



Optimising landscape scale
conservation interventions through
Biodiversity Auditing



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THE UK'S BIODIVERSITY IS DECLINING



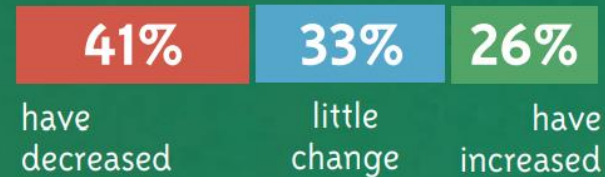
15%
of species are
threatened with
extinction from
Great Britain



133
of 8431 assessed
have already
become extinct
from Great Britain

SINCE 1970...

More species have seen their
populations decrease than increase:



UK biodiversity conservation, overall, has not been able to halt species declines



Environment Act 2021

2021 CHAPTER 30

An Act to make provision about targets, plans and policies for improving the natural environment; for statements and reports about environmental protection; for the Office for Environmental Protection; about waste and resource efficiency; about air quality; for the recall of products that fail to meet environmental standards; about water; about nature and biodiversity; for conservation covenants; about the regulation of chemicals; and for connected purposes.

The need for region-specific biodiversity and species information is enshrined in the Environment Act 2021 through the *Local Nature Recovery Strategy (LNRS)*

Environment Act 2021:

102 Content of local nature recovery strategies	
(1) A local nature recovery strategy relating to an area ("the strategy area") is to include—	70
(a) a statement of biodiversity priorities for the strategy area, and	
(b) a local habitat map for the whole strategy area or two or more local habitat maps which together cover the whole strategy area.	
(2) The statement of biodiversity priorities referred to in subsection (1)(a) is to include—	75
(a) a description of the strategy area and its biodiversity,	
(b) a description of the opportunities for recovering or enhancing biodiversity, in terms of habitats and species, in the strategy area,	
(c) the priorities, in terms of habitats and species, for recovering or enhancing biodiversity (taking into account the contribution that recovering or enhancing biodiversity can also make to other environmental benefits), and	20
(d) proposals as to potential measures relating to those priorities.	
(3) A local habitat map referred to in subsection (1)(b) is a map identifying—	25
(a) national conservation sites in the strategy area,	
(b) any nature reserves in the strategy area provided under section 21 of the National Parks and Access to the Countryside Act 1949, and	
(c) other areas in the strategy area which in the opinion of the responsible authority—	30
(i) are, or could become, of particular importance for biodiversity, or	
(ii) are areas where the recovery or enhancement of biodiversity could make a particular contribution to other environmental benefits.	
(4) A local habitat map which does not relate to the whole of the strategy area must relate to the area of one or more local authorities within the strategy area.	35

Risk of focusing on
coarse habitat classes



Solution:

understand both the *composition* and *requirements* of the *regional species pool*

Local Nature Recovery Strategies would be greatly enhanced by information on:

- the *species pool* of each LNR strategy area
- which species to *prioritise*
- their *management requirements* - evidence for potential measures



The Biodiversity Audit Approach

Biodiversity data

Landscape-scale management

Biological records

- What biodiversity

Auto-ecological data-bases

- Ecological requirements

Practitioner expertise

- management prescriptions

Robust, evidence-based guidance

- Integrated across taxa
- Management on the ground

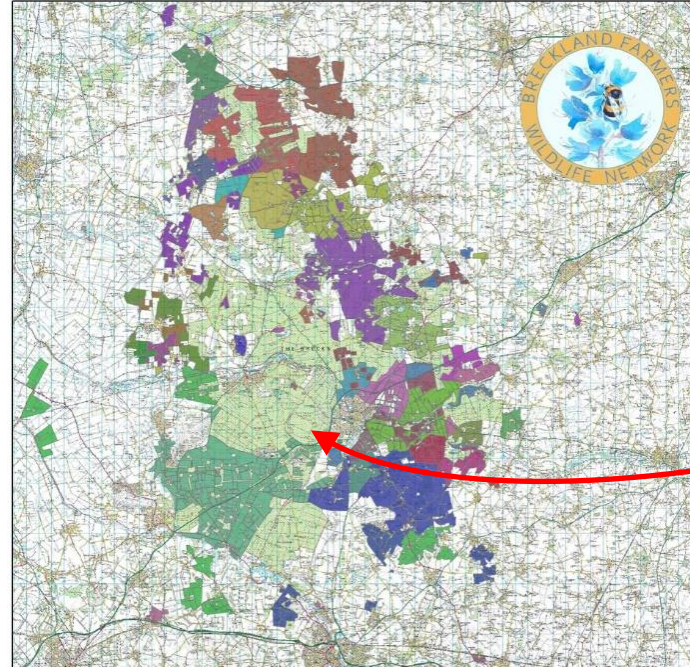


Cross-taxa groups of species - 'management guilds'
with shared requirements / management response

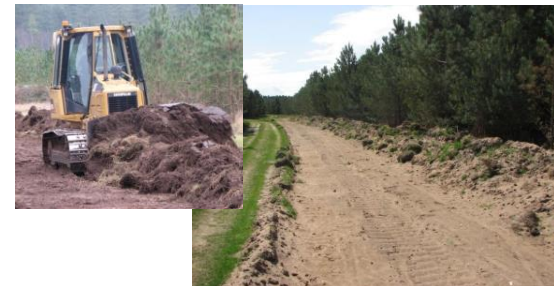
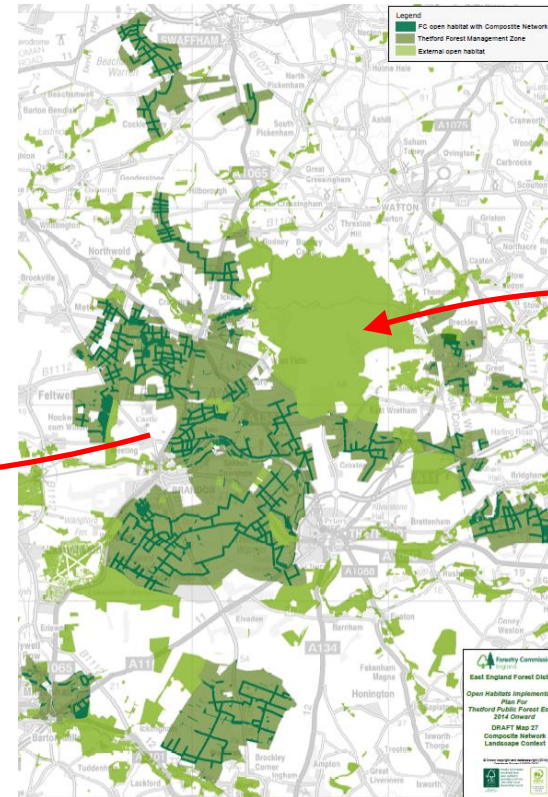
Biodiversity Audit
evidence
has catalysed
coordinated
landscape-scale
change

Implemented across
farm-clusters and
public-private
partnerships

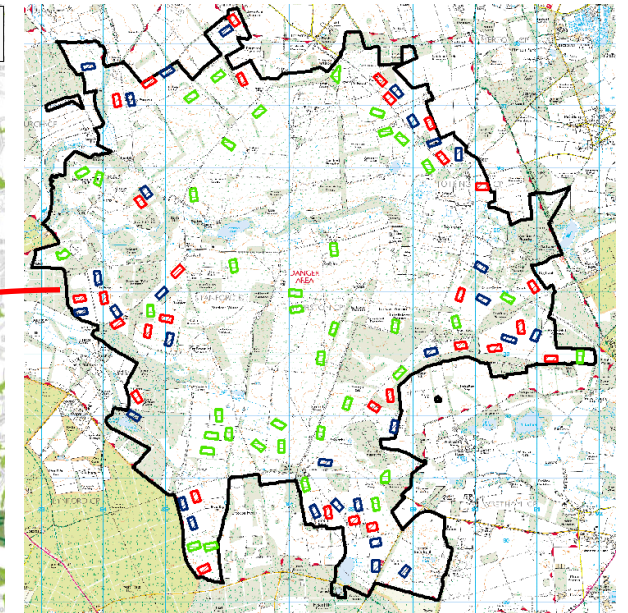
41,581 ha
Breckland Farmers Wildlife
Network (40 farms)



278 km open-habitat
connectivity network in
185 km² Forest (FC)



260 ha ground-disturbance
in 3,850 ha grassland
(MOD/DIO)



Biodiversity Audit

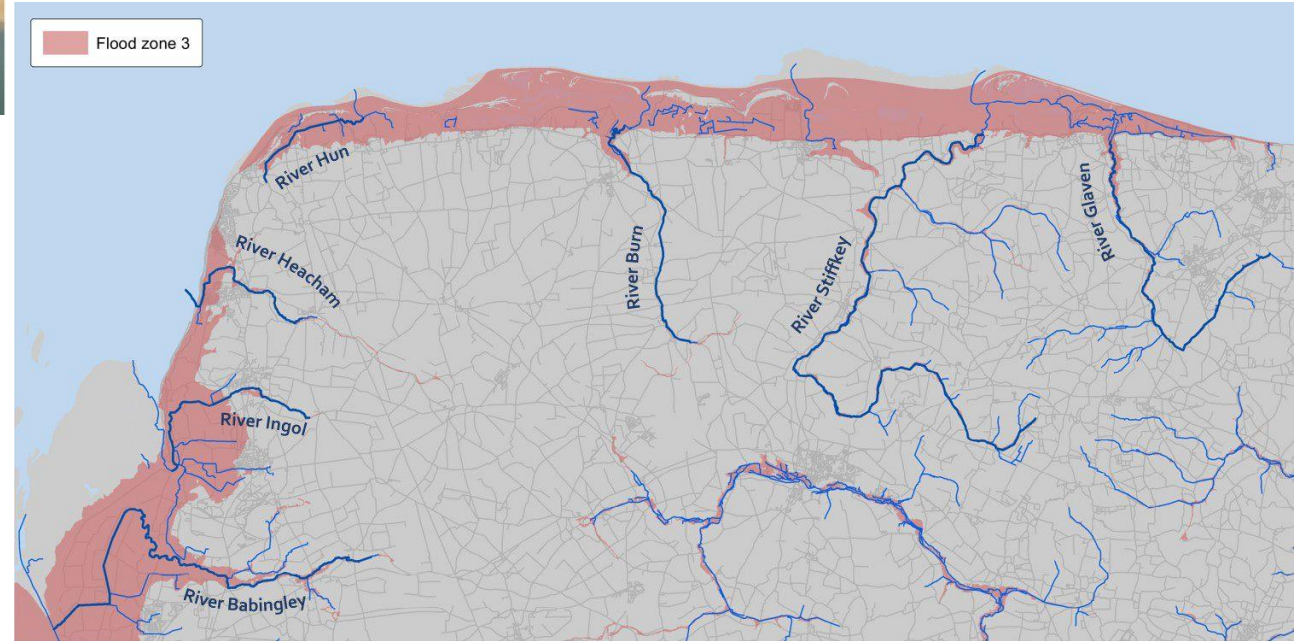


of the North Norfolk Coast



Challenge current thinking

Inform on the ground conservation

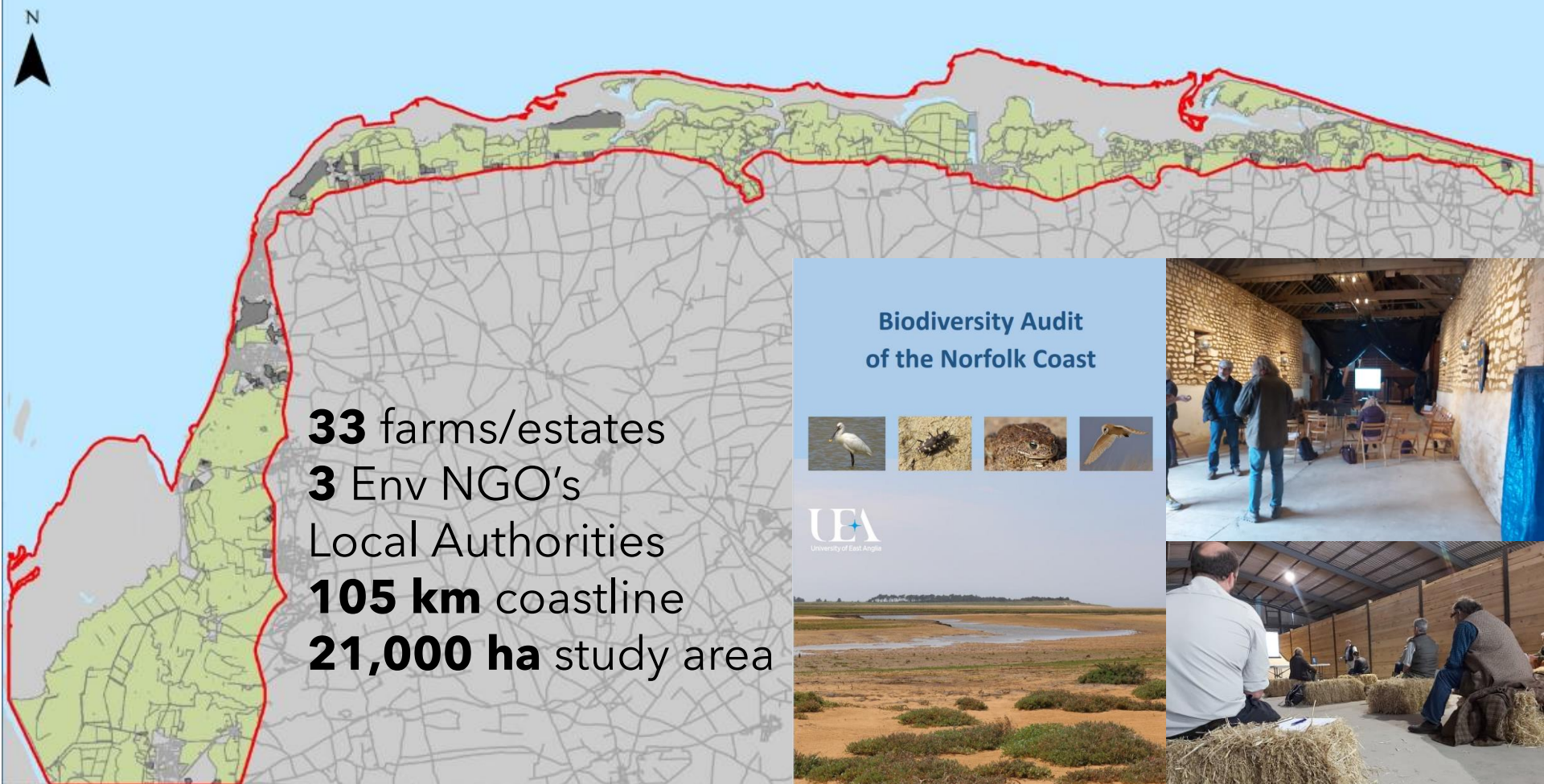


Inform sea level rise response




Co-designed, co-delivered by public-private partnership

Land managers across region engaged in the process






33 farms/estates
3 Env NGO's
Local Authorities
105 km coastline
21,000 ha study area

**Biodiversity Audit
of the Norfolk Coast**



UEA
University of East Angles



>1 million

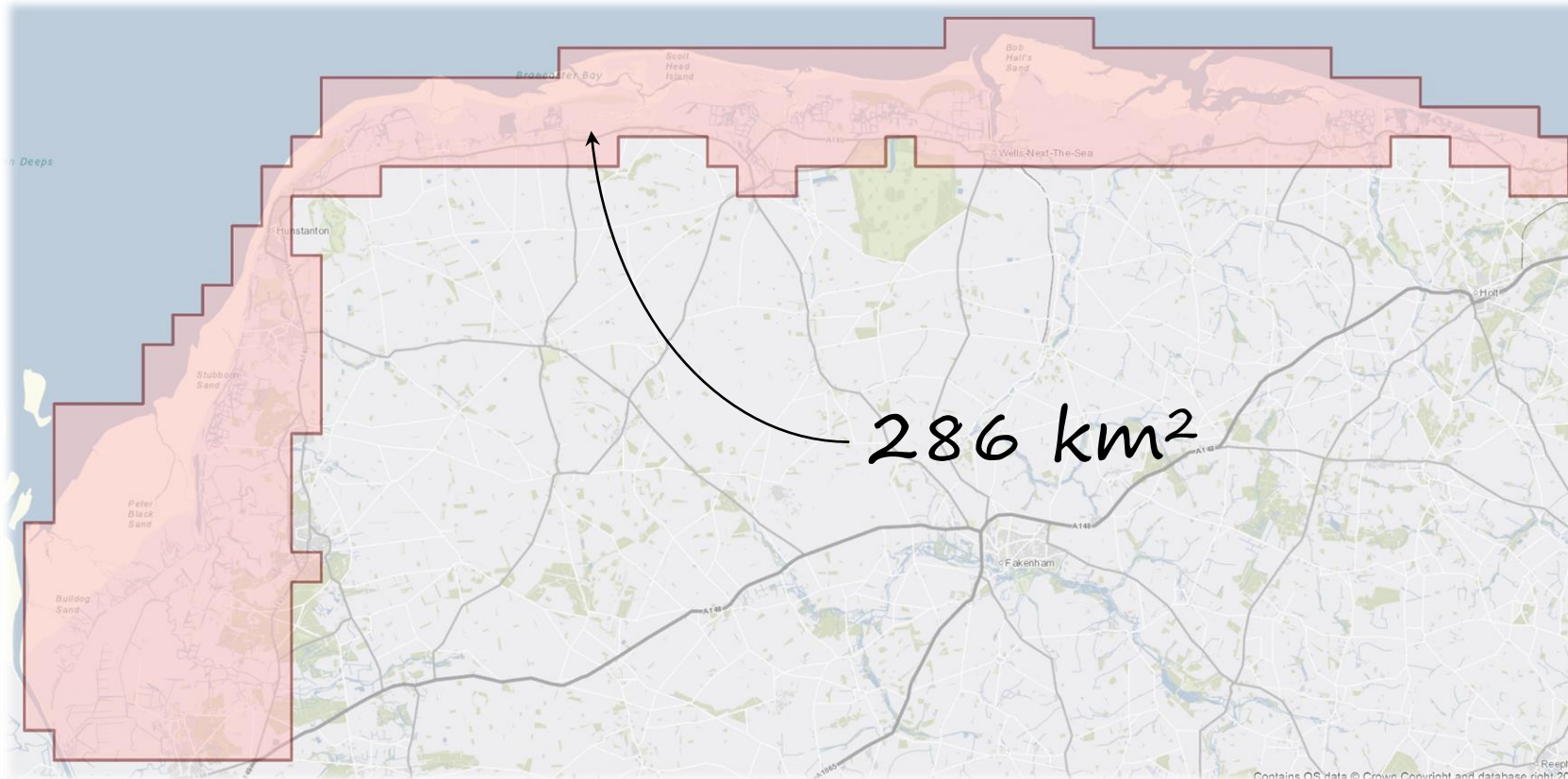
Records

10,801

Species

24

Local recorders validated species lists



10,801 species

An inventory of biodiversity across all species groups



0

2000

4000

6000

8000

10000



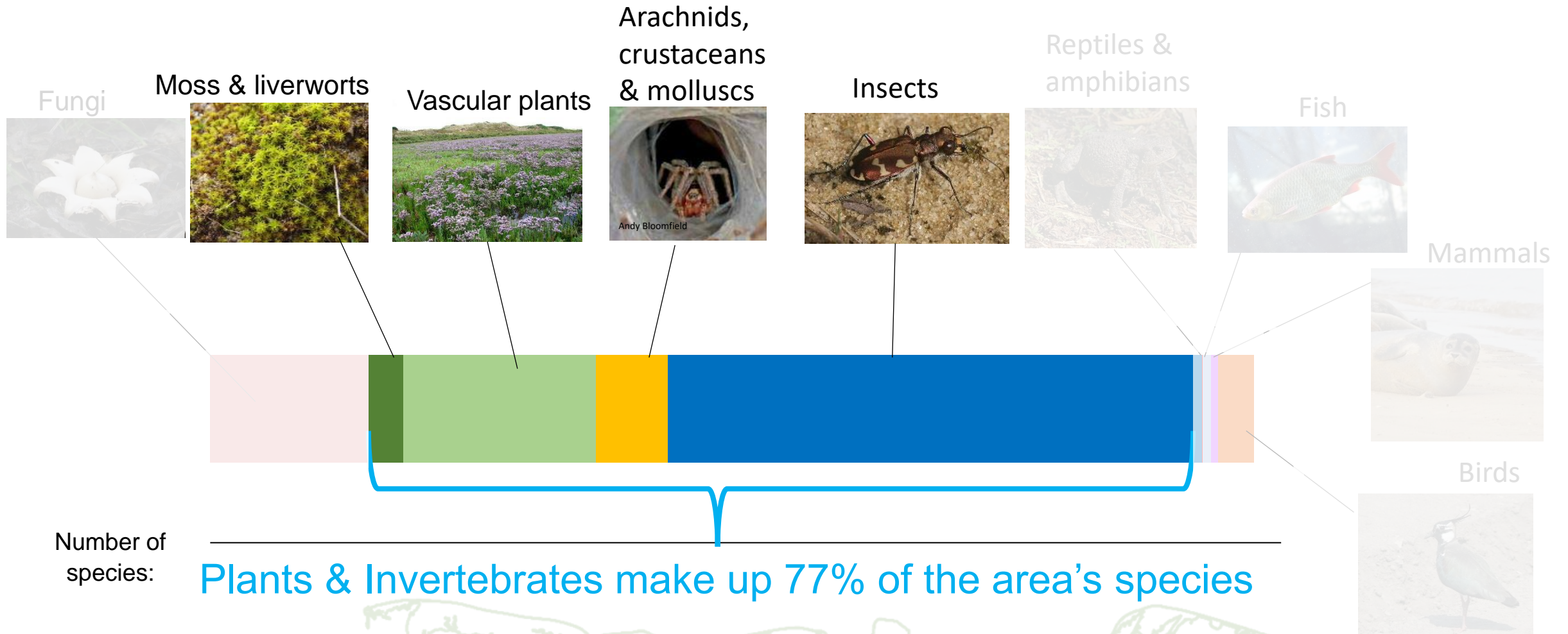
10,801 species

An inventory of biodiversity across all species groups



10,801 species

Full inventory across all species groups



Number of species:

Plants & Invertebrates make up 77% of the area's species




Current Management

(where a species has >10% of its range in out study area)

%age UK representation	Priority species count	Nationally irreplaceable Species count
50%	8	0
55%	10	2
42%	39	4

Short & Bare Ground




Crypticus quisquilius
(AfroBrazilian)

can be enhanced by addition of

Soil Moisture	%age UK representation	Priority species count	Nationally irreplaceable Species count
Wet	36%	7	0
Variable	55%	11	6
Damp	36%	19	0

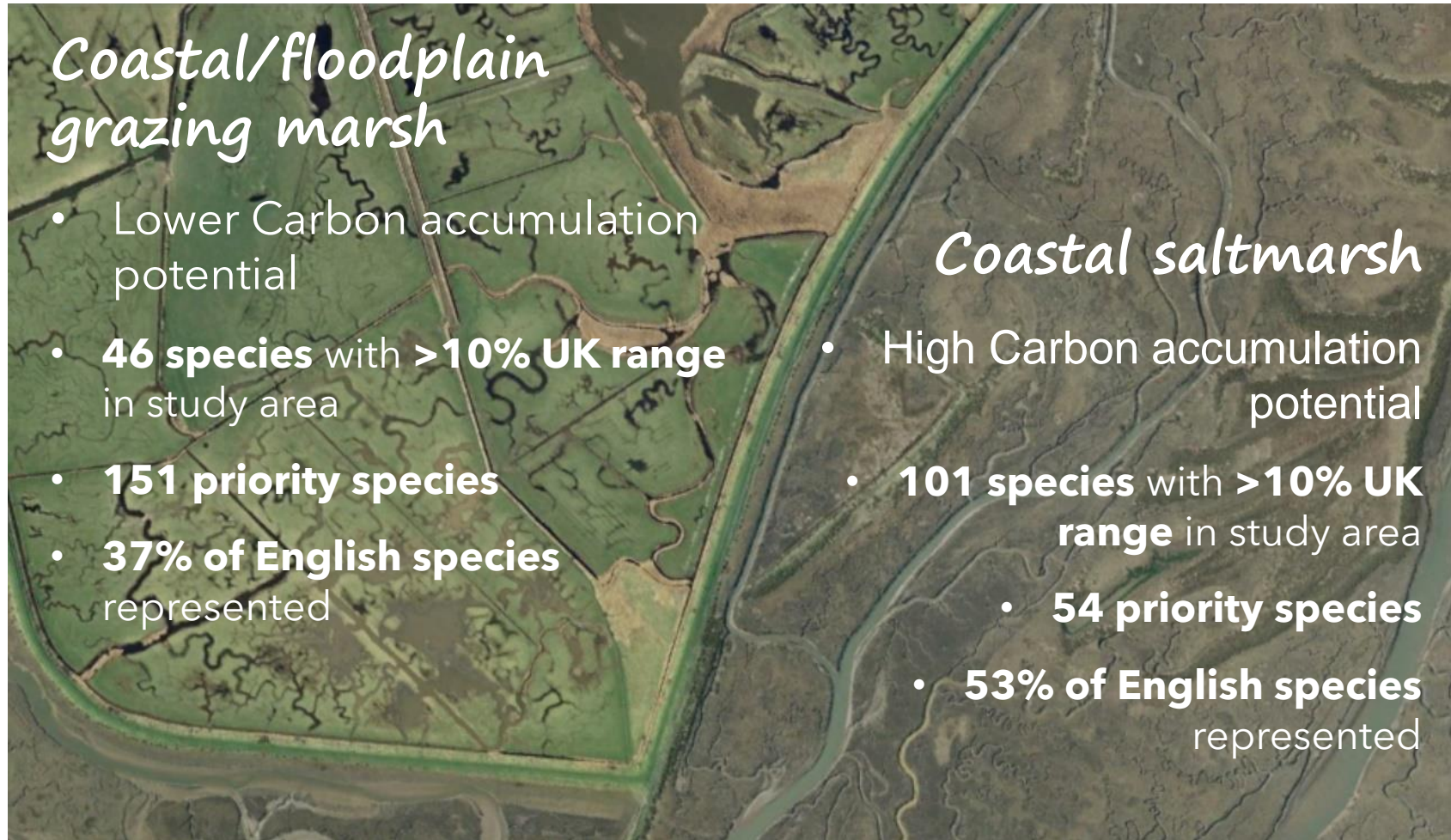
Tall or Scrubby Sward



Ochrosia ventralis
(J. Coelho)



Biodiversity Audit quantifies:
stackable biodiversity *co-benefits*, or *trade-offs* with other ecosystem services



Biodiversity Auditing:

using **biological data**
in a **systematic analysis**
to transform on the ground
conservation management



Thanks to:

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