



# **Flood and Coastal Risk Management – What role for habitats?**

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# What I'm going to cover:

- Coastal risk – now and future
- Who does what on the coast
- FCRM and Habitats
- Challenges and Opportunities

# Coastal risk in England

- 1.8 million people at coastal flood and erosion risk
- 2750km of coast at risk of sea flooding
- About a quarter of the coastline eroding at >10cm/year – but up to almost 2m/yr in some places
- Over 700 properties at risk from erosion in next 20 years
- With interventions this could increase by a further 2,000 properties over the next 50 years
- Without intervention this could increase to over 5,000 properties within 20 years and 28,000 in 50 years



# Environment Agency role:

- ➔ **Overview** of coastal flood and erosion management
- ➔ **Engagement** and **partnership working** with coastal groups and other stakeholders
- ➔ **Strategic planning** through Shoreline Management Plans and Flood Risk Management Plans
- ➔ Overview and assurance of **funding and investment** on the coast
- ➔ Understanding **risk** through fit for purpose **evidence**

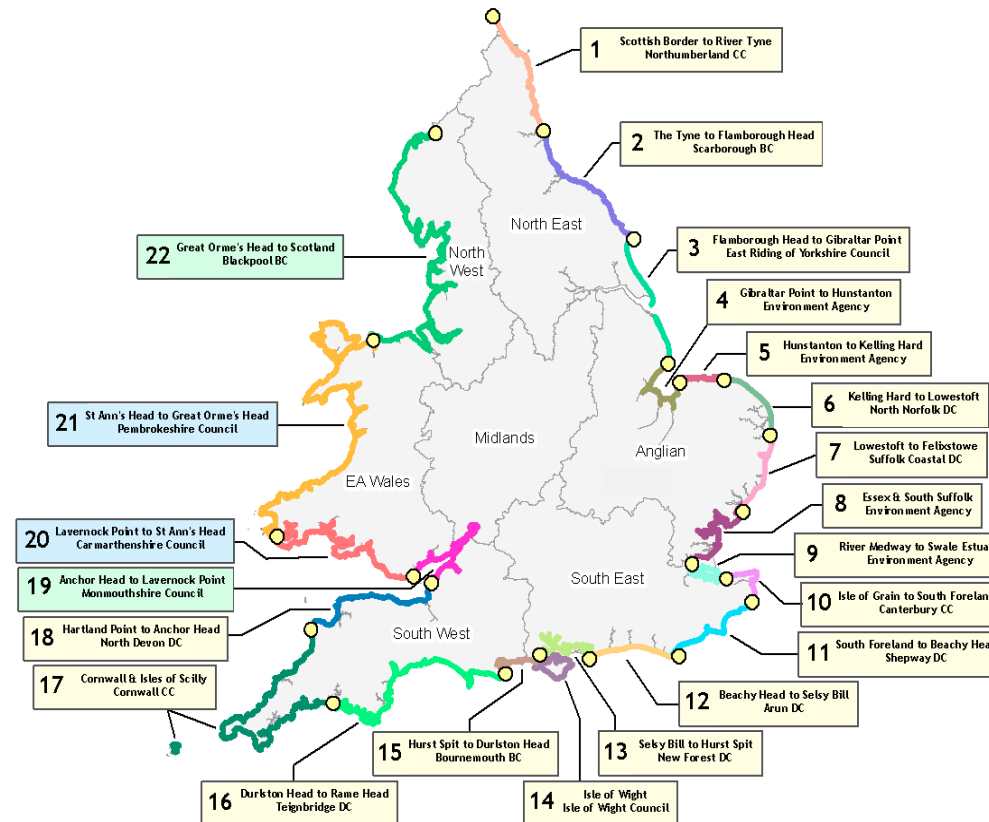
# Coastal Groups in England

- 7 coastal groups
- Bring together key partners in coastal management
- Voluntary groups with significant influence
- Chaired by coastal authorities or EA
- Established by Defra in 2008
- Maintain, monitor and review SMPs



# Shoreline Management Plans

- a large-scale assessment of the risks associated with coastal processes
- identifying sustainable approaches to managing the risks to the coast in the short term (0-20 years), medium term (20-50 years) and long term (50-100 years).
- Contain 4 management policies:
  - Hold the existing line of defence
  - Advance the existing defence line
  - Managed realignment
  - No active intervention
- £1m 3 year refresh underway



www.defra.gov.uk

Shoreline management plan guidance  
Volume 1: Aims and requirements  
March 2006

# Flood and coastal erosion risk management in England

## Investment programme 2015 to 2021



**£1.5 billion** in benefits to the agriculture sector through flood risk reduction

**£2.6 billion** of Defra capital grant invested in the 6 years

**One in six** homes in England is at risk of flooding

**£22.3 billion** in benefits through damages avoided from **300,000** households being better protected

Total additional benefits to the value of **£29.4 billion** through flood damages avoided and long term gains

Investing in built schemes and improving critical services - flood warnings, forecasting, mapping and telemetry

**£5.0 billion** long term benefits to transport, infrastructure, commerce and industry

**42%** spent on coastal flood and erosion risk management and **58%** on inland flood risk management

**300,000 households** with reduced risk of flooding

**£600 million** benefits through improved biodiversity and local environments

**5% reduction** in expected annual economic damages from flooding by 2021

Attracting over **£390 million** in additional funding through partnership contributions

# Coastal Schemes in the capital investment programme to April 2021

- £1.2 billion of investment in 1,500 coastal erosion and sea flooding projects
- delivering over 170,000 homes better protected
- representing 50% of the overall 6 year programme
- Schemes deliver benefits for people and wildlife

Celebrations as £63m coastal flood defence project is opened



# FCRM Outcome measures

- used by Defra to ensure that public money is effective at delivering the benefits expected

River & Sea Flooding	Number of households moved out of any flood probability category to a lower probability category	<b>2</b>
	Of the above, households moved out of the very sig & sig flood risk categories to moderate or low	<b>2b</b>
	Of the above, households in the 20% most deprived areas moved out of the v. sig & sig. categories	<b>2c</b>

Homes for people

Coastal Erosion	Households with reduced risk of coastal erosion	<b>3</b>
	Of the above, those protected from loss within 20 years	<b>3b</b>
	Of the above, those in the 20% most deprived areas protected from loss within 20 years	<b>3c</b>

Water Framework Directive	Hectares of water-dependent habitat created or improved	<b>4a</b>
	Hectares of intertidal habitat created	<b>4b</b>
	Kilometres of river protected under the EU Habitats or Birds Directive	<b>4c</b>

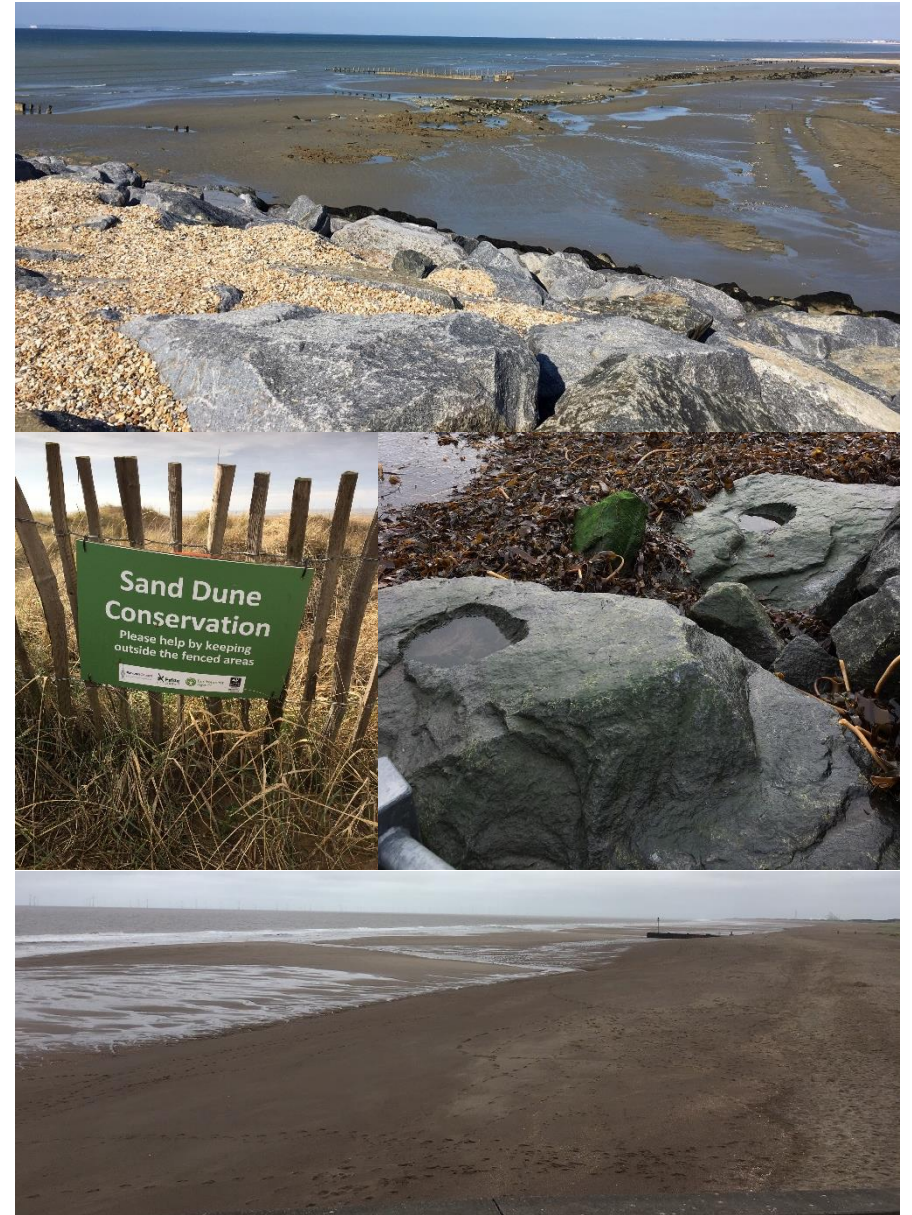
Homes for wildlife

# Environmental outcomes delivered through the FCRM investment programme

OM	OM4a	OM4b	OM4c	OM4d	OM4e	OM4f	OM4g	OM4h
	N2K Habitat created or improved (Ha)	N2K Intertidal created (Ha)	N2K Rivers improved (km)	Rivers enhanced (km)	Fish passage improved (km)	River habitat enhanced (km)	Habitat enhanced (Ha)	Habitat created (Ha)
15/16	514	179	21	-	-	-	-	-
16/17	341	48	43	-	-	-	-	-
17/18	317	162	15	75	54	80	249	556
18/19	168	-	2	59	90	74	485	300

# FCRM and Habitat

- **running to standstill** – the Habitat Compensation Programme
- **greening the grey** – delivering multiple benefits including enhancing the environment such as habitat creation
- **nature-based solutions** – FCRM using or manipulating natural systems eg. sand dune restoration and beach replenishment
- ‘net gain’ – taking opportunities to restore habitat where current FCRM has become unsustainable



# The FCRM Habitat Compensation Programme

- Compensates for direct loss and damage to Natura 2000 sites caused by FCRM activity, and anticipated losses to 'coastal squeeze'
- Habitat created before losses occur
- Provides a tested, reliable and more cost-effective delivery model
- Is evidence-based, with projections and pipelines updated after monitoring
- Is reported to Defra biennially



# Habitat Compensation Programme

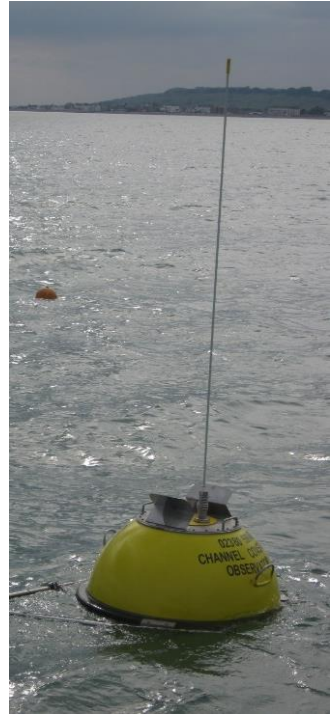
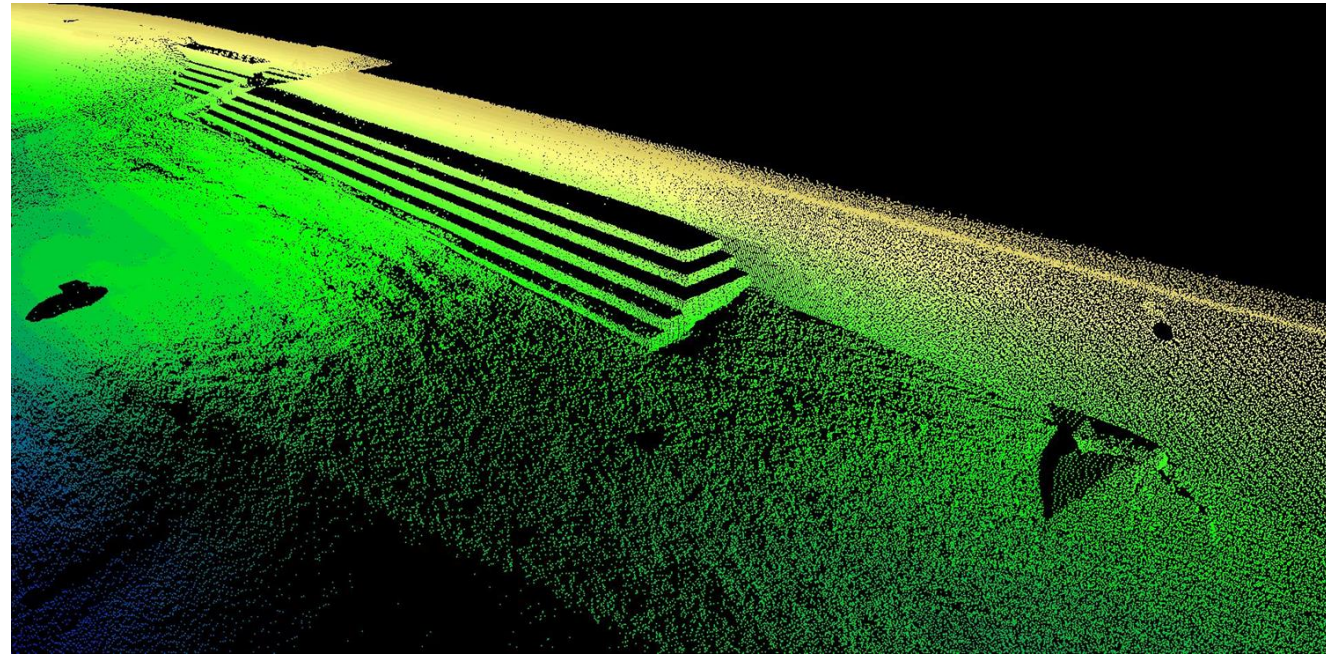
>900ha inter-tidal habitat created since early 2000s

Plus c.600ha of other coastal habitats (grazing marsh, reedbed etc)

Further c.300ha in development

Currently expect c.3000ha inter-tidal loss to 2100

# Coastal monitoring underpins our decision making



Defra funded National Coastal Monitoring Programme

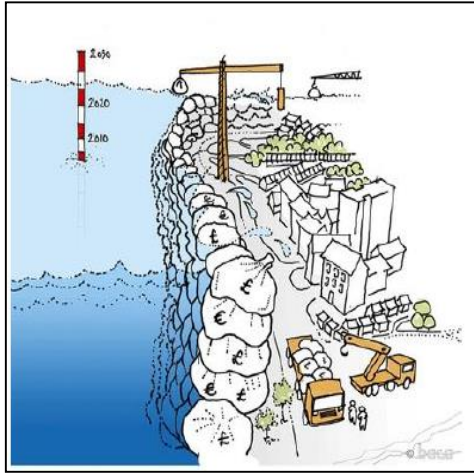
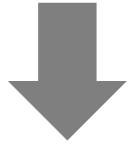
Hosted by Channel Coastal Observatory

All data is 'open data' and available from [www.coastalmonitoring.org](http://www.coastalmonitoring.org)

# Coastal challenges



# Coastal habitat opportunities





**Flood and Coastal Risk Management  
– What role for habitats?**

**A BIG ONE!**

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