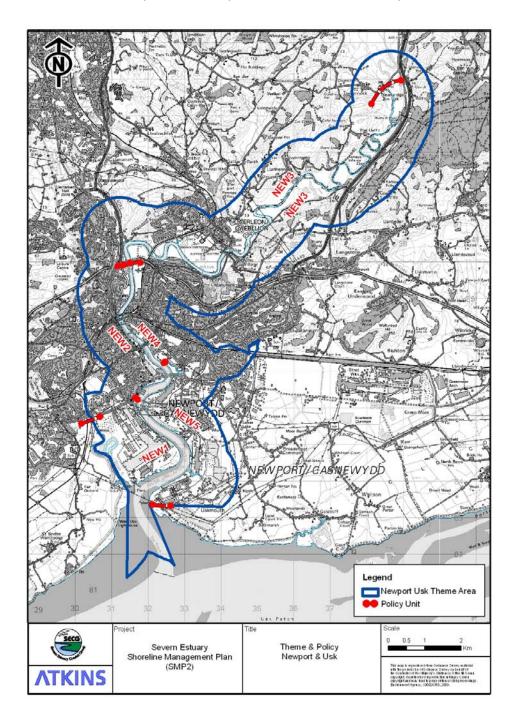
NEWPORT AND THE RIVER USK

This Theme area contains the Policy Units NEW 1, NEW 2, NEW 3 NEW 4 and NEW 5.

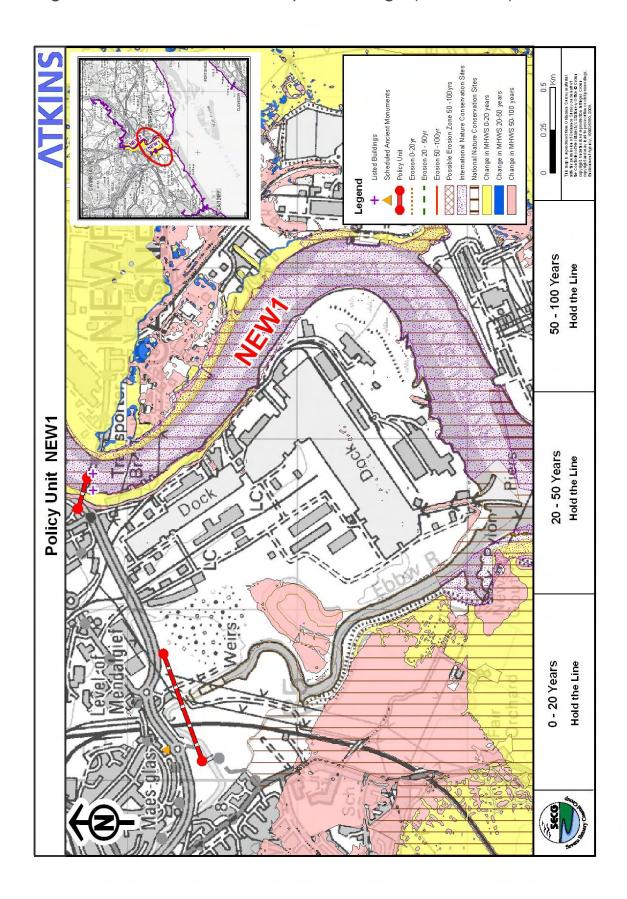
It starts on the *River Ebbw (east bank) at the Maesglas railway bridge*, and ends on the *River Usk at Spytty Pill, north of the A48 crossing*.

The Key Policy Drivers in this area are:

- International nature conservation sites Severn Estuary SAC, SPA and Ramsar, River Usk SAC;
- Critical infrastructure railway line, electricity substations, docks, M4;
- Residential developments Newport and the outskirts of Newport.



Policy Unit: NEW 1 – River Ebbw (east bank) at Maesglas Railway Bridge to River Usk at the transporter bridge (west bank)



Epoch	Preferred Policy	Comments
		The short term policy for this unit is Hold The Line
0 to 20 years (2025)	HTL	The existing defences will come to the end of their serviceable life in this epoch. HTL recommends that defences are replaced. Recently constructed defences are likely to require minimal maintenance. The position and height of new defences should be considered in more detail by the SEFRMS. The SEFRMS will consider combined risks from the sea (SMP2 policy) and the river (CFMP policy - take actions to maintain flood risk at existing level, accepting that risks will increase over time – see Section 3.4 SMP2-CFMP interactions). Actions should take account of potential impacts in the linked Policy Unit (NEW 2)
		HTL will manage the risk of impacts from flooding to Newport docks, their operation and local areas. Navigation dredging near to Newport docks is expected to continue.
		HTL <u>does not</u> guarantee funding to build or maintain current or future defences or to counter sea level rise.
	HTL	The medium term policy for this unit is Hold The Line
20 to 50 years (2055)		Defences are likely to have been reconstructed in the previous epoch and should be maintained. HTL will manage the risk of impacts from flooding to Newport docks, their operation and local areas. Navigation dredging near to Newport docks is expected to continue.
		HTL does not guarantee funding to build or maintain current or future defences or to counter sea level rise.
		The long term policy for this unit is Hold The Line .
50 to 100 years	HTL	Defences should be maintained. HTL will manage the risk of flooding to Newport docks, their operation and local areas. Navigation dredging near to Newport docks is expected to continue.
(2105)		HTL does not guarantee funding to build or maintain current or future defences or to counter sea level rise.

Economics

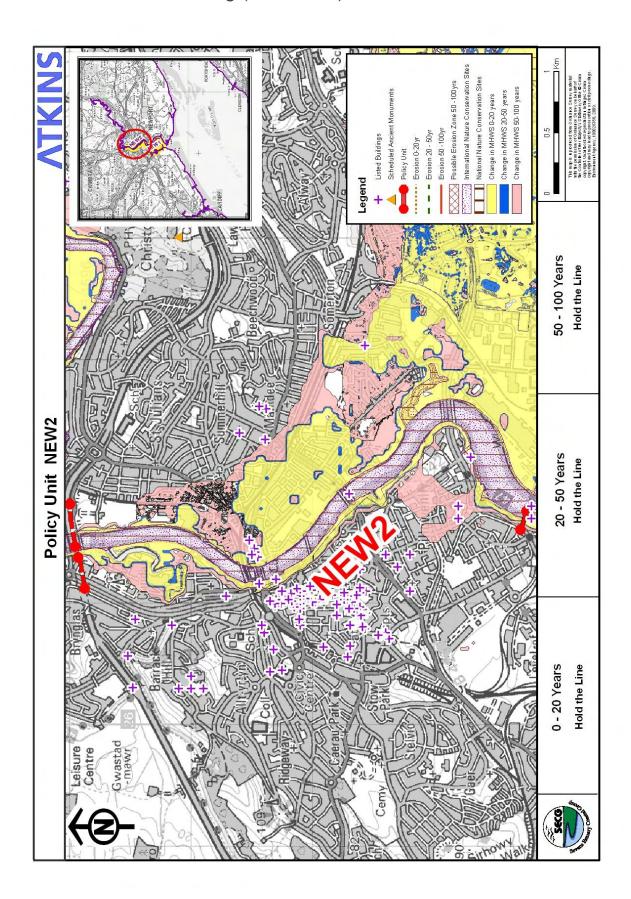
Policy	Existing SMP1	Time Period (epoch)			SMP2 Assessment		
Unit	Policy	0- 20- 50- 20 50 100			Preferred Plan Present Value Damages	Preferred Plan Present Value Defence Costs	
NEW 1	HTL	HTL	HTL	HTL	£177m (NEW1-2 total)	£9m (NEW1-2 total)	

The preferred policy is economically viable for the linked Policy Units of NEW 1 and NEW 2. The costs and damages of the preferred policy in the table above relate to actions taken in all linked policy units.

Predicted Implication of the Preferred Plan for the NEW 1 Policy Unit

Time Period	Management Activities	Property, Land Use and Human Health	Nature Conservation – including Earth Heritage, Geology and Biodiversity	Landscape Character and Visual Amenity	Historic Environment	Amenity and Recreational Use
0 – 20 years	Existing earth embankment defences are expected to come to the end of their serviceable life in this epoch and will need to be replaced. Maintenance may prolong the life of defences into the next epoch. Recently replaced defences are likely to require minimal maintenance.	Defences will manage the risk of impacts from flooding to existing property and land use.	A HTL policy will not impact the nature conservation sites during this time period. Works should take account of possible environmental impacts and the need for an EIA.	Defences are likely to come to the end of their serviceable life and require reconstruction in this epoch. Increased height of defences or change in defence construction materials will affect local landscape increasing presence in the landscape and disrupting views.	Defences will manage the risk of flooding to the historic environment.	Limited erosion and flood risk will not impact on the amenity value of the land.
20 – 50 years	Defences are likely to have been reconstructed in the previous epoch and should be maintained. If they have not already been reconstructed, they will need to be re-built in this epoch.	Defences will manage the risk of impacts from flooding to existing property and land use.	A HTL policy will not impact the Usk N2K site during this time period. Potential for coastal squeeze for Severn N2K. Works should take account of possible environmental impacts and the need for an EIA.	Increased height of defences or change in defence construction materials will affect local landscape - increasing presence in the landscape and disrupting views.	Defences will manage the risk of flooding to the historic environment.	Limited erosion and flood risk will not impact on the amenity value of the land
50 – 100 years	An on-going maintenance programme should be established including the monitoring of shoreline erosion as sea level rise increases.	Defences will manage the risk of impacts from flooding to existing property and land use.	A HTL policy will not impact the Usk N2K site. Potential for coastal squeeze for Severn N2K. Works should take account of possible environmental impacts and the need for an EIA.	Increased height of defences or change in defence construction materials will affect local landscape - increasing presence in the landscape and disrupting views.	Defences will manage the risk of flooding to the historic environment.	Limited erosion and flood risk will not impact on the amenity value of the land

Policy Unit: NEW 2 - River Usk at the transporter bridge (west bank) to River Usk at M4 crossing (west bank)



Epoch	Preferred Policy	Comments		
		The short term policy for this unit is Hold The Line .		
0 to 20 years (2025)	HTL	The existing defences will come to the end of their serviceable life in this epoch. HTL recommends that defences are replaced. Recently constructed defences are likely to require minimal maintenance. High ground limits the risk of flooding in some areas. The position and height of new defences should be considered in more detail by the SEFRMS. The SEFRMS will consider combined risks from the sea (SMP2 policy) and the river (CFMP policy - take actions to maintain flood risk at existing level, accepting that risks will increase over time – see Section 3.4 SMP2-CFMP interactions). Actions should take account of potential impacts in the linked Policy Unit (NEW 1). HTL will manage the risk of impacts from flooding to residential areas of Newport.		
		HTL does not guarantee funding to build or maintain current or future defences or to counter sea level rise.		
	HTL	The medium term policy for this unit is Hold The Line .		
20 to 50 years (2055)		Defences are likely to have been reconstructed in the previous epoch and should be maintained. HTL will manage the risk of impacts from flooding to residential areas of Newport.		
(2033)		HTL <u>does not</u> guarantee funding to build or maintain current or future defences or to counter sea level rise.		
		The long term policy for this unit is Hold The Line .		
50 to 100 years	HTL	Defences should be maintained. HTL will manage the risk of impacts from flooding to residential areas of Newport.		
(2105)		HTL <u>does not</u> guarantee funding to build or maintain current or future defences or to counter sea level rise.		

Economics

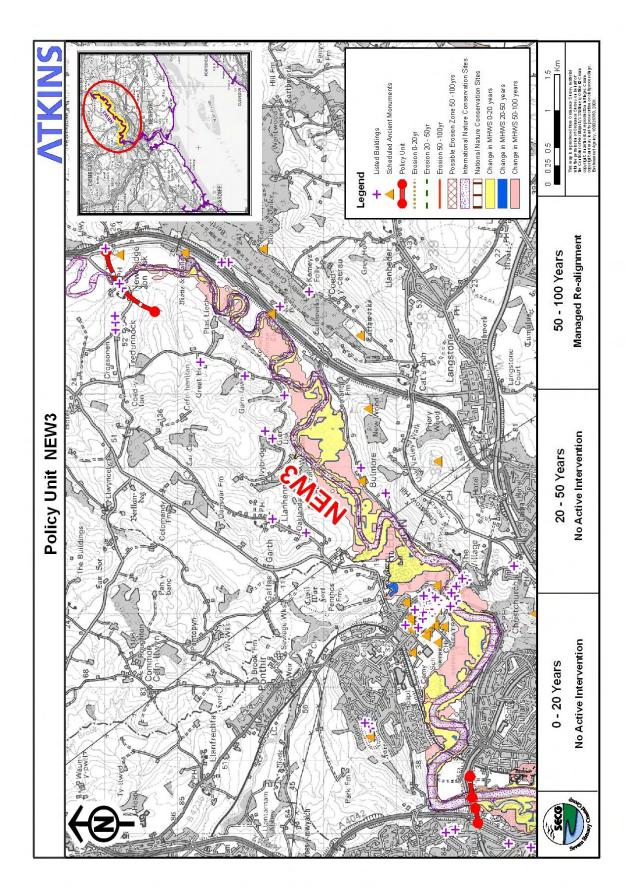
Policy	Existing	Time Period (epoch)			SMP2 Assessment		
Unit	SMP1 Policy	0- 20- 50- 20 50 100			Preferred Plan Present Value Damages	Preferred Plan Present Value Defence Costs	
NEW 2	HTL	HTL	HTL	HTL	£177m (NEW1-2 total)	£9m (NEW1-2 total)	

The preferred policy is economically viable for the linked Policy Units of NEW 1 and NEW 2. The costs and damages of the preferred policy in the table above relate to actions taken in all linked policy units.

Predicted Implication of the Preferred Plan for the NEW 2 Policy Unit

Time Period	Management Activities	Property, Land Use and Human Health	Nature Conservation – including Earth Heritage, Geology and Biodiversity	Landscape Character and Visual Amenity	Historic Environment	Amenity and Recreational Use
0 – 20 years	The current earth embankment defences are expected to come to the end of their serviceable life in this epoch and should be replaced when appropriate. Recently constructed defences are likely to require minimal maintenance.	Limited flood risk to existing property and land use exists due to high ground where low lying ground exacerbates flood risk, defences will mitigate against potential impacts	A HTL policy will not impact the nature conservation sites during this time period. Usk N2K site unaffected. Works should take account of possible environmental impacts and the need for an EIA.	Defences are likely to come to the end of their serviceable life and require reconstruction in this epoch. Increased height of defences or change in defence construction materials will affect local landscape - increasing presence in the landscape and disrupting views.	Defences will manage the risk of flooding to the historic environment.	Limited erosion and flood risk will not impact on the amenity value of the land.
20 – 50 years	An on-going maintenance programme should be established including the monitoring of shoreline erosion as sea level rise increases.	Limited flood risk to existing property and land use exists due to high ground where low lying ground exacerbates flood risk; defences will manage the risk of flooding to property and land.	A HTL policy will not impact the nature conservation sites during this time period. Usk N2K site unaffected. Works should take account of possible environmental impacts and the need for an EIA.	Increased height of defences or change in defence construction materials will affect local landscape - increasing presence in the landscape and disrupting views.	Defences will manage the risk of flooding to the historic environment.	Limited erosion and flood risk will not impact on the amenity value of the land
50 – 100 years	An on-going maintenance programme should be established including the monitoring of shoreline erosion as sea level rise increases.	Limited flood risk to existing property and land use exists due to high ground where low lying ground exacerbates flood risk; defences will manage the risk of flooding to property and land.	A HTL policy will not impact the nature conservation sites during this time period. Usk N2K site unaffected. Works should take account of possible environmental impacts and the need for an EIA.	Increased height of defences or change in defence construction materials will affect local landscape - increasing presence in the landscape and disrupting views.	Defences will manage the risk of flooding to the historic environment.	Limited erosion and flood risk will not impact on the amenity value of the land

Policy Unit: NEW 3 - River Usk (both banks) from M4 crossing to Newbridge on Usk



Epoch	Preferred Policy	Comments			
0 to 20 years (2025)		The short term policy for this unit is No Active Intervention. Defences will remain in place in this epoch. Defences should be monitored to ensure they do not pose a risk to H&S under NAI or impact on CFMP policy (take actions to reduce flood risk) (see Section 3.4 on SMP2-CFMP interactions). Individual defences planned around Home Farm, Caerleon ar specific to the development and do not impact on wider coastal processes. This Policy Unit is not linked to any others in terms of tidal flood risk.			
20 to 50 years (2055)	NAI	The medium term policy for this unit is No Active Intervention . Defences are expected to come to the end of their serviceable life in this epoch, leading to frequent but isolated tidal flooding of the valley, mainly of agricultural land. Historic environment assets, e.g. Caerleon will be at increased risk of impacts – mitigation and adaptation actions should be considered. Defences should be monitored to ensure they do not pose a risk to H&S under NAI or impact on CFMP policy (take actions to reduce flood risk) (see Section 3.4 on SMP2-CFMP interactions). This Policy Unit is not linked to any others in terms of tidal flood risk.			
50 to 100 years (2105)	MR	The long term policy for this unit is Managed Realignment . New, realigned defences should be built. The position, size and materials of new defences should be considered in detail to ensure MR does not impact on CFMP policy (take actions to reduce flood risk) (see Section 3.4 on SMP2-CFMP interactions). MR manages the risk of impacts from flooding and erosion to assets behind the new defences. Land, nature conservation and historic environment features in front of the new line of defences will be at increased risk of flooding and erosion - adaptation actions should be considered and implemented. This Policy Unit is not linked to any others in terms of tidal flood risk. MR does not guarantee funding to build new realigned defences.			

Economics

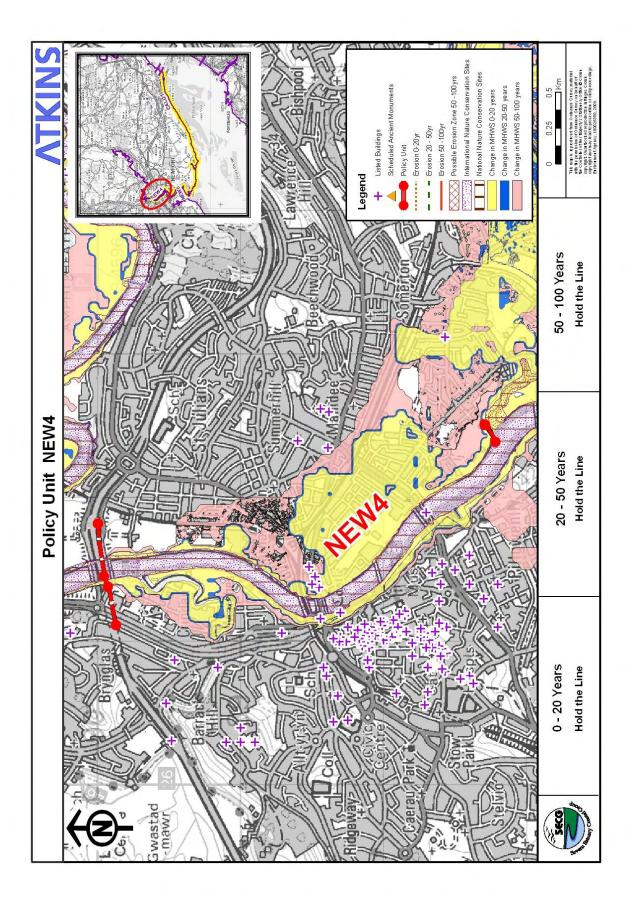
	Existing SMP1	Time Period (epoch)			SMP2 Assessment		
Unit	Policy	0- 20	20- 50	50- 100	Damages and Benefits	Assumed Defence Works and Costs	
NEW 3	N/A	NAI	NAI	MR	£1M	£0.4M	

The preferred policy is economically viable for this unit, but the benefit-cost ratio (BCR) is low. Where the BCR is low, schemes may be less likely to receive public funding and it may be necessary to find funding from other sources.

Predicted Implication of the Preferred Plan for the NEW 3 Policy Unit

Time Period	Management Activities	Property, Land Use and Human Health	Nature Conservation – including Earth Heritage, Geology and Biodiversity	Landscape Character and Visual Amenity	Historic Environment	Amenity and Recreational Use
0 – 20 years	The existing defences will remain in place with no active intervention preventing isolated flooding of agricultural land.	Present defences will remain in place reducing the risk of flooding to properties and land.	There will be limited impact in this epoch as the existing defence line will continue to protect the area from flood and erosion risk.	Limited erosion and flood risk will not impact on existing landscape and visual amenity.	Defences will manage the risk of flooding to historic environment assets.	The established defences will prevent increase in present flood risk to amenity and recreational assets.
20 – 50 years	The current defences are expected to come to the end of their serviceable life in this epoch, a no active intervention policy should continue. Actions may be needed to limit fluvial flooding (CFMP policy)	Following failure of the defences flooding to agricultural land can be expected.	No impact to national and internationally designated nature conservation sites.	Failed defences and more frequent flooding will alter the existing landscape characteristics through the possible abandonment of present agricultural practices within the floodplain.	Failure of the defences will increase flood risk to the historic environment.	Following failure of the defences flooding to amenity and recreational assets may be increased.
50 – 100 years	A Realigned defence line should be established and maintained throughout the epoch to prevent an increased flood risk.	Further flood risk to residential properties and other assets is prevented by realignment of the defences.	Managed realignment could offer opportunities to enhance designated sites and biodiversity. Works should take account of possible environmental impacts and the need for an EIA.	The area to the front of the new defence line will be subject to more frequent flooding, resulting in abandonment of present agricultural practices within the floodplain; landscape type will begin to change to intertidal.	Realigned defences will protect historic environment behind new defences. Historic assets in front of realigned defences will be at risk from inundation. Impacts on historic environment and mitigation actions will need to be considered in determining realignment of defences.	Further flood risk to amenity and recreational assets will be prevented by realignment of the defences.

Policy Unit: NEW 4 - River Usk (east bank) at M4 crossing to Spytty Pill (north of A48 crossing)



Epoch	Preferred Policy	Comments
		The short term policy for this unit is Hold The Line .
0 to 20 years (2025)	HTL	The existing defences will come to the end of their serviceable life in this epoch. HTL recommends that defences are replaced. Recently constructed defences are likely to require minimal maintenance. The position and height of new defences should be considered in more detail by the SEFRMS. The SEFRMS will consider combined risks from the sea (SMP2 policy) and the river (CFMP policy - take actions to reduce flood risk – see Section 3.4 SMP2-CFMP interactions). HTL will manage the risk of impacts from flooding to residential, commercial and industrial assets in this and linked Policy Units (NEW5, CALD 1).
		HTL does not guarantee funding to build or maintain current or future defences or to counter sea level rise.
		The medium term policy for this unit is Hold The Line .
20 to 50 years (2055)	HTL	Reconstructed defences should be maintained. Actions should not impact on CFMP policy - take actions to reduce flood risk – see Section 3.4 SMP2-CFMP interactions). HTL will manage the risk of impacts from flooding residential, commercial and industrial assets in this and linked Policy Units (NEW5, CALD 1).
		HTL <u>does not</u> guarantee funding to build or maintain current or future defences or to counter sea level rise.
		The long term policy for this unit is Hold The Line .
50 to 100 years (2105)	HTL	Reconstructed defences should be maintained. Actions should not impact on CFMP policy - take actions to reduce flood risk – see Section 3.4 SMP2-CFMP interactions). HTL will manage the risk of impacts from flooding residential, commercial and industrial assets in this and linked Policy Units (NEW5, CALD 1).
		HTL does not guarantee funding to build or maintain current or future defences or to counter sea level rise.

Economics

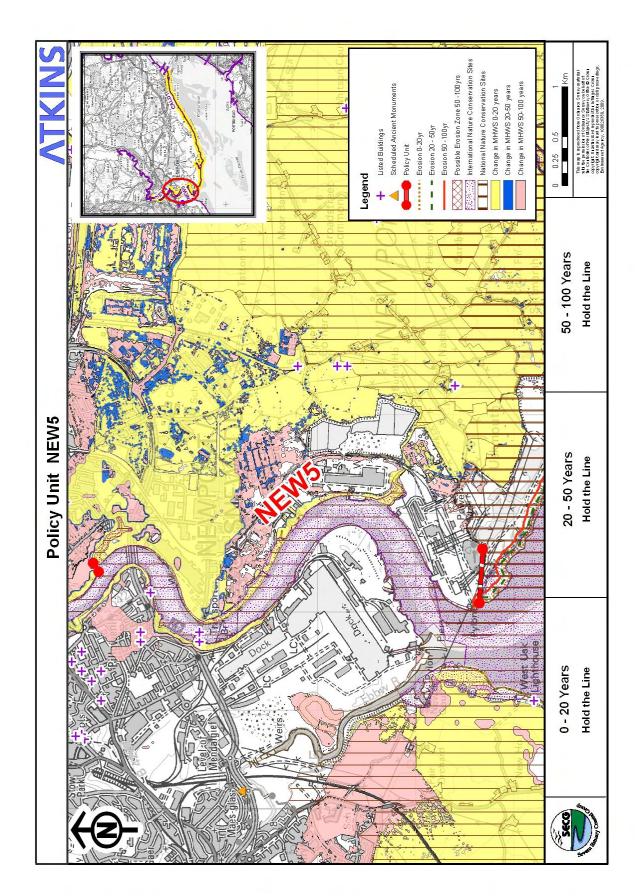
Policy	Existing	Time Period (epoch)			SMP2 Assessment		
Unit SMP1 Policy		0- 20	20- 50	50- 100	Preferred Plan Present Value Damages	Preferred Plan Present Value Defence Costs	
NEW 4	HTL	HTL	HTL	HTL	£1,135m (NEW4-5, CALD1 total)	£37m (NEW4-5, CALD1 total)	

The preferred policy is economically viable for the linked Policy Units of NEW 4, NEW 5, and CALD 1. The costs and damages of the preferred policy in the table above relate to actions taken in all linked policy units.

Predicted Implication of the Preferred Plan for the NEW 4 Policy Unit

Time Period	Management Activities	Property, Land Use and Human Health	Nature Conservation – including Earth Heritage, Geology and Biodiversity	Landscape Character and Visual Amenity	Historic Environment	Amenity and Recreational Use
0 – 20 years	The existing defences are expected to come to the end of their serviceable life and will need to be replaced in this epoch. Following replacement a monitoring and maintenance programme should be established. Recently constructed defences are likely to require minimal maintenance.	Defences will manage the risk of flooding to existing properties and land use of this and adjacent units will be protected from increased risk of flooding and erosion.	No detrimental impact from existing condition of national and internationally designated nature conservation sites. Works should take account of possible environmental impacts and the need for an EIA.	Defences are likely to come to the end of their serviceable life and require reconstruction in this epoch. Increased height of defences or change in defence construction materials will affect local landscape - increasing presence in the landscape and disrupting views.	Defences will manage the risk of flooding to historic environment assets.	The defences will prevent increase in present flood risk to amenity and recreational assets.
20 – 50 years	The monitoring and maintenance programme should continue.	Defences will manage the risk of flooding to existing properties and land use of this and adjacent units will be protected from increased risk of flooding and erosion.	No detrimental impact from existing condition of national and internationally designated nature conservation sites. Works should take account of possible environmental impacts and the need for an EIA.	Increased height of defences or change in defence construction materials will affect local landscape - increasing presence in the landscape and disrupting views.	Defences will manage the risk of flooding to historic environment assets.	The defences will prevent increase in present flood risk to amenity and recreational assets.
50 – 100 years	The monitoring and maintenance programme should continue.	Defences will manage the risk of flooding to existing properties and land use of this and adjacent units will be protected from increased risk of flooding and erosion.	No detrimental impact from existing condition of national and internationally designated nature conservation sites. Works should take account of possible environmental impacts and the need for an EIA.	Increased height of defences or change in defence construction materials will affect local landscape - increasing presence in the landscape and disrupting views.	Defences will manage the risk of flooding to historic environment assets.	The defences will prevent increase in present flood risk to amenity and recreational assets.

Policy Unit: NEW 5 - River Usk (East bank) at Spytty Pill (North of A48 crossing) to Uskmouth Power Station point



Epoch	Preferred Policy	Comments			
0 to 20 years (2025)	HTL	The short term policy for this unit is Hold The Line .			
		The existing defences will come to the end of their serviceable life in this epoch. HTL recommends that defences are replaced. Recently constructed defences are likely to require minimal maintenance. The position, size and materials of new defences should be considered in detail by the SEFRMS. The SEFRMS will consider combined risks from the sea (SMP2 policy) and the river (CFMP policy - take actions to reduce flood risk – see Section 3.4 SMP2-CFMP interactions). HTL will manage the risk of impacts from flooding residential, commercial and industrial assets in this and linked Policy Units (NEW4, CALD 1).			
		HTL <u>does not</u> guarantee funding to build or maintain current or future defences or to counter sea level rise.			
20 to 50 years (2055)	HTL	The medium term policy for this unit is Hold The Line .			
		Reconstructed defences should be maintained. Actions should not impact on CFMP policy (take actions to reduce flood risk - see Section 3.4). HTL will manage risk of impacts from flooding residential, commercial and industrial assets in this and linked Policy Units (NEW4, CALD 1).			
		HTL <u>does not</u> guarantee funding to build or maintain current or future defences or to counter sea level rise.			
	HTL	The long term policy for this unit is Hold The Line .			
50 to 100 years (2105)		Reconstructed defences should be maintained. Actions should not impact on CFMP policy (take actions to reduce flood risk - see Section 3.4). HTL will manage risk of impacts from flooding residential, commercial and industrial assets in this and linked Policy Units (NEW4, CALD 1).			
		HTL <u>does not</u> guarantee funding to build or maintain current or future defences or to counter sea level rise.			

Economics

Policy	Existing SMP1 Policy	Time Period (epoch)			SMP2 Assessment		
Unit		1 1 -211		50- 100	Preferred Plan Present Value Damages	Preferred Plan Present Value Defence Costs	
NEW 5	HTL	HTL	HTL	HTL	£1,135m (NEW4-5, CALD1 total)	£37m (NEW4-5, CALD1 total)	

The preferred policy is economically viable for the linked Policy Units of NEW 4, NEW 5, and CALD 1. The costs and damages of the preferred policy in the table above relate to actions taken in all linked policy units.

Predicted Implication of the Preferred Plan for the NEW 5 Policy Unit

Time Period	Management Activities	Property, Land Use and Human Health	Nature Conservation – including Earth Heritage, Geology and Biodiversity	Landscape Character and Visual Amenity	Historic Environment	Amenity and Recreational Use
0 – 20 years	The existing defences are expected to come to the end of their serviceable life and will need to be replaced in this epoch. Following replacement a monitoring and maintenance programme should be established. Recently constructed defences are likely to require minimal maintenance.	Defences will manage the risk of flooding to existing properties and land use of this and adjacent units will be protected from increased risk of flooding and erosion.	A HTL policy will not impact the River Usk SAC/SSSI during this time period. Works should take account of possible environmental impacts and the need for an EIA.	Defences are likely to come to the end of their serviceable life and require reconstruction in this epoch. Increased height of defences or change in defence construction materials will affect local landscape increasing presence in the landscape and disrupting views.	Defences will manage the risk of flooding to historic environment assets.	The defences will prevent increase in present flood risk to amenity and recreational assets.
20 – 50 years	The monitoring and maintenance programme should continue.	Defences will manage the risk of flooding to existing properties and land use of this and adjacent units will be protected from increased risk of flooding and erosion.	River Usk SAC/SSSI will remain unaffected. Works should take account of possible environmental impacts and the need for an EIA.	Increased height of defences or change in defence construction materials will affect local landscape - increasing presence in the landscape and disrupting views.	Defences will manage the risk of flooding to historic environment assets.	The defences will prevent increase in present flood risk to amenity and recreational assets.
50 – 100 years	The monitoring and maintenance programme should continue.	Defences will manage the risk of flooding to existing properties and land use of this and adjacent units will be protected from increased risk of flooding and erosion.	River Usk SAC/SSSI will remain unaffected. Works should take account of possible environmental impacts and the need for an EIA.	Increased height of defences or change in defence construction materials will affect local landscape - increasing presence in the landscape and disrupting views.	Defences will manage the risk of flooding to historic environment assets.	The defences will prevent increase in present flood risk to amenity and recreational assets.