

# Environment Agency: Climate Change Actions

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Flood & Coastal Risk Management  
Partnership & Strategic Overview Team

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EA 2025

A NATION RESILIENT  
TO CLIMATE CHANGE



EA 2025

HEALTHY AIR,  
LAND AND WATER



EA 2025

GREEN GROWTH AND  
A SUSTAINABLE FUTURE

## National Flood and Coastal Erosion Risk Management Strategy for England



“A nation ready for,  
and resilient to,  
flooding and coastal  
change – today,  
tomorrow and to the  
year 2100”



# EA Role

- Strategic Overview of flooding and coastal erosion risk management.
- Managing the risk of flooding from:
  - Rivers
  - Reservoirs
  - Sea

Monks Brook, Chandlers Ford



A3057, Romsey



Emsworth Millpond



# Environment Agency Carbon Footprint

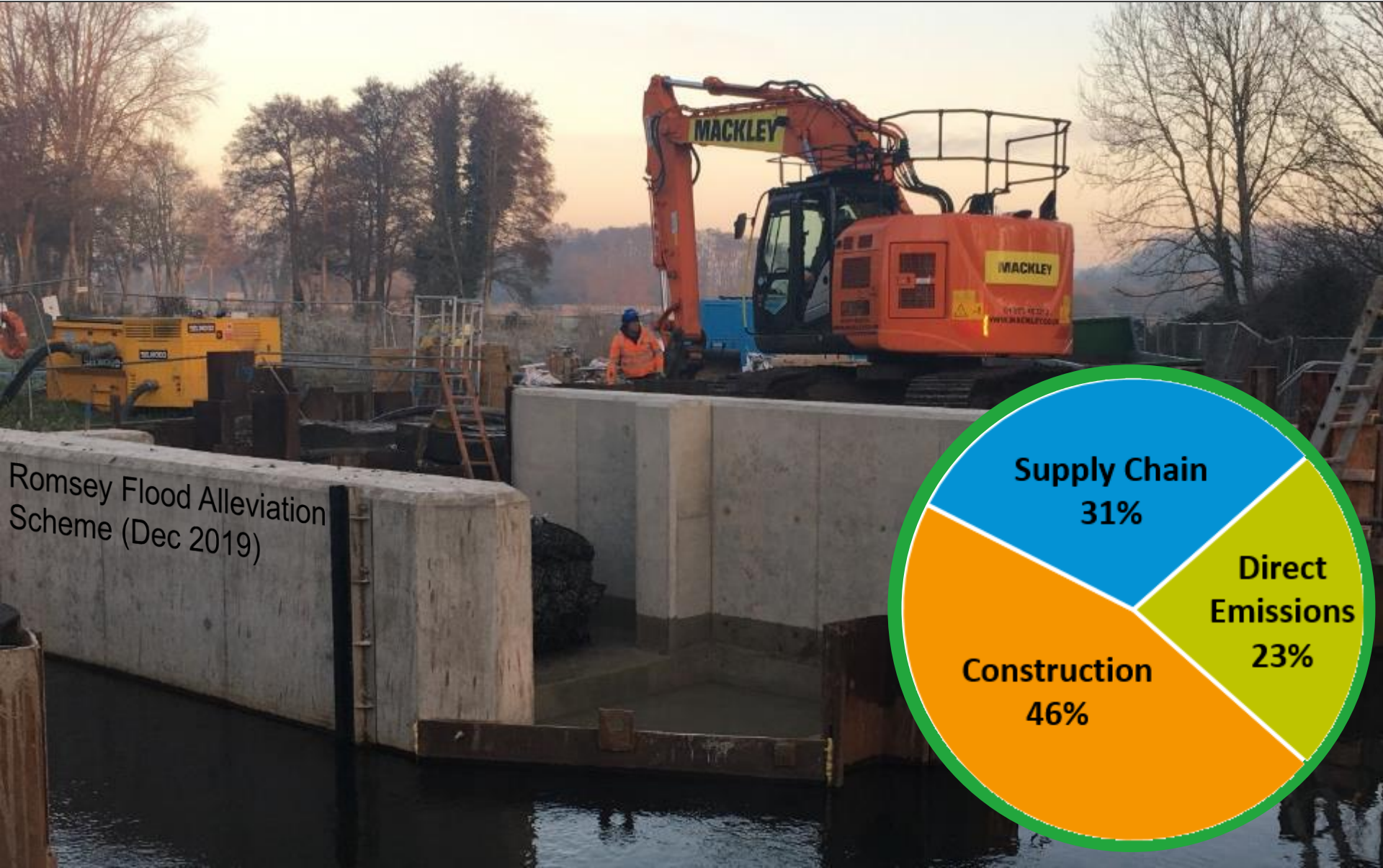
## Carbon Net Zero by 2030

- 45% Reduced emissions
- 55% Offsetting

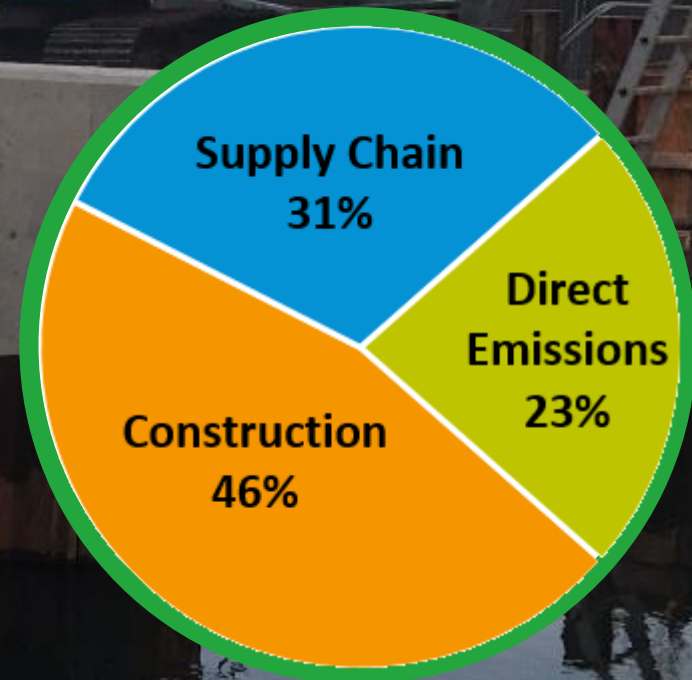


Romsey Flood Alleviation Scheme (Dec 2019)

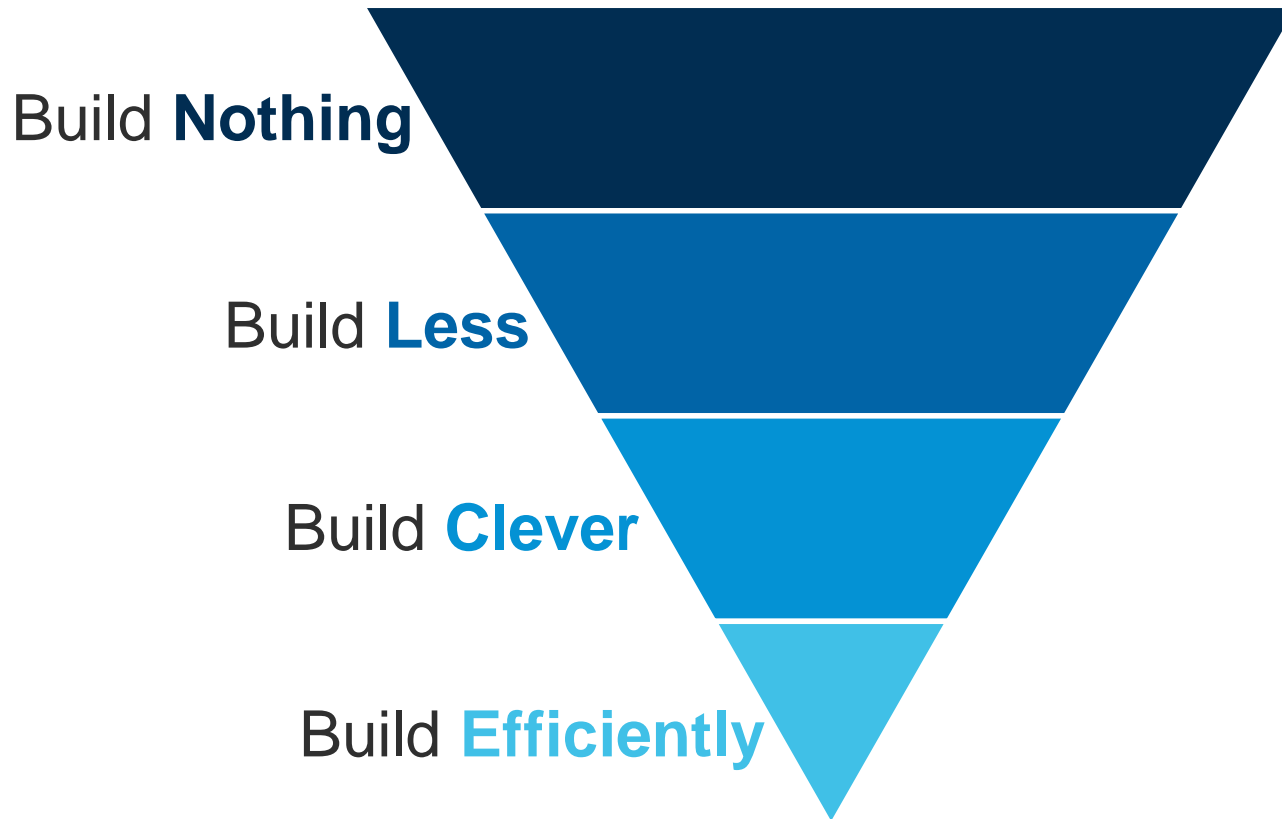
# Environment Agency Carbon Footprint



Romsey Flood Alleviation Scheme (Dec 2019)



# Carbon Reduction Hierarchy





# Carbon Reduction Hierarchy



Wallington  
Village

# Hampshire Flood Risk

- Properties at River & Coastal Flood Risk: 26,230
- Predicted to double in 50yrs
- EA Climate Impacts Tool:

	By 2050	By 2080
Winter Average Rainfall	+44%	+75%
Peak River Flows	+50%	+105%
Sea Level Rise	+0.6m	+1.0m
Wave Height	+5%	+10%
Storm Surge	+35cm	+70cm
Extreme Rainfall Intensity	+20%	+40%



# Hampshire Flood Risk

- Properties at River & Coastal Flood Risk: 26,230
- Predicted to double in 50yrs
- EA Climate Impacts Tool:

	By 2050	By 2080	
Winter Average Rainfall	+44%	+75%	<b>Wetter Winters</b>
Peak River Flows	+50%	+105%	
Sea Level Rise	+0.6m	+1.0m	<b>Higher, Stormier Seas</b>
Wave Height	+5%	+10%	
Storm Surge	+35cm	+70cm	
Extreme Rainfall Intensity	+20%	+40%	<b>Heavier Rainfall</b>

# Spatial Planning & Climate Change Allowances



Hambledon (2011)



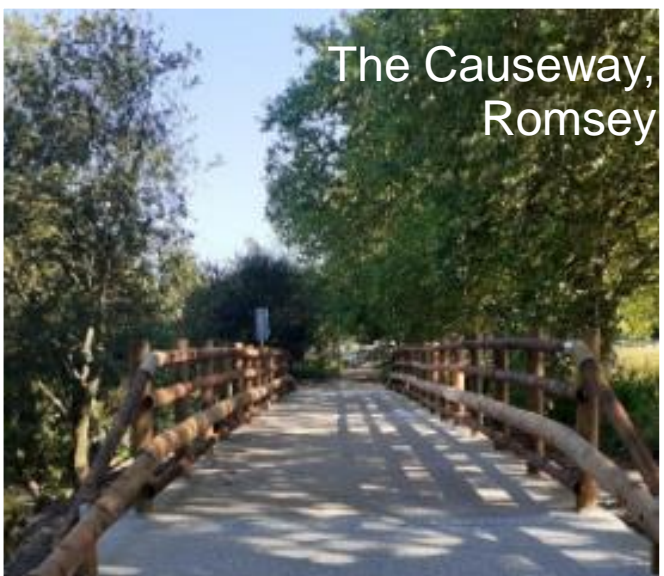
Old Fire Station, Winchester

**“Require no increase to flood risk for lifetime for development, including climate change allowance”**



# Flood Alleviation Schemes

- 6yr Programme ends Mar 2021
- Homes better protected
  - Nationally: 300,000.
  - Hampshire & IOW: 4,938





# Flood Alleviation Schemes

- New 6yr Programme
- 1<sup>st</sup> April 2021
- £5.2 billion
- Homes to be better protected:
  - Nationally: 336,000
  - Hampshire & IOW: 10,000
- New funding rules
- Significant private sector contributions needed
- Catchment Approach



# Hurst to Lymington



2.28mAOD

2.08mAOD = 2100 MHWS

1.37mAOD = 2050 MHWS

1.12mAOD = Present Day MHWS





# Hurst to Lymington



Flood Event with 5% chance of happening

2118 = 78cm overtop

2068 = 17cm overtop

2038 = 10cm overtop

2018 = 7cm overtop



2.28m AOD

2.08m AOD = 2100 MHWS

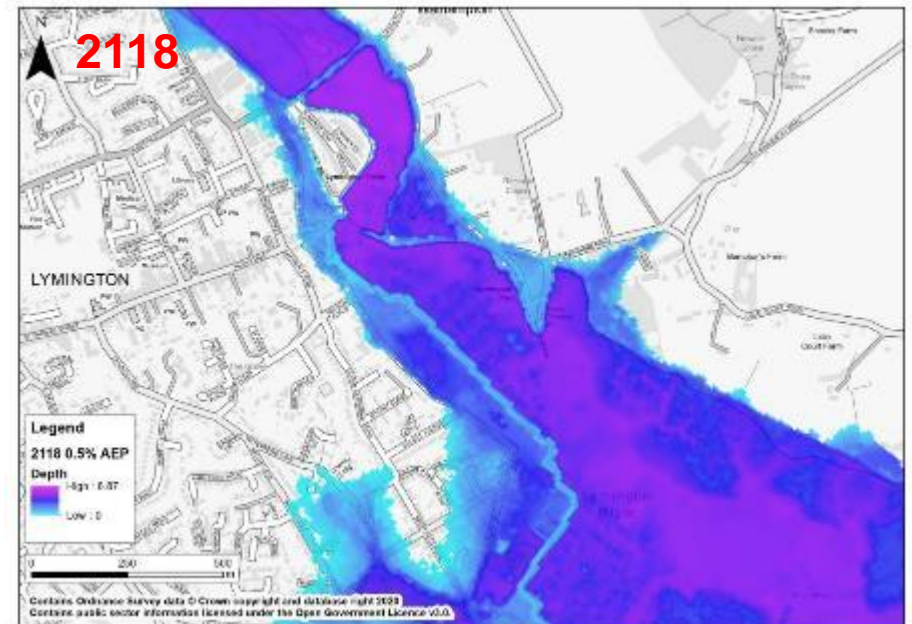
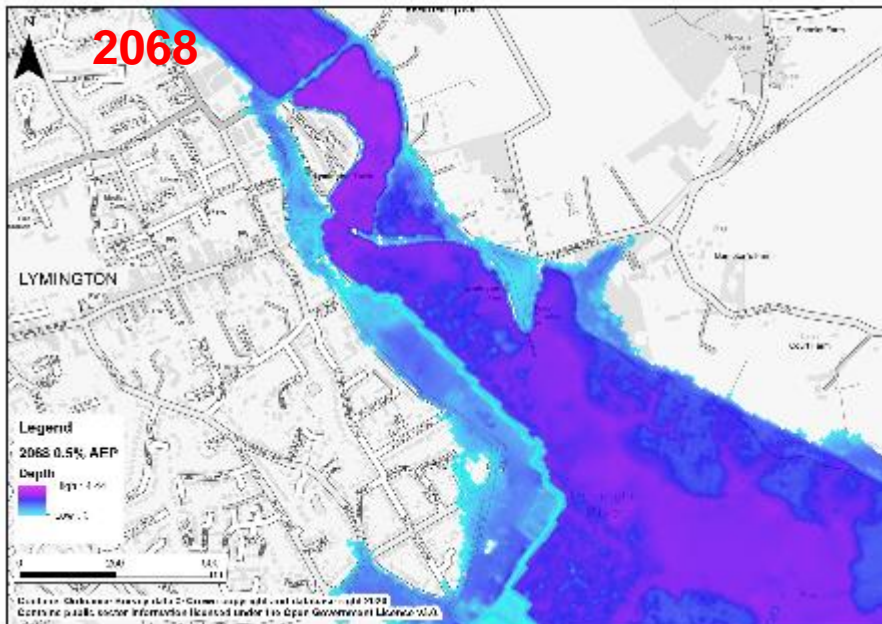
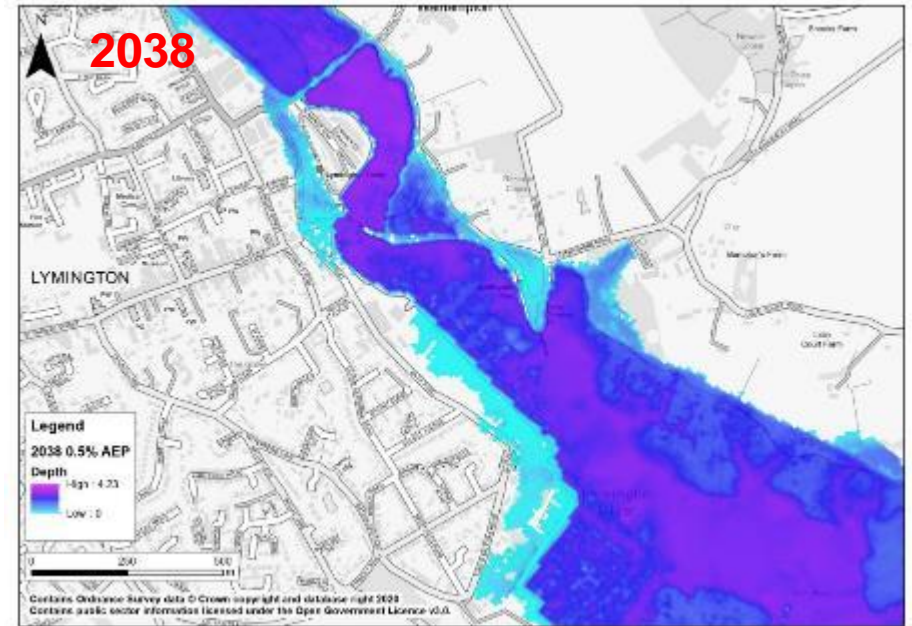
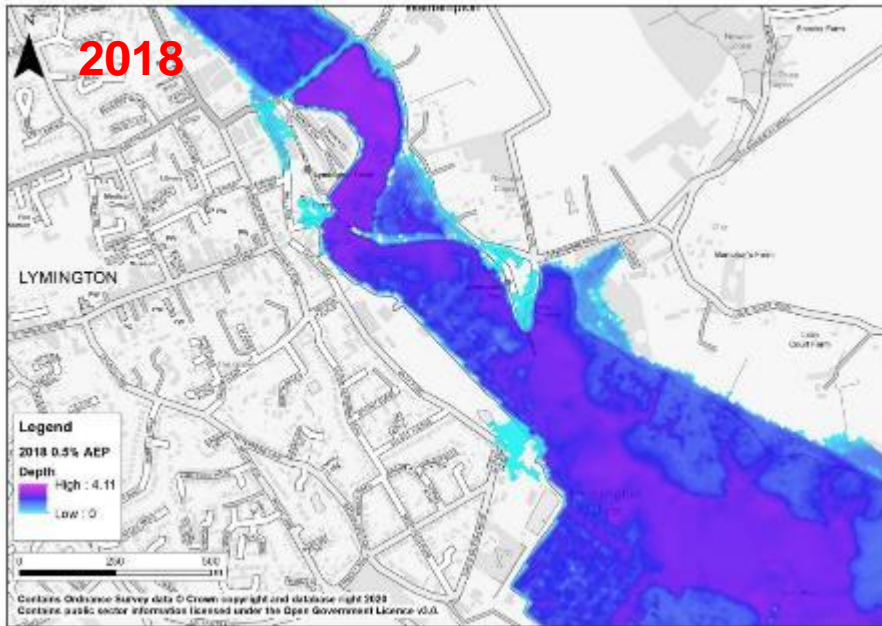
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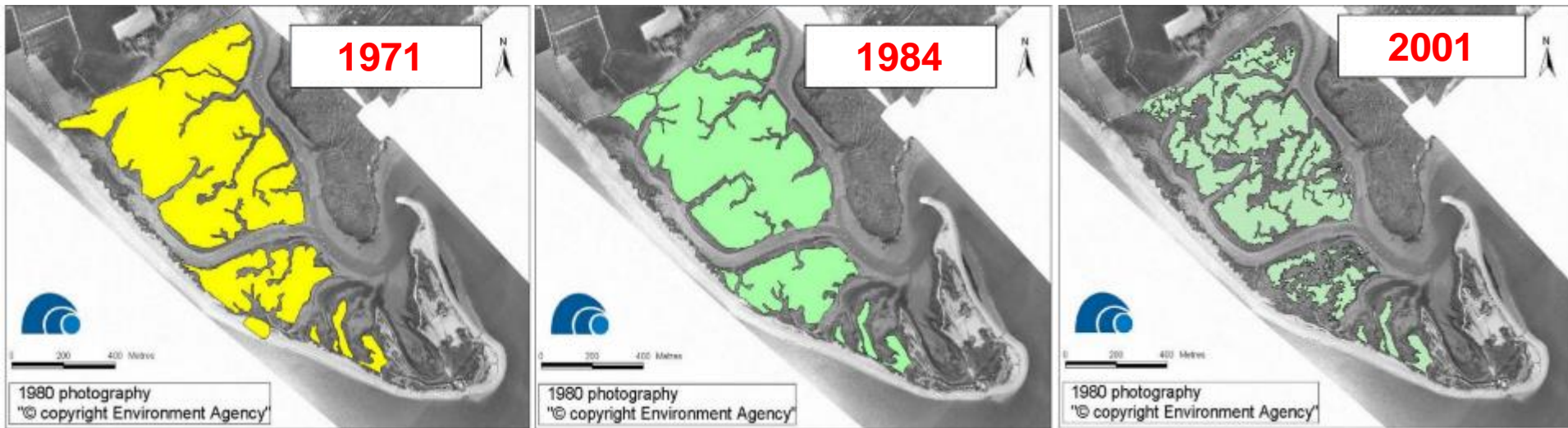


# Hurst to Lymington





# Hurst to Lymington: Habitat loss



# Erosion of coastline / SMP Refresh





# Property Flood Resistance





# Green Infrastructure





# Osnabrueck: Green Infrastructure



**157,000m<sup>2</sup> of green roofs**  
(commercial, residential, garages)

**22 football pitches**

Total Water Storage:  
**3,141m<sup>2</sup> / hr**





