor: Earth heritage, soils and geology There are no areas designated for their earth heritage or geological interest.	
Does SMP policy work with natural processes and enhance or maintain natural features?	- Maintenance and upgrading of existing defences would prevent the shoreline operating naturally.
Will SMP policy maintain or enhance the visibility of coastal geological exposures, where designated?	X There are no designated exposures.
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?	+ Maintenance and upgrading of existing defences would manage the risk of erosion of potentially contaminated land.
Will SMP policy adversely affect water bodies in the coastal zone?	<ul style="list-style-type: none"> ● HTL policy could have localised adverse effects on biological quality elements, but since the Bristol Channel Inner North water body is already at good status, the WFD objectives not at risk. ● The Thaw & Cadoxton Jurassic Lias groundwater body will be unaffected. There are no associated surface freshwater bodies.

Impact colour key	+ Positive	● Neutral	- Negative	X Not applicable
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Aberthaw (4)						
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	4.1	Engage with and encourage RWE npower to undertake a study to identify the current and future risk of coastal erosion and flooding to the Aberthaw power station site and associated infrastructure to enable a long term sustainable flood and coastal erosion risk management plan to be developed for the site.	RWE npower	RWE npower (VoG)	0 to 20 years
	2.2	4.1	Undertake a study into the nature of the potentially contaminated land immediately to the east of the power station site.	WAG	VoG/ EAW	0 to 20 years
3. Strategy			-			
4. Scheme Work			-			
5. Monitoring (data collection)						
	5.1	4.1	Monitor the risk of coastal erosion to the railway line at the eastern end of the policy unit.	WAG	Network Rail (Coastal Group, Wales Coastal Monitoring Centre)	0 to 100 years
	5.2	4.1	Undertake beach and coastal defence asset monitoring to inform future studies and SMP reviews. In particular defence conditions and risk to the railway should be considered. 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	RWE npower (Coastal Group, Wales Coastal Monitoring Centre)	0 to 100 years
	5.3	4.1	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
	5.4	4.1	Undertake periodic defence inspection, condition assessment and photographs. Confirm defence crest levels.	RWE npower	RWE npower (Coastal Group, Wales Coastal Monitoring Centre)	0 to 100 years
	5.5	4.1	Undertake further studies, and associated modelling, to better understand sediment regimes in the SMP area and inform future coastal management.	WAG/ RWE npower	Coastal Group (RWE npower)	0 to 20 years
	5.6	4.1	Continued regular monitoring of the risk of coastal erosion and flooding to railway infrastructure, which may require mitigation measures to be developed, assessed and implemented (subject to obtaining necessary consents, licences and approvals).	Network Rail	Network Rail (Coastal Group, Wales Coastal Monitoring Centre)	0 to 20 years
	5.7	4.1	Monitor risk to the coastal railway path and investigate potential re-routing of the path where appropriate.	WAG	VoG	Ongoing
6. Asset management						
	6.1	4.1	Maintain and improve defences and beach including management of public access to deliver hold the line policy.	RWE npower	RWE npower (Coastal Group)	0 to 100 years
	6.2	4.1	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
	6.3	4.1	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.	RWE npower	RWE npower (Coastal Group)	0 to 20 years
7. Communication						
	7.1	4.1	Undertake consultation with the local community, key stakeholders and general public during the development of suitable defence improvements and whenever appropriate to ensure an acceptable approach is developed and adopted.	RWE npower	RWE npower (Coastal Group)	0 to 20 years

SUPERSEDED

contact CBCEG for current action plan

	7.2	4.1	Undertake monitoring and management of Action Plans to ensure SMP policies are put into practice.	WAG	Coastal Group (RWE npower)	0 to 100 years
8. Interface with planning and land management	8.1	4.1	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	4.1	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	4.1	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).	RWE npower	RWE npower	0 to 20 years
10. Adaptation / resilience			-			
11. Flood forecasting and warning	11.1	4.1	Continue with risk-based improvements to flood risk maps and inundation modelling to provide improved flood warning service.	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.