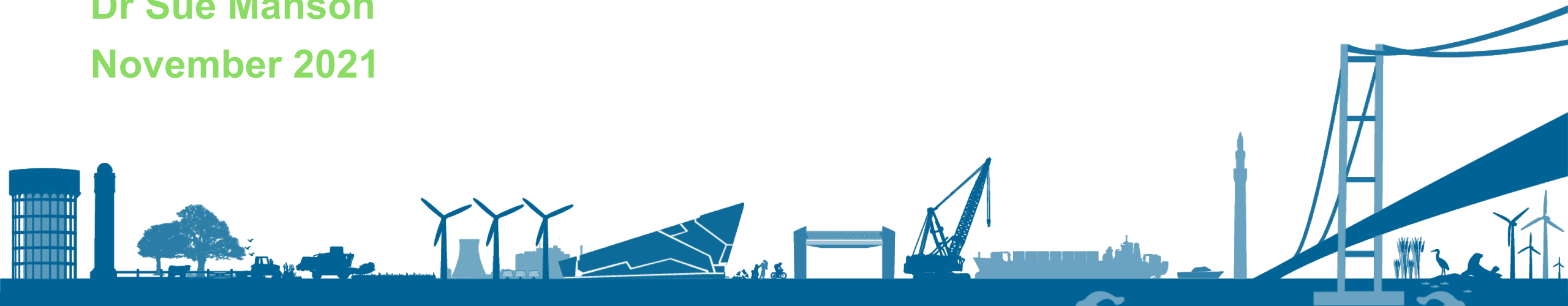


# Flood resilience and nature based solutions: delivering multiple outcomes

Dr Sue Manson

November 2021



# Outline

- Role of nature in flood resilience
- Blue carbon
- Examples around the Humber
- Humber 2100+



# The Humber



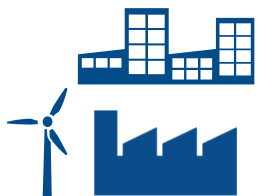
# The Humber



Around 500,000 people



More than 200,000 properties



Around 14,000 businesses



Road, rail and energy infrastructure



UK's largest port complex (by tonnage)



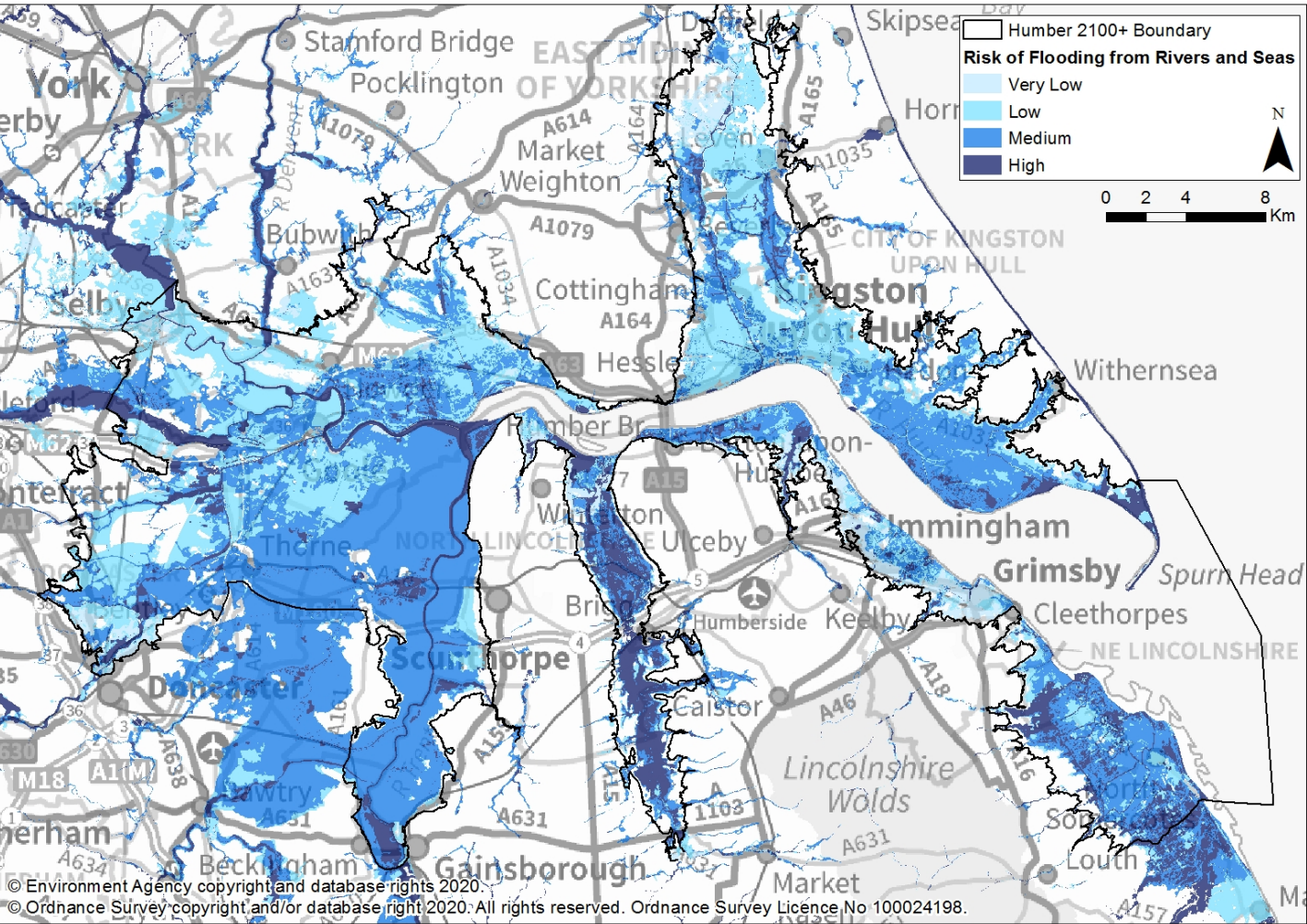
Internationally important habitats



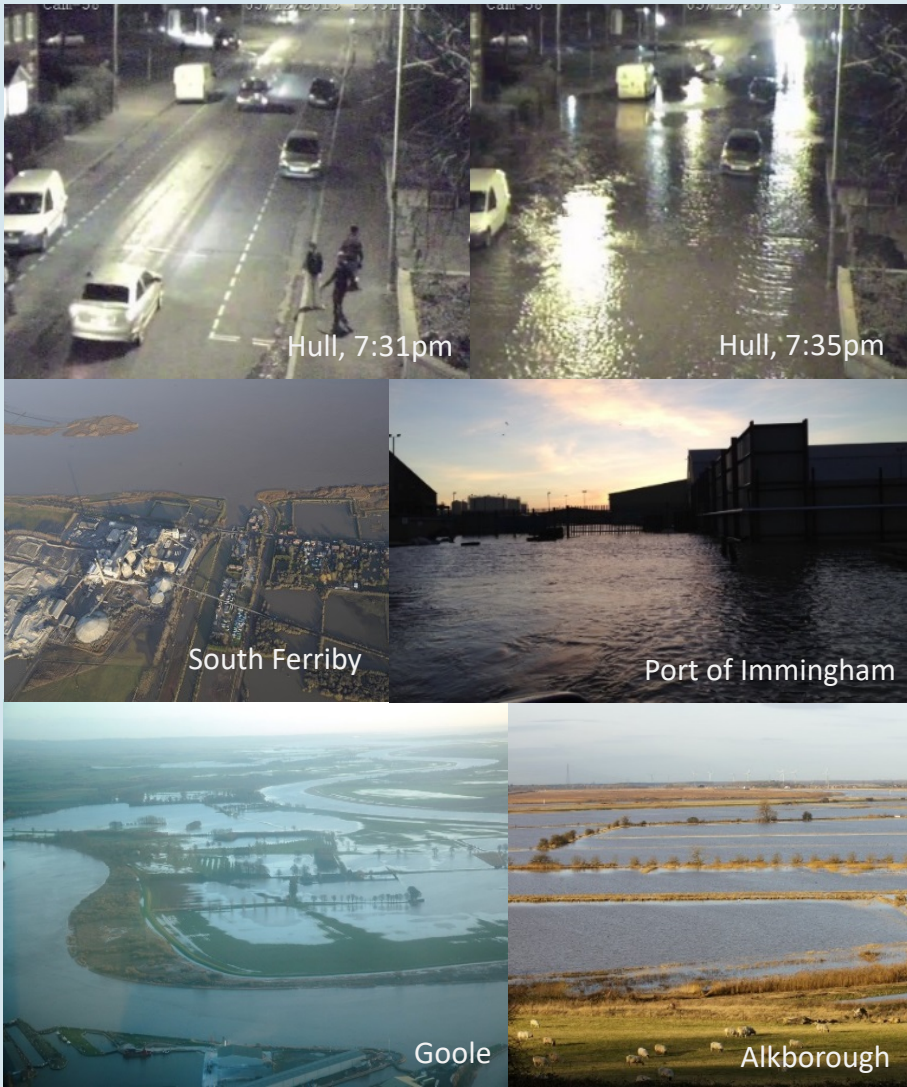
120,000 hectares of agricultural land



# Current flood risk from rivers & the sea



## 2013 tidal surge



# Context: nature based solutions and resilience



## Embedding a new approach to resilience

### IMPROVE PLACEMAKING:

Making the best land use and development choices to manage flooding and coastal change



### BETTER PROTECT:

Building and maintaining defences and managing the flow of water



### RECOVER QUICKLY:

Getting back to normal and building back better



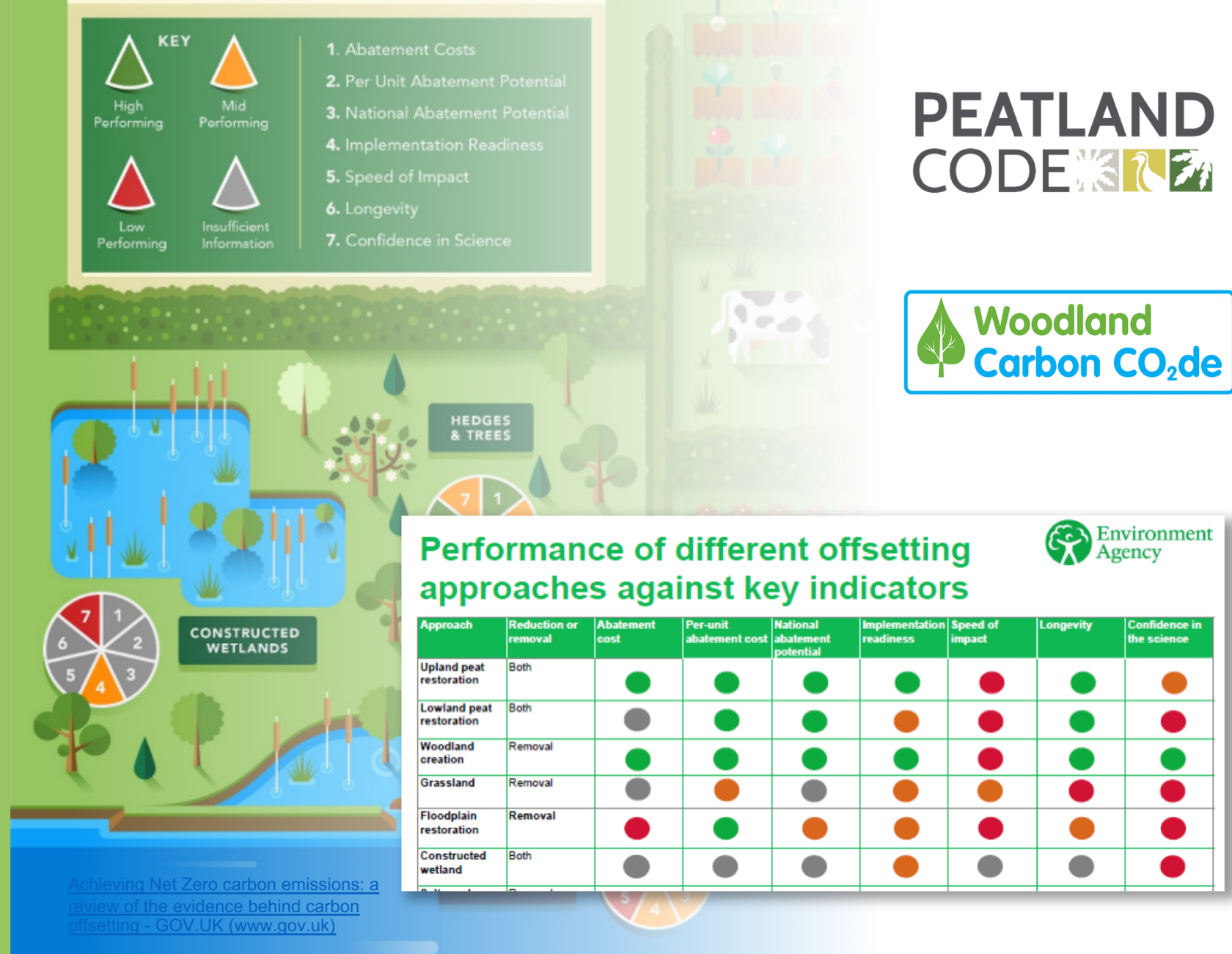
### READY TO RESPOND:

Preparing for and responding effectively to incidents



PLAN TO ADAPT







# Alkborough Flats

- Key role in Humber's resilience to tidal flooding
- Created in 2006 through a managed realignment
- Stores water during extreme floods
- Supports economy
- Habitat like reedbed, saltmarsh and wet grassland, over 200 bird species & fish nursery.
- Community asset
- Environment Agency, Natural England, ABP, North Lincs council.



# Water for farmers and wildlife study

- RSBP, Environment Agency & landowners
- Exploring opportunities to manage farmland around the Estuary for multiple benefits
- Field scale trials of temporary wetlands started 2021



# Managing a dynamic estuary

- Humber estuary is a system
- Need to understand the important relationships within that system





# Humber 2100+

Working together to manage tidal flood risk

- Improve understanding of how the systems functions
- understand current and future pressures
- measures focussed on helping system adapt to pressures
- Allow natural evolution & adaptation of habitats



# Thank you for your time

If you want to find out more visit:

[Humber 2100+ - Environment Agency -  
Citizen Space \(environment-agency.gov.uk\)](https://environment-agency.gov.uk)

Email the team at [Hstrategy@environment-agency.gov.uk](mailto:Hstrategy@environment-agency.gov.uk)

Or scan the code

