

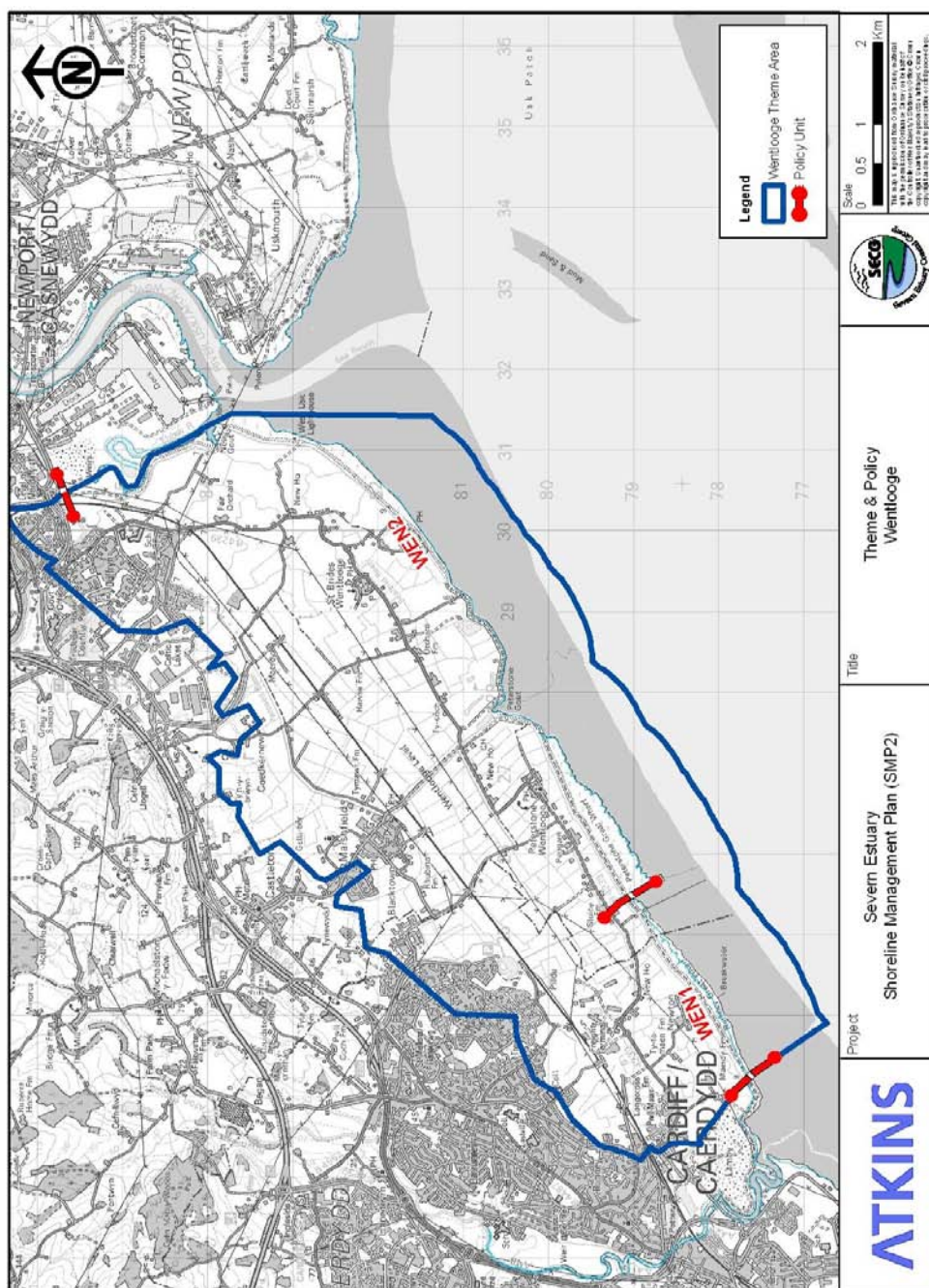
WENTLOOGE

This Theme area contains the Policy Units **WEN 1** and **WEN 2**.

It starts at **Lamby Way Landfill Site drain/outfall** on the west shoreline of the Severn Estuary, and ends on the **River Ebbw (west bank) at the Maesglas railway bridge**.

The **Key Policy Drivers** in this area are:

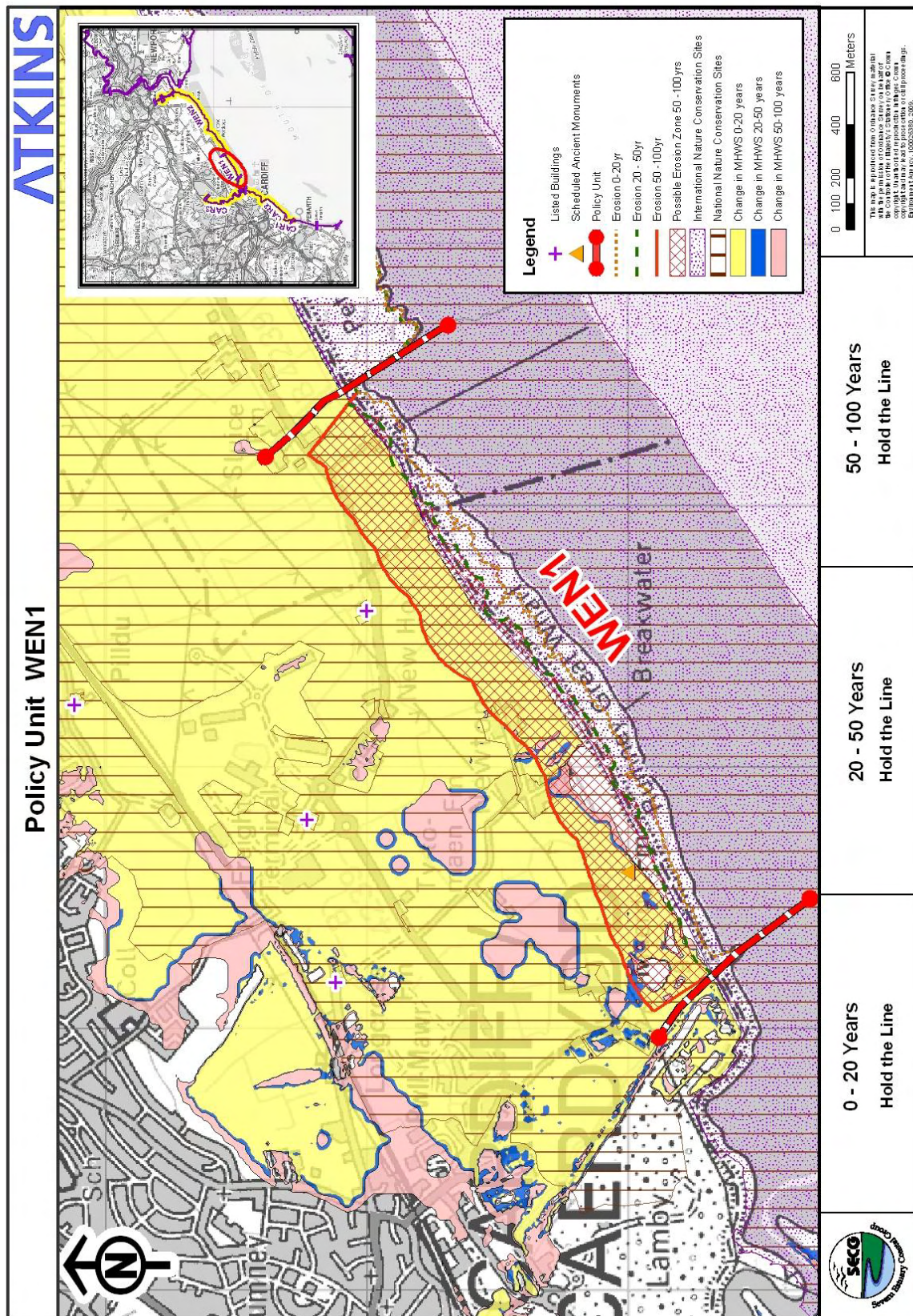
- International nature conservation sites – Severn Estuary SAC, SPA and Ramsar;
- Critical infrastructure – railway line, electricity substations;
- Residential developments.



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Policy Unit: WEN 1 - Lamby Way landfill site drain to Sluice House Farm (Tarwick Rhyne)



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Preferred Policies to Implement the Plan:

Epoch	Preferred Policy	Comments
0 to 20 years (2025)	HTL	<p>The Short Term policy for this unit is Hold The Line</p> <p>The existing defences will remain in place with some maintenance, managing the risk of flooding and erosion impacts to a large, mainly agricultural area. Rumney Great Wharf is likely to erode as sea levels rise. Actions should take account of potential impacts in linked Policy Units (CAR 1, CAR 2, CAR 3, and WEN 2). Investigations of future potential for MR should start in this epoch. All stakeholders should be involved. Future MR will help manage impacts from sea level rise and create new habitat.</p> <p>HTL <u>does not</u> guarantee funding to build or maintain current or future defences or to counter sea level rise.</p>
20 to 50 years (2055)	HTL	<p>The Medium Term policy for this unit is Hold The Line</p> <p>The existing defences will come to the end of their serviceable life in this epoch. HTL recommends that defences are replaced. Opportunities to create habitat and help manage the impacts of sea level rise through MR should be investigated when the position of any new defences is chosen. The position of new defences and the impacts of erosion at Rumney Great Wharf need to be investigated in more detail. Long term erosion rates are unclear and should be monitored. Saltmarsh in front of any new defences will continue to erode - other, similar habitat should be created elsewhere in the estuary to maintain/improve the condition of the European protected sites. Actions should take account of potential impacts in linked Policy Units (CAR 1, CAR 2, CAR 3, and WEN 2).</p> <p>HTL <u>does not</u> guarantee funding to build or maintain current or future defences or to counter sea level rise.</p>
50 to 100 years (2105)	HTL	<p>The Long Term policy for this unit is Hold The Line</p> <p>Defences are likely to have been reconstructed in the previous epoch and should be maintained. Long term erosion rates are unclear and should be monitored. Actions may be needed to ensure new defences are not undermined. Saltmarsh in front of new defences will continue to erode - other, similar habitat should be created elsewhere. The potential for MR should be investigated to create a long term sustainable defence.</p> <p>HTL <u>does not</u> guarantee funding to build or maintain current or future defences or to counter sea level rise.</p>

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Economics

Policy Unit	Existing SMP1 Policy	Time Period (epoch)			SMP2 Assessment	
		0-20	20-50	50-100	Preferred Plan Present Value Damages	Preferred Plan Present Value Defence Costs
WEN 1	HTL (or Realignment)	HTL	HTL	HTL	£568m (CAR1-3, WEN1-2 total)	£24m (CAR1-3, WEN1-2 total)

The preferred policy is economically viable for the linked Policy Units of CAR 1, CAR 2, CAR 3, WEN 1 and WEN 2. The costs and damages of the preferred policy in the table above relate to actions taken in all linked policy units.

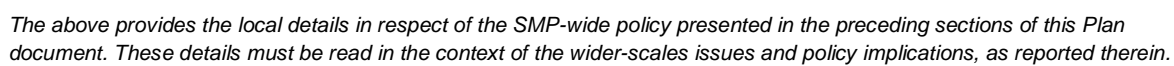
Predicted Implication of the Preferred Plan for the WEN 1 Policy Unit

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	The current defences will remain in place. Maintenance will help to prolong the residual life of the defences.	Defences will reduce the risk of impacts of flooding on existing property, land use or human health.	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.	A HTL policy will not impact on landscape character and visual amenity during this epoch as existing defences are expected to remain in place	Defences will manage the risk of flooding to the historic environment, including Gwent Levels Historic Landscape Area.	Defences will manage the risk of flooding on amenity or recreational value of the land.
20 – 50 years	The current earth embankment defences are expected to come to the end of their serviceable life in this epoch and should be replaced. There are some privately owned defences in this policy unit that could offer a second line of defence. How these are utilised should be investigated when new defences are considered.	Defences will reduce the risk of impacts of flooding on existing property, land use or human health.	Coastal squeeze will occur which will result in loss of intertidal habitats of Severn N2K sites. The Gwent Levels, Rumney and Peterstone SSSI terrestrial habitats will be protected. Works should take account of possible environmental impacts and the need for an EIA.	Defences are likely to need reconstruction during this (or the next) epoch. Any increase in the height of the new defences will affect local landscape - increasing presence in the landscape. Landscape will also alter as saltmarsh in front of new defences erodes. Higher defences will also create a visual impact with defences disrupting views.	Defences will manage the risk of flooding to the historic environment, including Gwent Levels Historic Landscape Area.	Defences will manage the risk of flooding on amenity or recreational 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. Private defences should be maintained if they are part of the flood management strategy. Public funding for this is not guaranteed.	Defences will reduce the risk of impacts of flooding on existing property, land use or human health.	Coastal squeeze will occur which will result in loss of intertidal habitats of the Severn N2K sites. The Gwent Levels, Rumney and Peterstone SSSI terrestrial habitats will be protected. Works should take account of possible environmental impacts and the need for an EIA.	Any increase in the height of defences will affect local landscape - increasing presence in the landscape. Landscape will also alter as saltmarsh in front of new defences erodes. Higher defences will also create a visual impact with defences disrupting views.	Defences will manage the risk of flooding to the historic environment, including Gwent Levels Historic Landscape Area.	Defences will manage the risk of flooding on amenity or recreational value of the land.

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Policy Unit: WEN 2 - Sluice House Farm (Tarwick Rhyne) to the River Ebbw (west bank) at Maesglas Railway Bridge

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Preferred Policies to Implement the Plan:

Epoch	Preferred Policy	Comments
0 to 20 years (2025)	HTL	<p>The short term policy for this unit is Hold The Line</p> <p>The existing defences will remain in place in the short term with some maintenance, managing the risk of flooding and erosion impacts to a large area of mainly agricultural Land and important infrastructure (road, rail, electricity). Erosion of Peterstone Great Wharf will increase as sea levels rise. Actions should take account of potential impacts in linked Policy Units (CAR 1, CAR 2, CAR 3, and WEN 1). Investigations of future potential for MR should start in this epoch. All stakeholders should be involved. Future MR will help manage impacts from sea level rise and create new habitat.</p> <p>HTL <u>does not</u> guarantee funding to build or maintain current or future defences or to counter sea level rise.</p>
20 to 50 years (2055)	HTL	<p>The medium term policy for this unit is Hold The Line</p> <p>The existing defences will come to the end of their serviceable life in this epoch. HTL recommends that defences are replaced. The position of new defences and the impact on erosion rates should be considered in more detail. Opportunities to create habitat and help manage the impacts of sea level rise through MR should be investigated when the position of any new defences is chosen. Erosion of Peterstone Great Wharf will increase as sea levels rise. Actions should take account of potential impacts in linked Policy Units (CAR 1, CAR 2, CAR 3, and WEN 1).</p> <p>HTL <u>does not</u> guarantee funding to build or maintain current or future defences or to counter sea level rise.</p>
50 to 100 years (2105)	HTL	<p>The long term policy for this unit is Hold The Line</p> <p>Defences are likely to have been reconstructed in the previous epoch and should be maintained. Erosion of Peterstone Great Wharf will increase as sea levels rise. Actions may be needed to ensure new defences are not undermined. Intertidal habitat in front of any new defences will continue to erode – other, similar habitat should be created elsewhere in the estuary to maintain/improve the condition of the European protected sites. The potential for MR should be investigated to create a long term sustainable defence. Actions should take account of potential impacts in linked Policy Units (CAR 1, CAR 2, CAR 3, and WEN 1).</p> <p>HTL <u>does not</u> guarantee funding to build or maintain current or future defences or to counter sea level rise.</p>

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Economics

Policy Unit	Existing SMP1 Policy	Time Period (epoch)			SMP2 Assessment	
		0-20	20-50	50-100	Preferred Plan Present Value Damages	Preferred Plan Present Value Defence Costs
WEN 2	HTL	HTL	HTL	HTL	£568m (CAR1-3, WEN1-2 total)	£24m (CAR1-3, WEN1-2 total)

The preferred policy is economically viable for the linked Policy Units of CAR 1, CAR 2, CAR 3, WEN 1, and WEN 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 WEN 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 defences will remain in place. Maintenance will help to prolong the residual life of the defences. Studies to help inform the potential for MR should be undertaken.	Defences reduce the risk of impacts from flooding to existing property, land use or human health.	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.	Limited erosion and flood risk under a HTL policy will not impact on existing landscape and visual amenity	Defences will manage the risk of flooding to the historic environment, including Gwent Levels Historic Landscape Area.	Defences will manage the risk of flooding to amenity or recreational value of the land.
20 – 50 years	The current earth embankment defences are expected to come to the end of their serviceable life in this epoch and should be replaced. The position of new defences should be investigated, including opportunity for MR.	Defences reduce the risk of impacts from flooding to existing property, land use or human health. Realignment of defences could lead to a loss of property / land but reduce the risk of impacts from flooding to areas behind the new defences. Losses will depend on the location of new defences.	Coastal squeeze will occur which will result in loss of intertidal habitats within Severn N2K sites. The Gwent Levels St Brides SSSI terrestrial habitats will be protected. Realignment of defences could lead to a loss of terrestrial habitat. Works should take account of possible environmental impacts and the need for an EIA.	Defences are likely to need reconstruction during this epoch. Any increase in the height of the new defences will affect local landscape - increasing presence in the landscape. Landscape will also alter as Peterstone Great Wharf erodes. Higher defences will also create a visual impact with defences disrupting views. Realignment of defences will alter the landscape, but may be less visually intrusive than higher defences in their current location.	Defences will manage the risk of flooding to the historic environment including Gwent Levels Historic Landscape Area. Realignment of defences could lead to the loss of historic environment features and alter the historic landscape.	Defences will manage the risk of flooding on amenity or recreational value of the land. Realignment of defences could lead to the loss of recreational assets. PRoW / coastal path may need to be re-routed.

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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
50 – 100 years	An on-going maintenance programme should be established including the monitoring of shoreline erosion as sea level rise increases. The potential for MR should be investigated.	Defences reduce the risk of impacts from flooding to existing property, land use or human health. Realignment of defences could lead to a loss of property / land but reduce the risk of impacts from flooding to areas behind the new defences. Losses will depend on the location of new defences	Coastal squeeze will occur which will result in loss of intertidal habitats within Severn N2K sites. The Gwent Levels St Brides SSSI terrestrial habitats will be protected. Realignment of defences could lead to a loss of terrestrial habitat. Works should take account of possible environmental impacts and the need for an EIA.	Any increase in the height of the new defences will affect local landscape - increasing presence in the landscape. Landscape will also alter as Peterstone Great Wharf erodes. Higher defences will also create a visual impact with defences disrupting views. Realignment of defences will alter the landscape, but may be less visually intrusive than higher defences in their current location.	Defences will manage the risk of flooding to the historic environment including Gwent Levels Historic Landscape Area. Realignment of defences could lead to the loss of historic environment features and alter the historic landscape.	Defences will manage the risk of flooding on amenity or recreational value of the land. Realignment of defences could lead to the loss of recreational assets. PRoW / coastal path may need to be re-routed.

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