

# Water Works



Bedfordshire  
Cambridgeshire  
Northamptonshire

**Kate Carver Wildlife Trust BCN**  
**Mark Nokkert Cambridgeshire ACRE**







**Water Works**  
PEAT PEOPLE SCIENCE

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Developing a more sustainable system for farmers and growers trialling crops that grow in wet conditions – wet farming - and transforming how people work together for sustainable development in the fens within a UNESCO Fens Biosphere



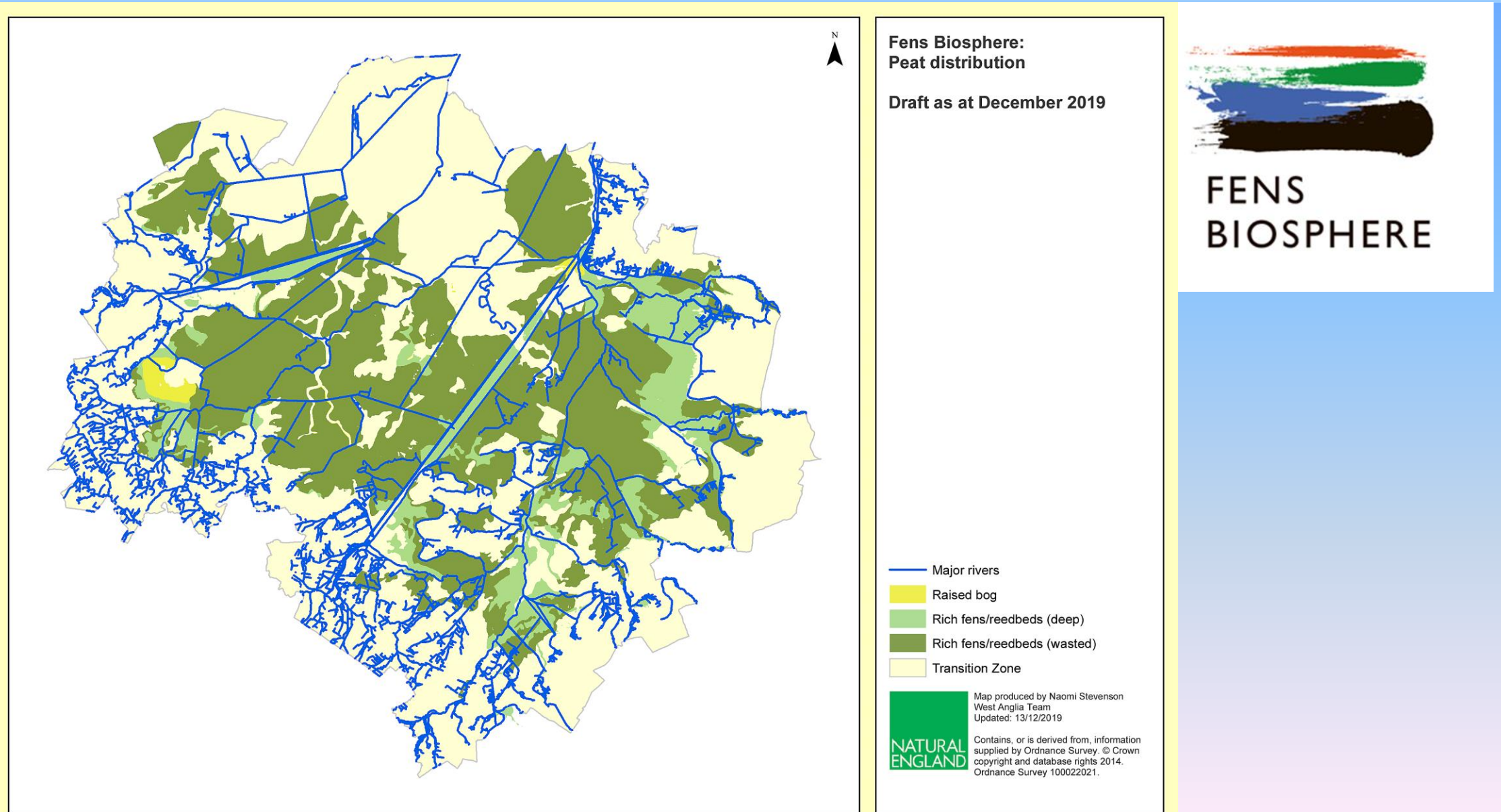
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Cambridgeshire  
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UK Centre for  
Ecology & Hydrology



# The link between the two elements of our dream is the PEAT – the declining peat resource largely defines the extent of the Biosphere





# Fens – An unsustainable loss of peat



**4.5 million m<sup>3</sup> of peat is lost each year in the Fens**

**Water is polluted**



**52% of CO<sub>2</sub> emitted by farming in the UK comes from lowland peat soil**

**NFU net zero by 2040**





**Paludiculture – field scale trials of crops for food, industry and biomedical applications in “real life” conditions**



**Wet farming builds soils, cleans water locks, in CO<sub>2</sub>**





**Food – Watercress, Wild Celery, Bilberry, Water Mint**

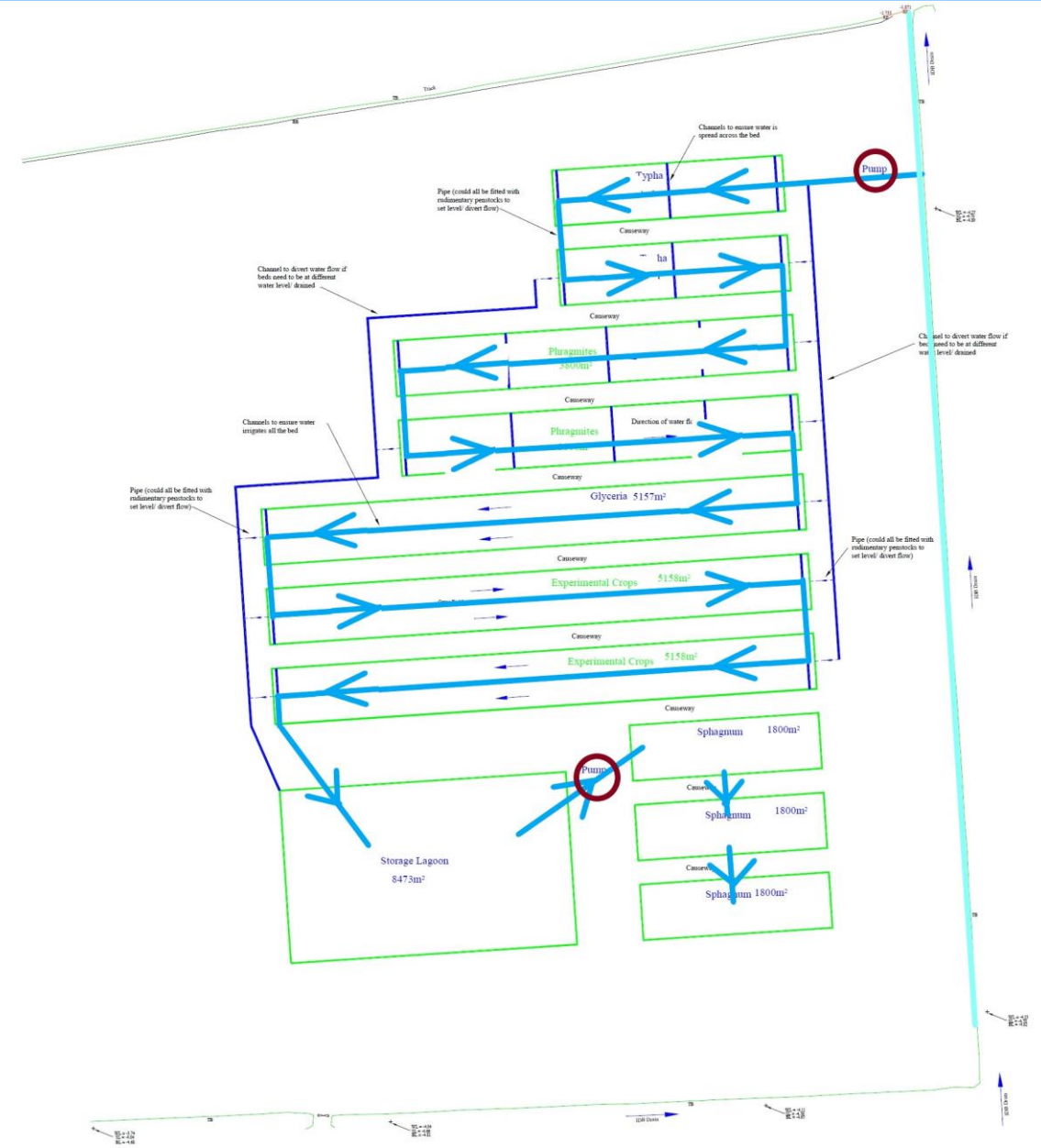
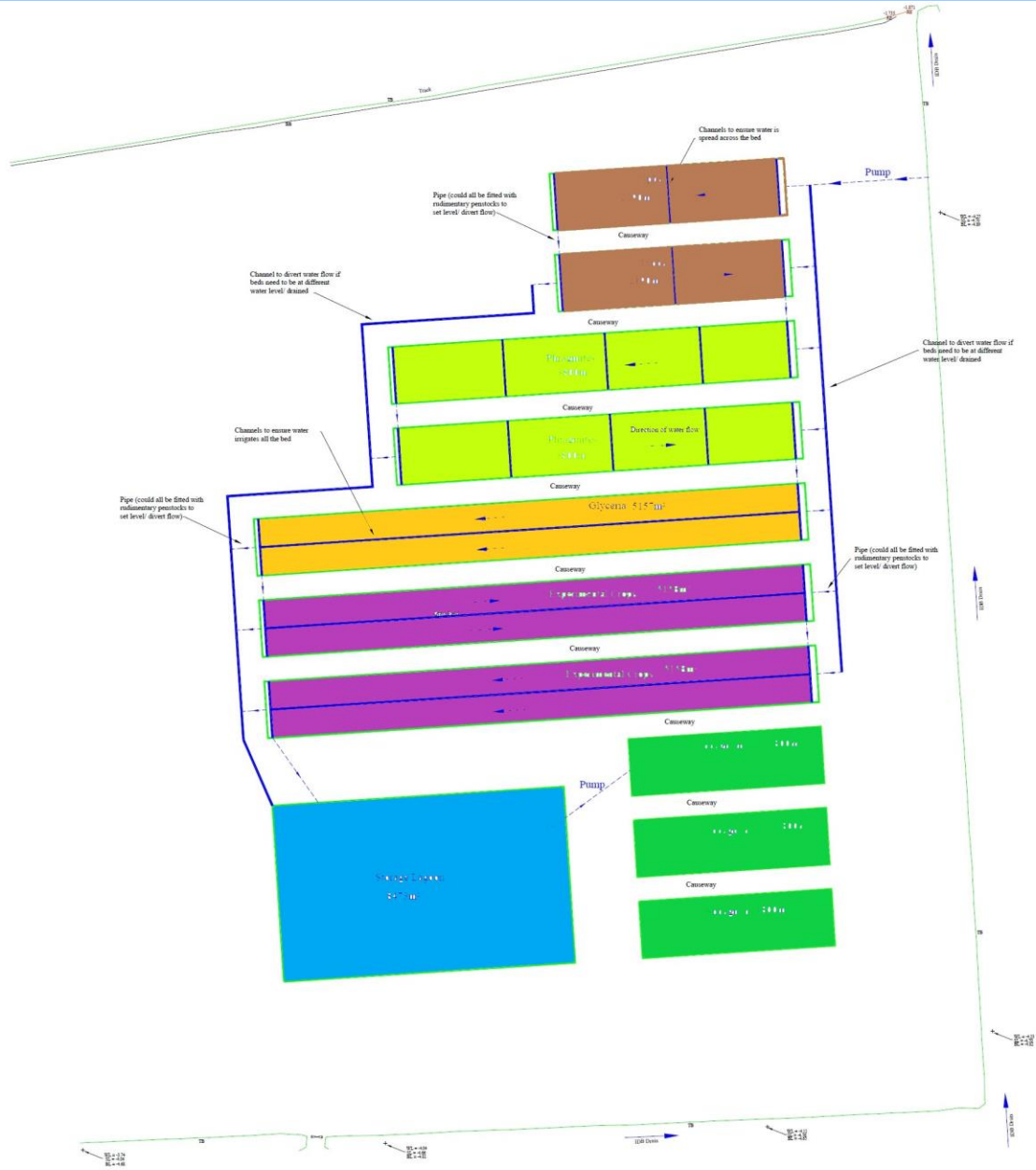
**Flavourings – Meadowsweet, Bog Myrtle**

**Medicinal – Comfrey, Gypsywort, Lady's Smock, Yellow Flag, Hemp Agrimony**





# Wet farming site plan – cropping and water

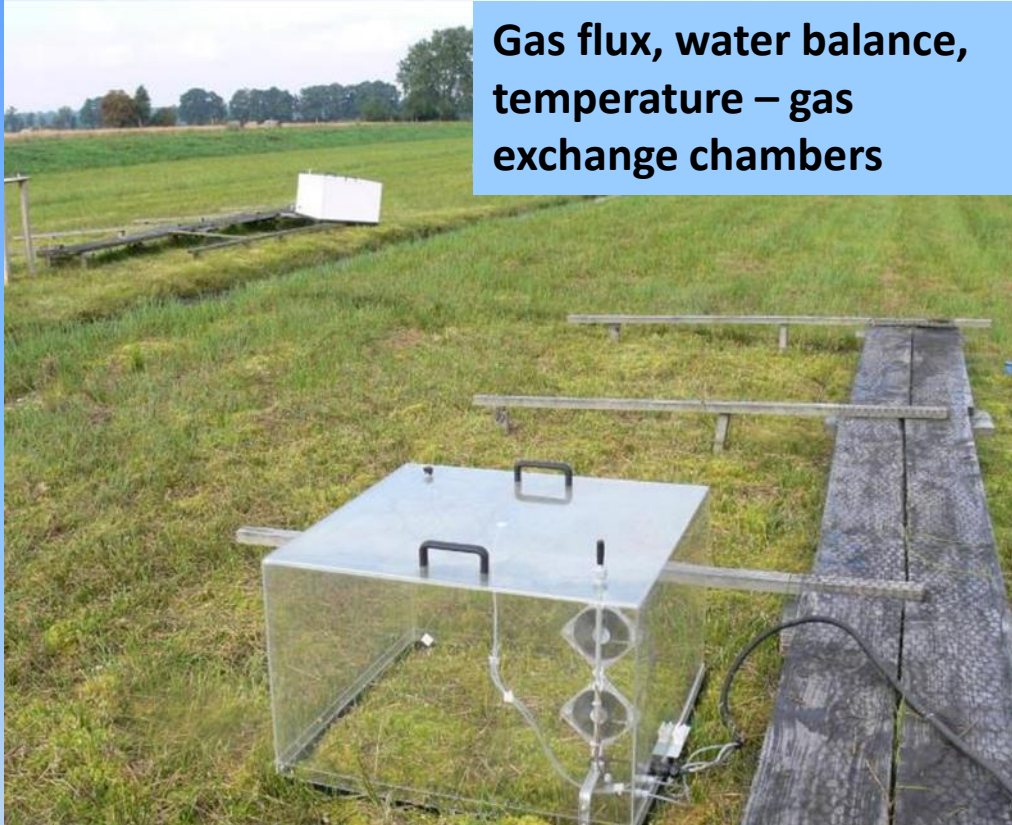








# Monitoring



Gas flux, water balance,  
temperature – gas  
exchange chambers



Wildlife usage – bird, insects , mammals

Water quality into and  
through trials site – data  
loggers and YSI meter  
(dissolved oxygen and  
chemical analysis)

Crop growth and  
potential yield



Weed burdens  
and other  
issues





**Connecting with farmers and growers...**



**... reaching out to the future**



***Global Accolade:***  
701 biospheres in  
124 countries



*Special Places*, delivering:

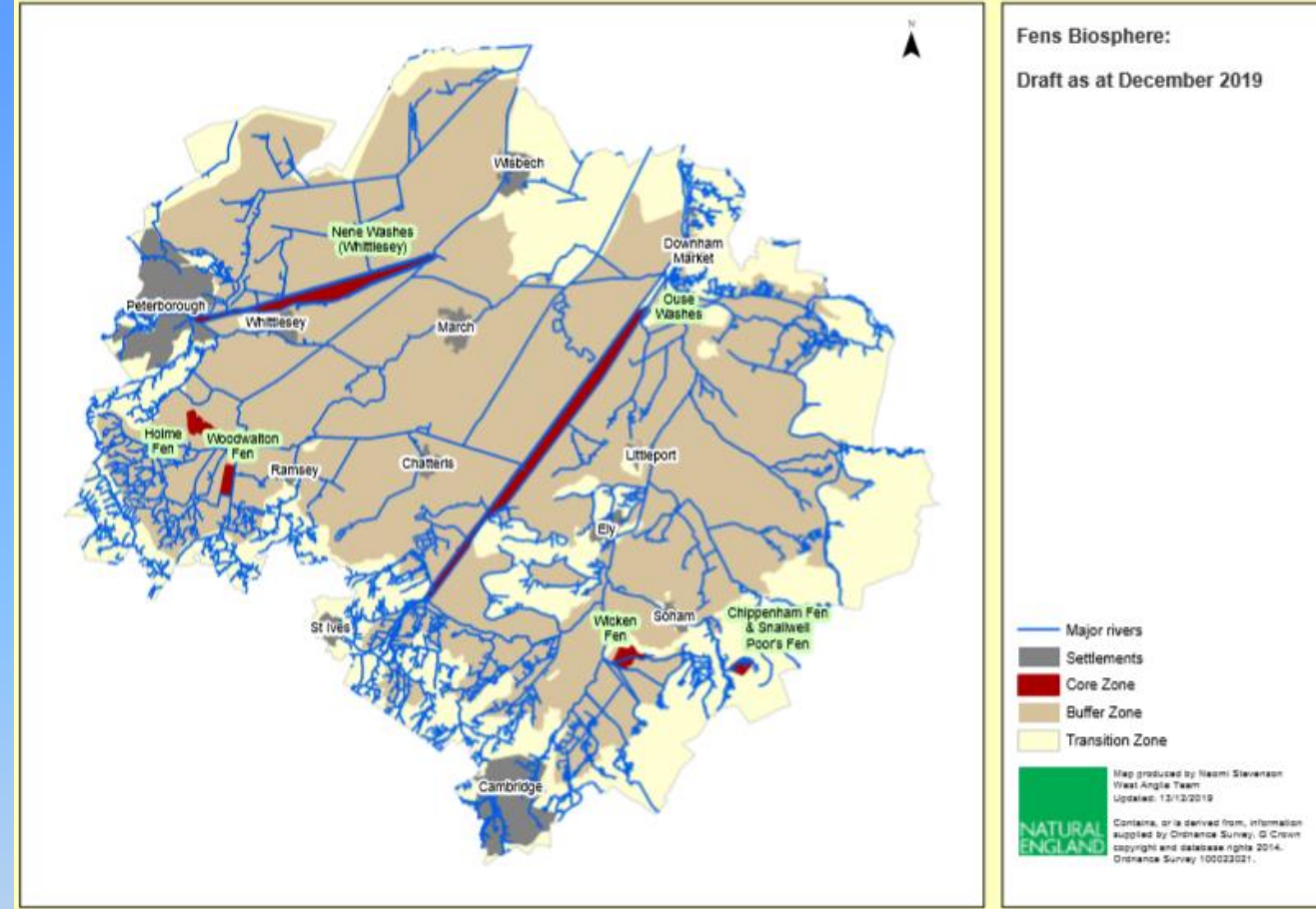
- ✓ **Sustainable Economic Development**
- ✓ **Environmental improvements**
- ✓ **Knowledge exchange**

7 Biospheres in the UK





# ***FUTURE-PROOFING The Fens' Key Assets***



***Fens Biosphere: Bringing together the area's exceptional natural, cultural and economic assets, expertise & cutting-edge research***



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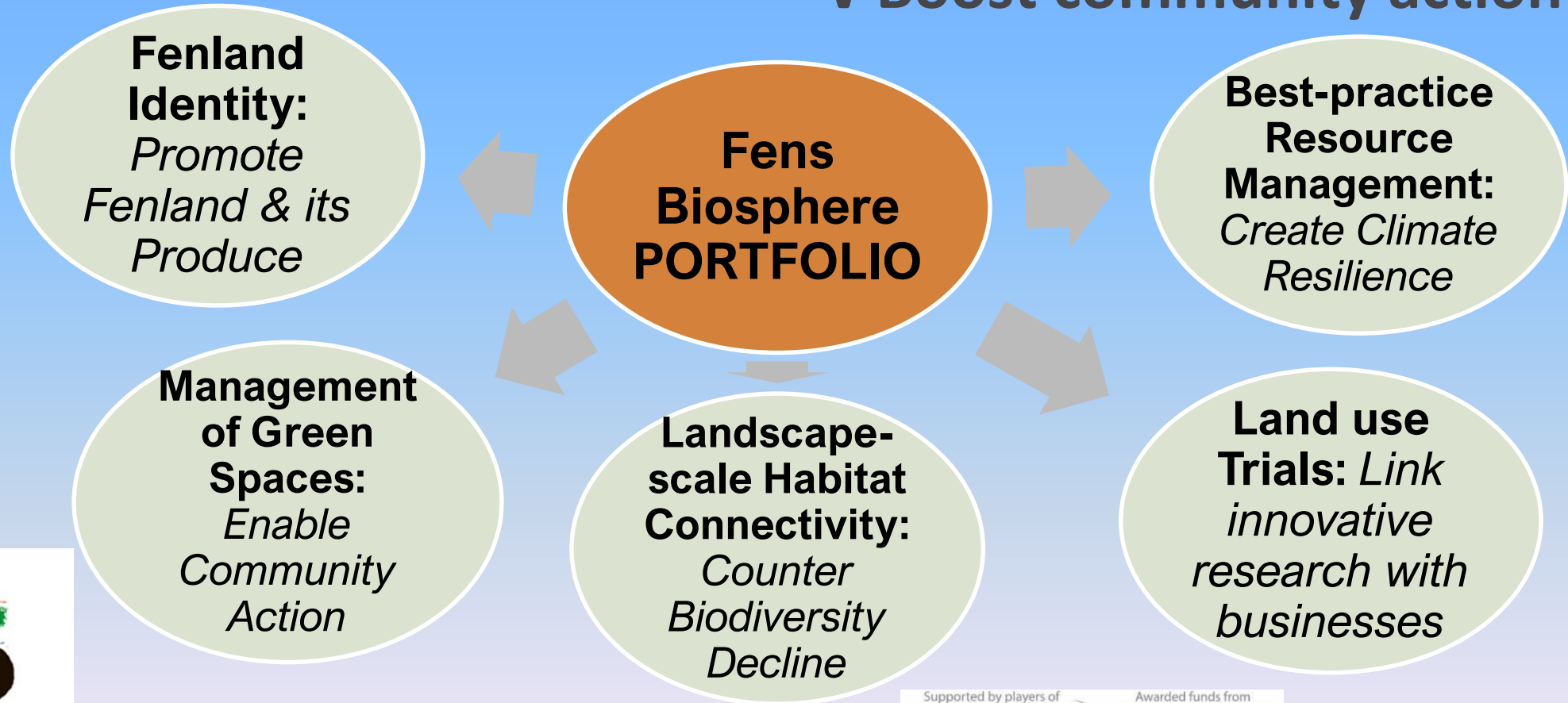


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- > Sharing Best Practice
- > Creating opportunities

- In order to:
- ✓ Boost the economy
  - ✓ Boost the environment
  - ✓ Boost community action



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“The Cambridgeshire fens are one of our most significant landscapes, full of history and meaning yet sadly diminished in their value for nature. We need to put that right, by pursuing a vision for sustainable land use that works for people, nature and the economy in the long term. The Fens Biosphere project provides an exciting opportunity to find solutions for this incredible landscape that respect the past and honour the future. I’m delighted to be involved.”

Dame Fiona Reynolds,  
Master of Emmanuel College Cambridge



Photo credit: David Levinson





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*Thanks for listening*