

North Wirral (I1a 6)



**Recommendations:**

**Overview:**

The long term plan for this area is to continue to provide protection, minimising flood or erosion risk to the majority of property and infrastructure along the north Wirral coast to achieve the social benefits, but altering historical approaches in doing so. The socio-economic case for rebuilding some of the coastal defence structures in their present form and positions, once they reach the end of their current life, is weak. Changes in physical conditions, including the change in position of low water channels and the natural accretion of some areas, also justify a change in approach.

The plan can therefore be achieved with lower level interventions along the frontage, and options to combine these with secondary defence lines can be adopted. Elsewhere, formally setting back the shoreline position may be possible at a lower cost without significantly compromising social benefits. These changes in implementation approach will also improve the achievement of objectives for the natural environment.

Location (Policy Unit)		Policy and Approach (from 2010)			Justification		
		0-20 years	20-50 years	50-100 years	Social	Environmental	Economic
6.1	<b>Hilbre Point (Stanley Road) to Wallasey Embankment (Meols)</b>	<b>Hold the Line –</b> Manage flood and erosion risk by maintaining existing defences and beach management. As part of wider strategy, undertake a more detailed study into risks and the viability of maintaining defences	<b>Hold the Line –</b> Manage flood and erosion risk by maintaining existing defences and beach management, depending on outcome of strategy study.	<b>Hold the Line –</b> Manage flood and erosion risk by maintaining existing defences and beach management, depending on outcome of strategy study.	Manages flood and erosion risk to Hoylake and Meols.	Manages flood risk to grassland communities of Meols Meadows SSSI.	The economic viability of the policy depends on the flood and erosion risk area being assessed in more detail and amenity and community benefits included. (See note 1 below).
6.2	<b>Wallasey Embankment (Meols to Leasowe)</b>	<b>Hold the Line –</b> Maintain existing defences. Investigate opportunities to establish secondary or set back defences in the medium term so less substantial defences are required on the front line.	<b>Hold the Line –</b> Depending on outcome of investigations, construct additional secondary defences to help manage flood risk.	<b>Hold the Line –</b> Maintain defences to manage flood risk.	Manages flood and erosion risk to Meols, Moreton and Leasowe.	Manages flood risk to grassland communities of Meols Meadows SSSI.	Policy is robustly economically justified due to the numbers of assets in the large flood risk area.
6.3	<b>Wallasey Embankment to (Leasowe) to Harrison Groyne (New Brighton)</b>	<b>Hold the Line –</b> Maintain existing defences. Investigate the justification and affordability of the policy including assessing contamination risks from landfill and potential for long term creation of more natural dunes.	<b>Hold the Line –</b> Maintain existing defences. Update studies to confirm justification and affordability of the policy and potential for long term re-establishment of more natural dunes.	<b>Managed Realignment -</b> Depending on previous studies, if practical, after defences reach the end of their effective life allow coast to take a more natural state. Construct set back defences if justified.	Manages erosion risks to amenity assets in short and medium term.  Potential loss of the coastal fringes of the golf course in the long term.	Allows return to natural dune development / rollback processes though potential losses to golf course and North Wirral Coastal Park. Manages risks to heritage assets at Gun site until medium term.	There is unlikely to be sufficient economic justification for national funding for new defences on present alignment, so alternative approaches need to be investigated.
6.4	<b>Harrison Groyne to Perch rock (New Brighton)</b>	<b>Hold the Line –</b> Maintain existing defences. Undertake studies to confirm approach: re-assess coastal risks; detailed economic appraisal including social and environmental benefits of options; select the most appropriate, economical and affordable long term approach.	<b>Hold the Line –</b> Maintain existing defences. Undertake further studies to investigate the most appropriate form of defence and alignment in the long term and assess the economic viability of the defences.	<b>Hold the Line –</b> Maintain existing defences while economic to do so then, subject to further studies, construct a new defence system, taking account of potential outflanking from west.	Manages flood and erosion risk to New Brighton, including important area of public open space, main road and promenades.	Avoids erosion of potentially contaminated reclamation material, but potential losses to intertidal habitat within internationally designated site due to coastal squeeze. The impacts could be reduced with beach management.	The economic viability of the policy may depend on whether flood risk area is re-assessed and amenity and community benefits are included. (See note 1 below).

**Key assumptions made during development**

East Hoyle Bank is likely to continue to accrete and move eastwards, resulting in increased foreshore levels in this location at least into the medium epoch. To the east of Meols, as East Hoyle Bank migrates to the east, the Meols Channel will be pushed further against the shoreline increasing pressure on the defences. Into the long term increasing sea levels may overtake the rate of accretion reducing the area of intertidal zone and resulting in coastal squeeze against the hard defences.

Uncertainty surrounding the rates of accretion and consequence on the required level of investment to defend the frontage will need to be explored as part of the supporting investigations detailed in the Action Plan. The studies to be undertaken as part of a coastal risk management strategy will also help refine flooding extents and assessment of benefits. The SMP policies will be subject to review if sea level rise predictions are changed.

**Note 1:** Policy delivery in the noted frontages may be compromised by funding prioritisation due to the low Benefit Cost Ratio this needs to be examined in more detail in a strategy and opportunities for co-funding need to be investigated.

North Wirral (11a 6)



Predicted Implications of the Policies being Adopted in this Location:

Time period from 2010	Property and population	Land use, infrastructure and material assets	Amenity and recreational use	Historic environment	Landscape character and visual amenity	Earth heritage, soils and geology	Water	Biodiversity, flora and fauna
0-20 years	<ul style="list-style-type: none"> <li>+ Manages risk to property and population.</li> </ul>	<ul style="list-style-type: none"> <li>+ No loss of infrastructure or material assets.</li> <li>+ Manages risk to Burbo Bank offshore wind farm and associated infrastructure (e.g. cable landfall at Gunsite at Leasowe Revetment) from flood risk</li> <li>+ Manages risk to agricultural land including Grade 2 land to the east of Hoylake, east Meols and to the east and west of Wallasey.</li> </ul>	<ul style="list-style-type: none"> <li>+ East Hoyle Bank is likely to continue to accrete and move eastwards, resulting in increased foreshore levels in this location.</li> <li>+ To the east of Meols, as East Hoyle Bank migrates to the east, the Meols Channel will be pushed further against the shoreline, however, groynes should continue to stabilise the beach. Beach amenity will remain.</li> <li>+ Manages risk to North Wirral Coastal Park and golf courses.</li> </ul>	<ul style="list-style-type: none"> <li>• No known impacts on the historic environment</li> </ul>	<ul style="list-style-type: none"> <li>• No designated landscapes within the area.</li> </ul>	<ul style="list-style-type: none"> <li>• No geological features impacted by the policy.</li> </ul>	<ul style="list-style-type: none"> <li>• Holding the line in the majority of areas where existing defences are currently maintained is unlikely to affect the existing hydrology.</li> </ul>	<ul style="list-style-type: none"> <li>+ Overall accretion of intertidal habitats expected to continue.</li> <li>• Potential for scheme level impacts on international conservation sites including                             <ul style="list-style-type: none"> <li>○ Mersey Narrows and North Wirral Foreshore potential SPA &amp; Ramsar</li> <li>○ Dee Estuary / Aber Dyfrdwy SAC</li> </ul>                             Habitats Regulations Assessment (HRA) required for strategy.                         </li> </ul>
20-50 years	As above.	As above.	As above.	As above.	As above	As above	As above	As above plus: <ul style="list-style-type: none"> <li>• Accretion of intertidal habitats may be balanced by sea level rise.</li> </ul>
50-100 years	As above	As above <ul style="list-style-type: none"> <li>- Potential impact on cable landfall under a managed realignment policy, dependant on realignment extent</li> </ul>	<ul style="list-style-type: none"> <li>+ Managed realignment at Leasowe will allow space for the beach and dunes to roll landward.</li> <li>- Potential loss of parts of Wallasey Golf Course and Leasowe Golf Course and Gun Site picnic site through managed realignment</li> </ul>		As above	As above	As above plus <ul style="list-style-type: none"> <li>• Potential changes to shellfisheries on East Hoyle Bank due to changes in sediment patterns and increased areas for spawning.</li> <li>- Potential risk to landfill site, with potential for release of contaminants.</li> </ul>	As above plus: <ul style="list-style-type: none"> <li>• At Leasowe potential opportunity to return to a more natural dune frontage, Potential for significant impacts on international conservation sites including</li> <li>- Earlier gains in intertidal habitat may be lost with sea level rise.</li> </ul>

Impact colour key	+ Positive	• Neutral	- Negative
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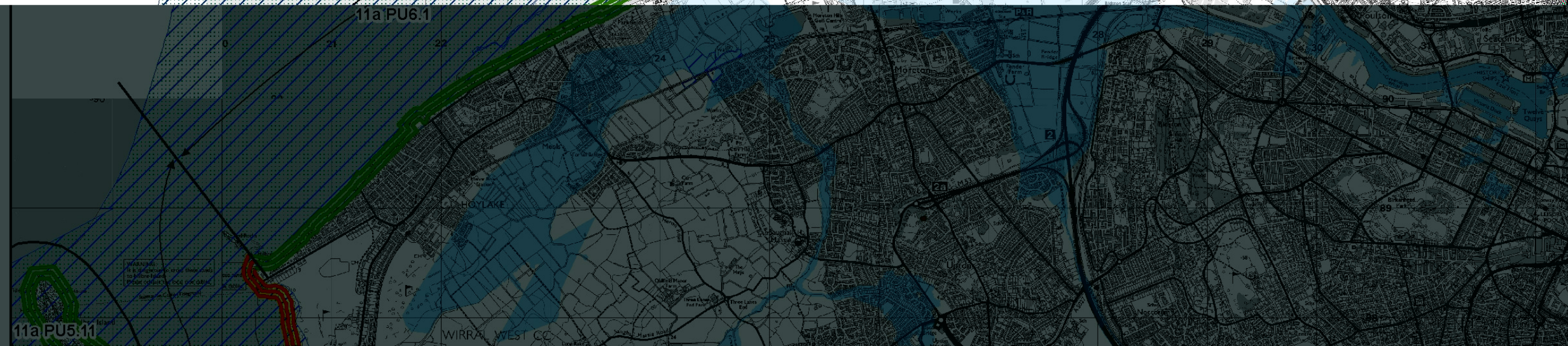
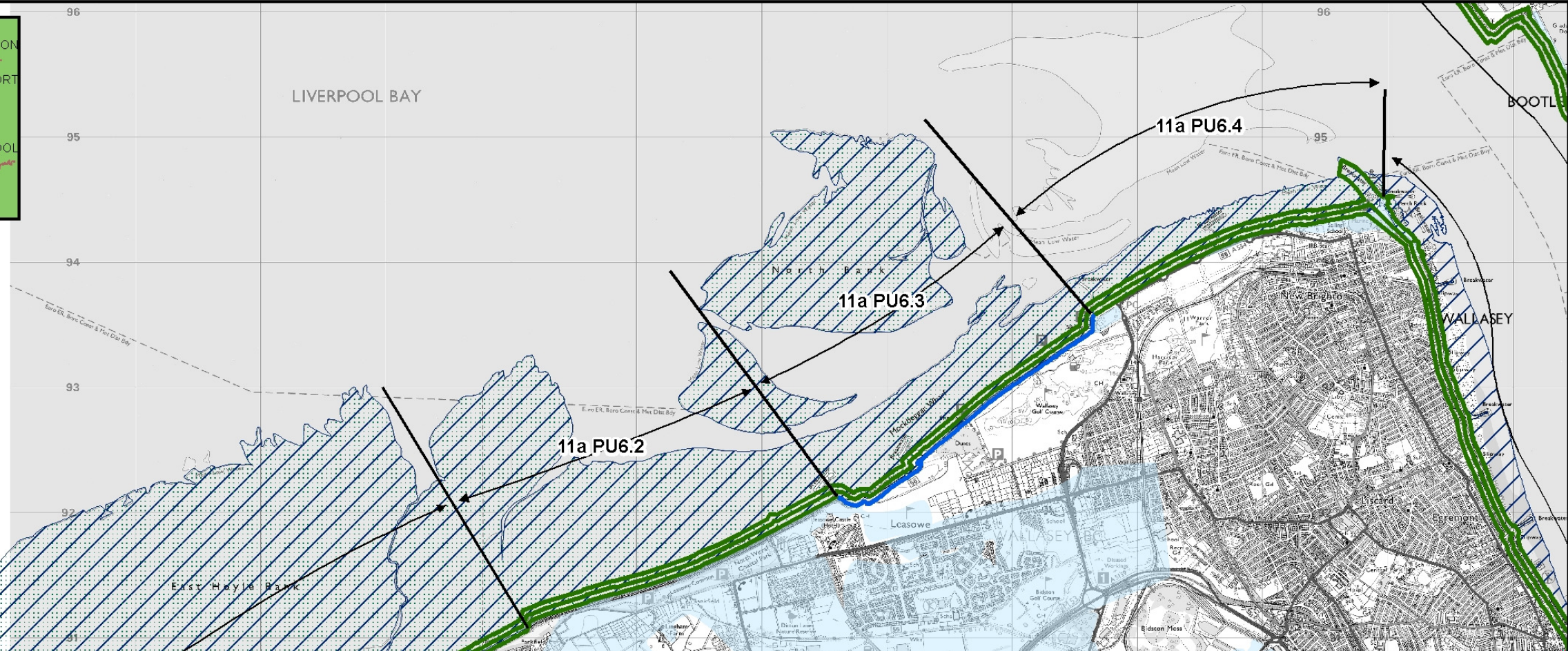
ACTION PLAN						
Action	Action Ref	Action Description (to be approved)	Potential source of funding (subject to approval)	Lead authority and key partners	To start by (subject to funding)	Outcome
<b>1. Studies for policy area</b>	1.1	Undertake a more detailed assessment of flood and erosion risks including investigating contaminated land, costs of options and socio-economic and environmental benefits and dis-benefits for the whole frontage to inform the strategy development.	EA	WC	2010	Detailed assessment of risk to inform Coastal Strategy
<b>2. Studies for Policy Units:</b>	2.1	Prepare a more detailed estimate of costs for maintaining defences and socio-economic assessment, to inform strategy		WC	2010	Outcome measured through production of Coastal Strategy
<b>PU6.1</b>	2.2	Investigate opportunities to create secondary defence line in future to inform strategy	EA	WC	2010	Outcome measured through production of Coastal Strategy
<b>PU6.2</b>	2.3	Investigate opportunities to re-establish a more naturally functioning dune system to inform long term strategy.	EA	WC	2010	Outcome measured through production of Coastal Strategy
<b>PU6.3</b>	2.4	Update the assessment of flood risk in this area following the completion of the Wirral Coastal Strategy.	EA	WC	2013-2016	Flood map reflects best understanding of level of flood risk to this community.
<b>PU6.4</b>						
<b>3. Strategy</b>	3.1	Develop coastal flood and erosion risk management strategy for the north Wirral frontage taking into account coastal and estuary processes and flood risk linkages between open coast and Mersey and Dee estuaries.	EA	WC	2010 - 2012	Production of StAR
<b>4. Scheme Work</b>	4.1	To be defined by strategy	EA	WC	ongoing	Actions identified on Long Term Plan.
<b>5. Monitoring (Data Collection)</b>	5.1	Undertake beach coastal defence asset monitoring in conjunction with Cell 11 Regional Monitoring Strategy to inform strategy and future SMP reviews	EA	EA	ongoing	Data available through CERMS provides improved evidence base for future decision making.
	5.2	Environmental monitoring of designated sites to provide baseline data for future Habitat regulations Assessments	NE	NE	ongoing	
	5.3	In areas of managed realignment, investigate the hazard that the landfill site poses to people and the environment from leaching or the release of contaminated materials. Where necessary, consider protection in situ or excavation and removal of material.	EA	EA	2015 – 2018	Any decision to realign the coast in this area is properly informed by an understanding of the environmental hazards associated with landfill.
<b>6. Asset Management</b>	6.1	Maintenance of defences and beach and dune management including management of public access	EA	WC	ongoing	Maintenance undertaken to required standards.
<b>7. Communication</b>	7.1	Undertake consultation with key stakeholders and general public during strategy development	EA	WC	ongoing	Public participation.
	7.2	Monitoring and management of Action Plans to ensure SMP policies are put into practice	n/a	NWNWCG	ongoing	NWNWCG reports on progress.
<b>8. Interface with Planning and Land Management</b>	8.1	Advise local Planning Authority about SMP policies and flood and erosion risks so they can be accounted for in the next revisions of land use plans in order to help manage residual risks from flooding and erosion.	n/a	WC, EA	ongoing	Coastal risks considered in land use plans.
	8.2	Advise local Planning Authority about SMP policies and flood and erosion risks so they can take due account in planning decisions and aim to reduce the need to manage flood risk in future.	n/a	WC, EA	ongoing	Coastal risks considered in planning decisions.
<b>9. Emergency Response</b>	9.1	Development, monitoring and review of emergency response plans to prepare for over design standard events.	n/a	EA	ongoing	Coastal risks considered in emergency plans.

<b>ACTION PLAN</b>						
<b>Action</b>	<b>Action Ref</b>	<b>Action Description</b> (to be approved)	<b>Potential source of funding</b> (subject to approval)	<b>Lead authority</b> and key partners	<b>To start by</b> (subject to funding)	<b>Outcome</b>
<b>10. Adaptation/Resilience</b>	10.1	Investigations recommended for establishing a secondary line of defences, see items 2.2	EA	WC	2010	Outcome measured through production of Coastal Strategy
	10.2	Develop adaptation approaches to allow for long term coastal change at Leasowe and Wallasey	EA / Defra	WC	2010	Outcome measured through production of Coastal Strategy
<b>11. Flood Forecasting and Warning</b>	11.1	Continue with improvements to flood risk maps and inundation modelling to provide improved flood warning service.	EA	EA	ongoing	Management of risk.
<b>12. Habitat Creation and environmental mitigation</b>	12.1	Consider potential for options for beach and foreshore control structures to manage foreshore levels to inform strategy development. Undertake a Habitats Regulation Assessment for the strategy.	EA	WC	2015	Meet legal requirements.
	12.2	Seek opportunities for habitat enhancement during strategy development e.g. to incorporate scrub control and improvements to the grazing regime as part of flood/erosion risk management works, as appropriate and where possible, such as at Meols Meadows SSSI.	EA	WC	2011 – 2014	Outcome measured through production of Coastal Strategy.
<p>NB Activities from SMP will be carried forward into medium term plans and carried out on a priority basis, subject to funding and approval.</p> <p>n/a = activity is part of authorities general duties, not funded through flood and erosion risk management routes.</p> <p>Defra = Department for Environment, Food and Rural Affairs; EA = Environment Agency; NE = Natural England; NWNWCG = North West and North Wales Coastal Group; RHCP = Regional Habitat Creation Programme; WC = Wirral Borough Council</p>						



# North West England and North Wales Shoreline Management Plan 2

Sub-Cell 11a: Area: 6 Map: 1



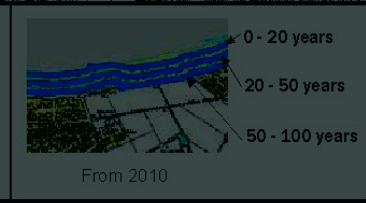
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- Legend**
- National Nature Conservation Designations
  - International Nature Conservation Designations
  - Scheduled Monuments

- Coastal flood risk area under extreme events, Environment Agency Flood Map 2008
- Policy Unit Boundary
- Policy Unit Extent

- Shoreline Management Policies**
- Hold the Line (HTL)
  - Managed Realignment (MR)
  - No Active Intervention (NAI)



Note that the policy lines on the map show the preferred shoreline management policy for each period and do not represent either the shoreline or defence location



Boxes showing cumulative erosion estimates represent the expected minimum and maximum erosion distance from the shoreline position in 2010. They are only shown where there is a NAI policy and coastal erosion is the main risk