

**Formby Dunes (I 1a 9)**



**Recommendations:**

**Overview:**

Allowing the natural evolution of this area is the long term plan, with minimal intervention if local problems occur, which may involve dune management or relocation of assets at risk. By managing the natural roll back of the dune system the impacts on the human assets can be minimised whilst maintaining the natural character of the frontage.

Location (Policy Unit)		Policy and Approach (from 2010)			Justification		
		0-20 years	20-50 years	50-100 years	Social	Environmental	Economic
9.1	<b>Mouth of the River Alt (west bank) to Weld Road, Southport (Formby dune system)</b>	<b>Managed Realignment –</b> Allow the dune system to evolve naturally with limited intervention to manage dunes, and manage adaptation in the erosion risk zone (such as relocating paths and car parks), subject to consents.	<b>Managed Realignment –</b> Allow the dune system to evolve naturally with limited intervention to manage dunes, and manage adaptation in the erosion risk zone (such as relocating paths and car parks), subject to consents.	<b>Managed Realignment –</b> Allow the dune system to evolve naturally with limited intervention to manage dunes, and manage adaptation in the erosion risk zone (such as relocating paths and car parks), subject to consents.	Maintains dune system as amenity. Potential need to relocate car parks and footpaths in eroding areas. Erosion risk to small number of isolated properties and holiday parks, in the medium / long term.	Maintains natural processes, natural development of dune system supports designated areas. Landward constraints to realignment of the dunes may lead to losses in area of SAC dune system in longer term, however, these will not be a result of SMP policy.	Managed realignment policy is justified by environmental benefits of managing coastal change. Not economically justified or technically feasible to defend dune system from erosion.

**Key assumptions made during development**

It has been assumed that the littoral drift divide occurs in the vicinity of Formby Point, with net movement of sand away from Formby Point. Consequently, erosion will continue at Formby Point and accretion to the north and south. Uncertainty associated with the costs of this adaptive policy will need to be explored as part of developing a management strategy. The SMP policy will be subject to review if sea level rise predictions are changed.

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**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
<b>0-20 years</b>	<ul style="list-style-type: none"> <li>+ Continued accretion and increased beach levels along the Southport frontage will provide natural defence to the southern part of Southport.</li> <li>- Potential erosion/flooding to a minimal number of isolated properties along the frontage (e.g. at the end of Albert Road).</li> </ul>	<ul style="list-style-type: none"> <li>+ Manages erosion risks to infrastructure and material assets</li> </ul>	<ul style="list-style-type: none"> <li>+ Managed erosion risk to tourist amenities close to the shore along the Ainsdale frontage</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 scenario area</li> </ul>	<ul style="list-style-type: none"> <li>+ Natural roll-back of the dune system will be beneficial to the Sefton Coast SSSI (geological) and Ainsdale GCR Site</li> </ul>	<ul style="list-style-type: none"> <li>● No known impacts on water quality.</li> <li>● Managed realignment should be carried out in a way which will not adversely impact on the water quality status of the coastal waters, and does not compromise the achievement of WFD water quality targets.</li> </ul>	<ul style="list-style-type: none"> <li>+ Likely increase in extent of intertidal habitats within the Ribble &amp; Alt Estuaries SPA &amp; Ramsar sites, which support associated bird interest features,</li> <li>+ Natural roll-back of the dunes within Sefton Coast SAC &amp; SSSI and the Ainsdale Sand Dunes NNR, and increase in extent of dune grassland.</li> <li>● Potential reduction in the extent of some dune habitats due to erosion however this loss will be balanced by accretion elsewhere.</li> <li>+ No adverse effects are anticipated on the integrity of the European sites as a result of SMP policy.</li> </ul>
<b>20-50 years</b>	<ul style="list-style-type: none"> <li>- As above but increasing flood and erosion risk to isolated properties along the frontage.</li> </ul>	As above	As above	As above	As above	As above	As above	As above
<b>50-100 years</b>	<ul style="list-style-type: none"> <li>- Potential damage to some community facilities due to erosion (e.g. car park in Formby)</li> </ul>	As above	<ul style="list-style-type: none"> <li>- Increasing flood and erosion risk to the tourist assets in Ainsdale and the Sefton Coastal Footpath</li> </ul>	As above	As above	As above	As above	As above

Impact colour key	+ Positive	● Neutral	- Negative
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**Formby Dunes (11a 9)**

**ACTION PLAN**

Action	Action Ref	Action Description (to be approved)	Potential source for 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	Consider the need for compensatory habitat due to the squeeze of the dunes against built assets restricting roll-back and, if necessary, to identify compensatory habitat sites, working with the RHCP.	NE	SC, NC		Informs actions.
<b>2. Studies for Policy Units:</b>	2.1	.-				
<b>3. Strategy</b>	3.1	Develop and adopt long term dune management adaptation strategy to manage roll back of the dunes, maintaining their value as a natural defence and the environmental value.	EA	SC, NE	2011	Sustainable Management.
<b>4. Scheme Work</b>	4.1	To be defined by dune management and adaptation strategy.	EA	SC	ongoing	Actions identified in Long Term Plan.
<b>5. Monitoring (Data Collection)</b>	5.1	Undertake beach and dune monitoring in conjunction with Cell 11 Regional Monitoring Strategy to inform strategy and future SMP reviews.	EA	SC	ongoing	Data provided to CERMS provides improved evidence base for future decision making
	5.2	Environmental monitoring of designated habitats within international conservation sites to provide baseline data for strategy or scheme level Habitat Regulations Assessments.	NE	NE, SC	ongoing	
<b>6. Asset Management</b>	6.1	Beach and dune management including management of public access.	SC, LO	SC, NE, NT	ongoing	Maintenance undertaken to required standards.
<b>7. Communication</b>	7.1	Consult key stakeholders and general public during dune management and adaptation strategy development.	EA	SC	ongoing	Public participation.
	7.2	Monitoring and management of Action Plans by NWNWCG to confirm 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	SC, EA	ongoing	Coastal flood 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	SC, EA	ongoing	Coastal flood 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	SC	ongoing	Coastal flood risks considered in emergency plans.
<b>10. Adaptation/Resilience</b>	10.1	See item 3.1, 12.1 – 12.5.				
<b>11. Flood Forecasting and Warning</b>	11.1	Continue to improve flood risk maps and inundation modelling particularly in areas where there are dunes and promenades and areas benefiting from these defences are not currently shown.	EA	EA, SC	ongoing	Improved flood warnings and risk mapping, raising awareness of coastal risks.
<b>12. Habitat Creation and environmental mitigation</b>	12.1	Develop a regional dune habitat restoration programme as a strand of the RHCP to mitigate potential dune losses within Sefton Dunes SAC that may result from landward constraints to natural dune roll back.	EA	SC, NE, EA	2013-2016	Sustainable Management.
	12.2	Investigate options for allowing the dunes to roll-back naturally, while managing impacts on habitats and species.	EA / Defra	SC	2013-2016	Sustainable Management.
	12.3	Undertake a more detailed Habitats Regulations Assessment for the adaptation strategy for this policy area.	EA	SC	2013-2016	Sustainable Management.
	12.4	Seek opportunities for habitat enhancements during strategy development as part of flood/erosion risk management works e.g. consider sand fencing and grazing and scrub/weed control within the designated conservation sites, where and as appropriate.	EA	SC, LO	2013-2016	Sustainable Management.
	12.5	Ongoing monitoring of erosion and document or record historic environment features as they become exposed.	n/a	NT, SC, EH	ongoing	Mitigation of losses.

NB. Activities from SMP will be carried forward into medium term plans and carried out on a priority basis, subject to funding and approval n/a = activity is part of authorities general duties, not funded through flood and erosion risk management routes.

EA = Environment Agency; LO – land owners; NE = Natural England; NT = National Trust; NWNWCG = North West and North Wales Coastal Group; RHCP = regional Habitat creation Programme; SC = Sefton Council.



# North West England and North Wales Shoreline Management Plan 2

Sub-Cell 11a: Area: 9 Map: 1



Coastal erosion estimates:  
 20yr: 10m to 15m  
 50yr: 20m to 70m  
 100yr: 40m to 350m  
 These erosion bands reflect the significant uncertainty regarding future dune response to climate change. The upper limit is taken from Sefton Council (2007).

Coastal erosion estimates:  
 20yr: 75m to 90m  
 50yr: 185m to 280m  
 100yr: 370m to 680m  
 These erosion bands reflect the significant uncertainty regarding future dune response to climate change. The upper limit is taken from Sefton Council (2007).


Coastal erosion estimates:  
 20yr: 25m to 50m  
 50yr: 60m to 110m  
 100yr: 120m to 240m  
 These erosion bands reflect the significant uncertainty regarding future dune response to climate change. The upper limit is taken from Sefton Council (2007).

11a PU9.1

11a PU8.4

- Legend**
-  National Nature Conservation Designations
  -  International Nature Conservation Designations
  -  Scheduled Monuments
  -  Coastal flood risk area under extreme events, Environment Agency Flood Map 2008

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

0 0.25 0.5 1 Kilometres  
Scale: 1:35,000

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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.



# North West England and North Wales Shoreline Management Plan 2

Sub-Cell 11a: Scenario Area: 9 Map: 2

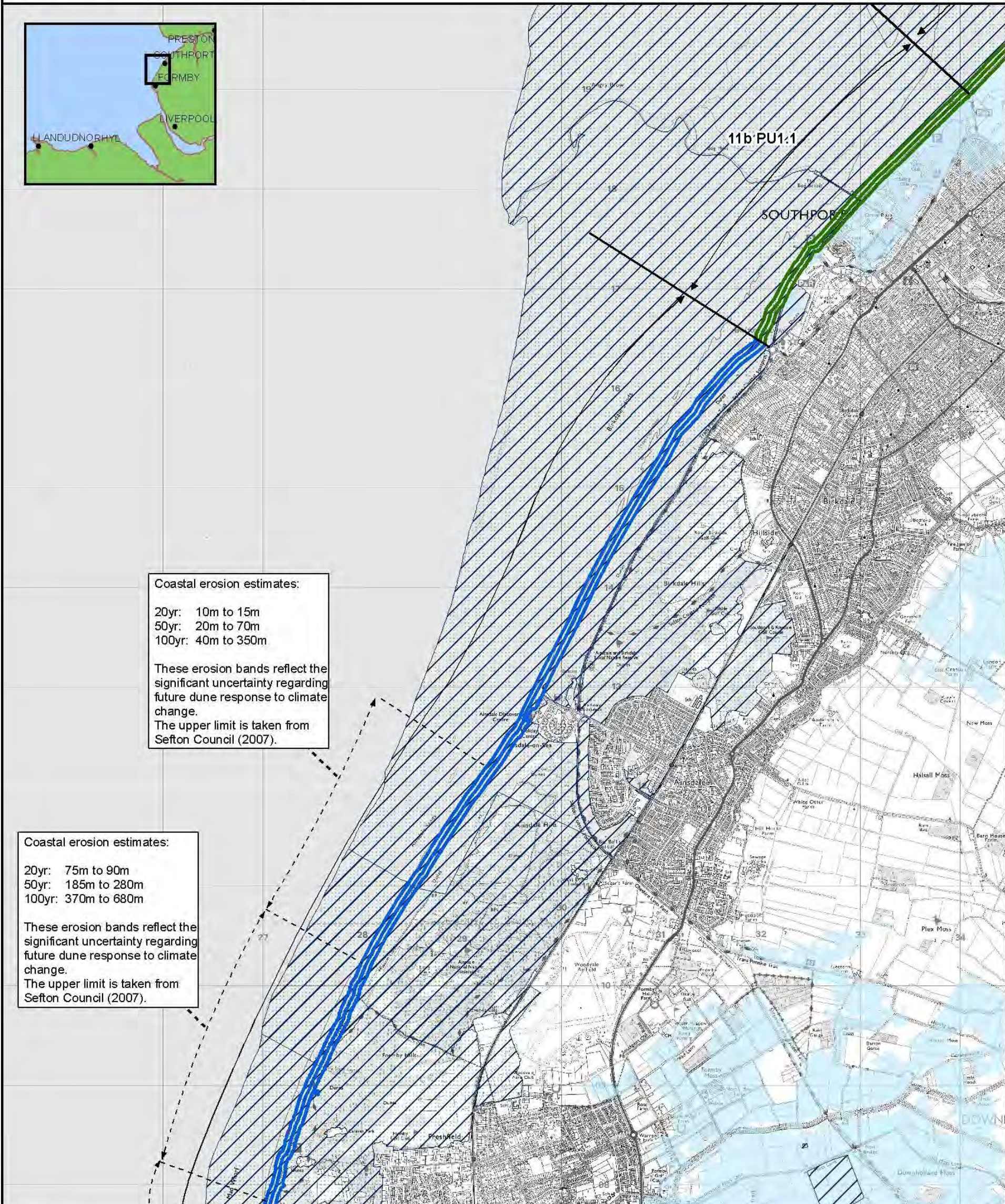


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**Coastal erosion estimates:**  
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<b>Legend</b> National Nature Conservation Designations International Nature Conservation Designations Scheduled Monuments Coastal flood risk area under extreme events, Environment Agency Flood Map 2008	<b>Shoreline Management Policies</b> Hold the Line (HTL) Managed Realignment (MR) No Active Intervention (NAI) Policy Unit Boundary Policy Unit Extent	 From 2010	 Scale: 1:35,000 0 0.25 0.5 1 Kilometres

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.