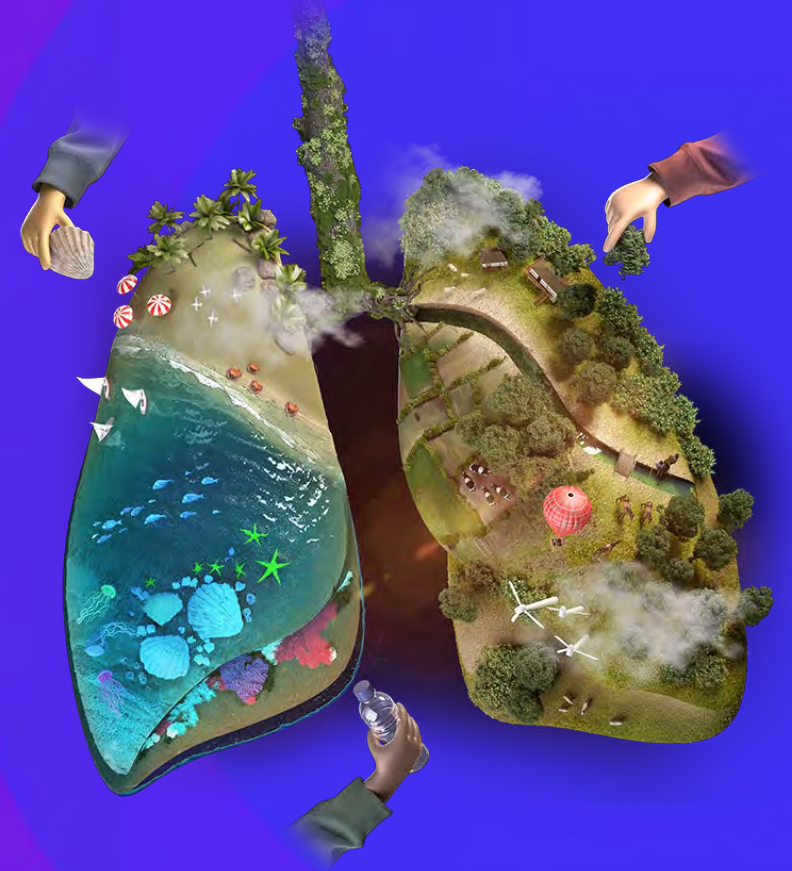


CONNECTED THRIVING PLACES



ZOË METCALFE
Client Director,
Local and Central Government

November 2023



Nature is the World's best multi-tasker

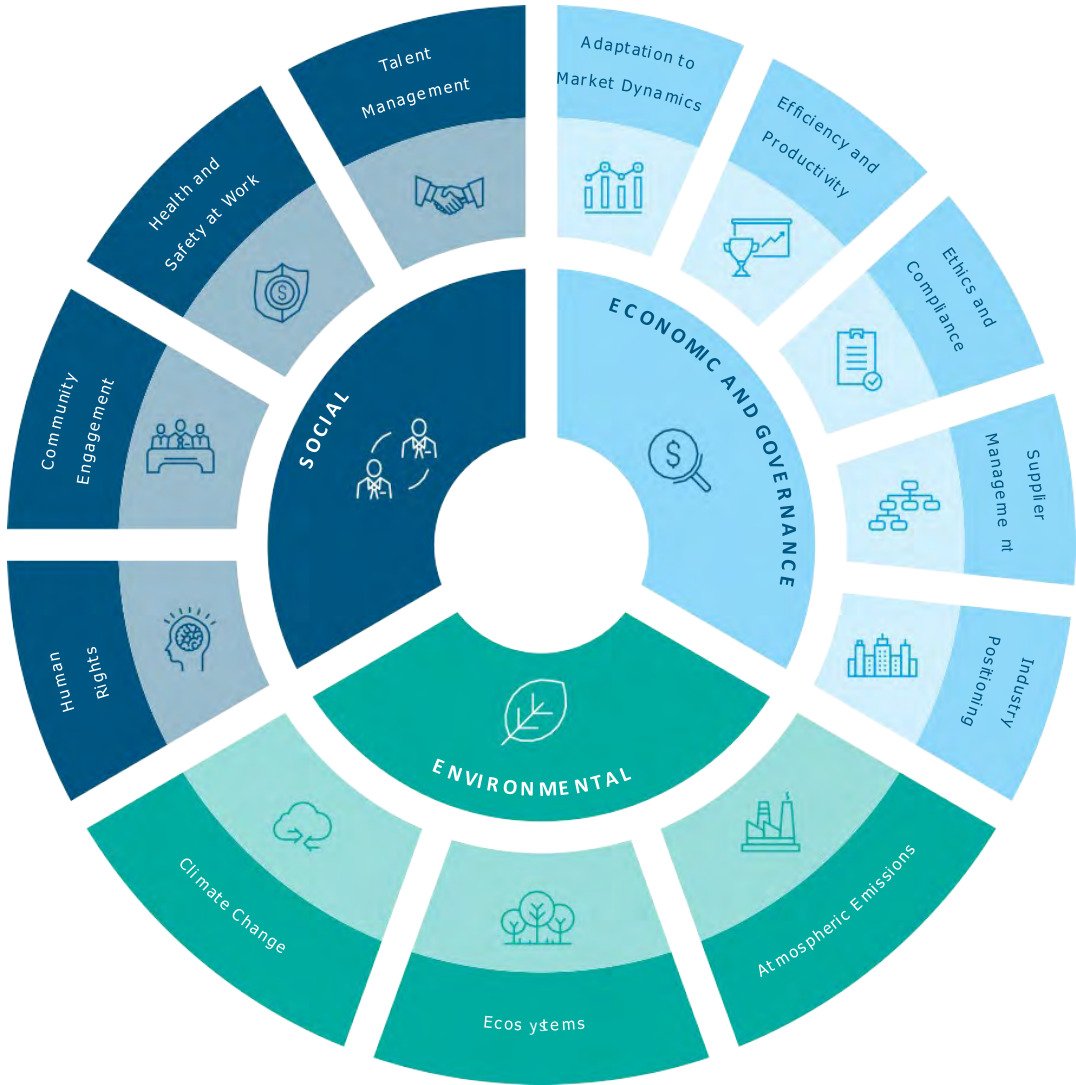
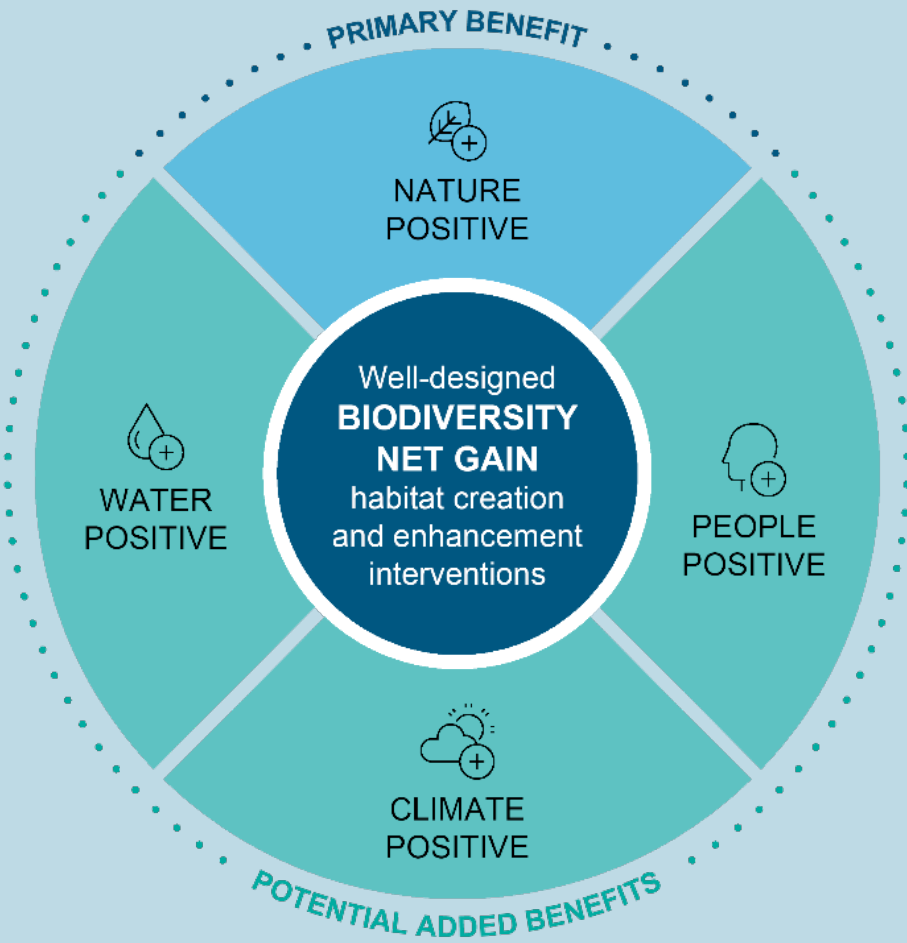


Habitat Nexus for human and nature positive futures

Connected Nature positive Place-making



The World Bank and the International Monetary Fund (IMF), traditionally strong advocates of GDP thinking, are now also paying attention to environment, inequality and sustainability of the economy.



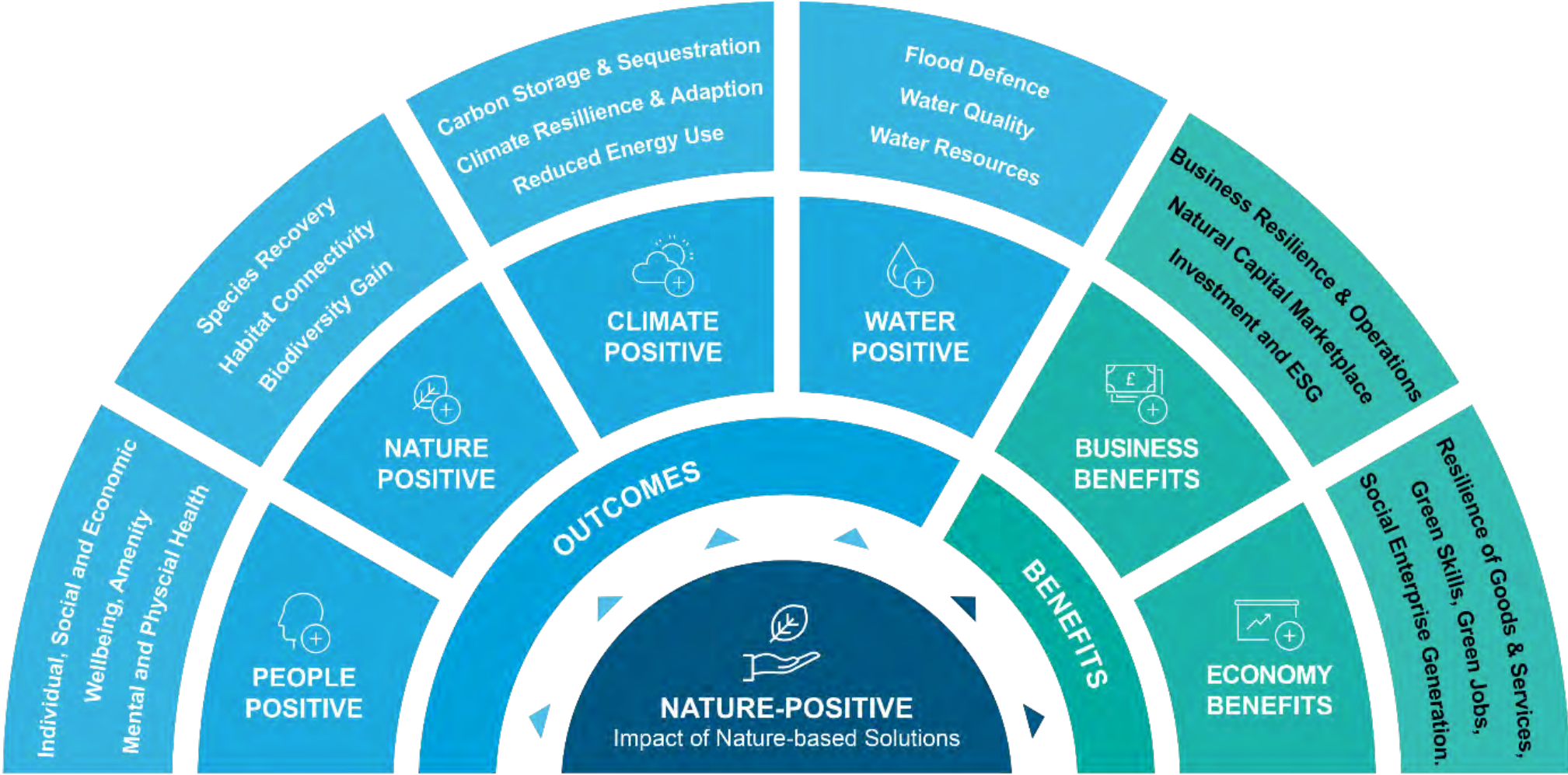
Working with Nature for health and safety outcomes



Climate risk through Nature based solutions

Ecosystem services

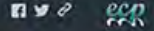
Policy ESG CSR



Our digital story map

Empowering asset owners, communities and land owners to unlock value by working with nature

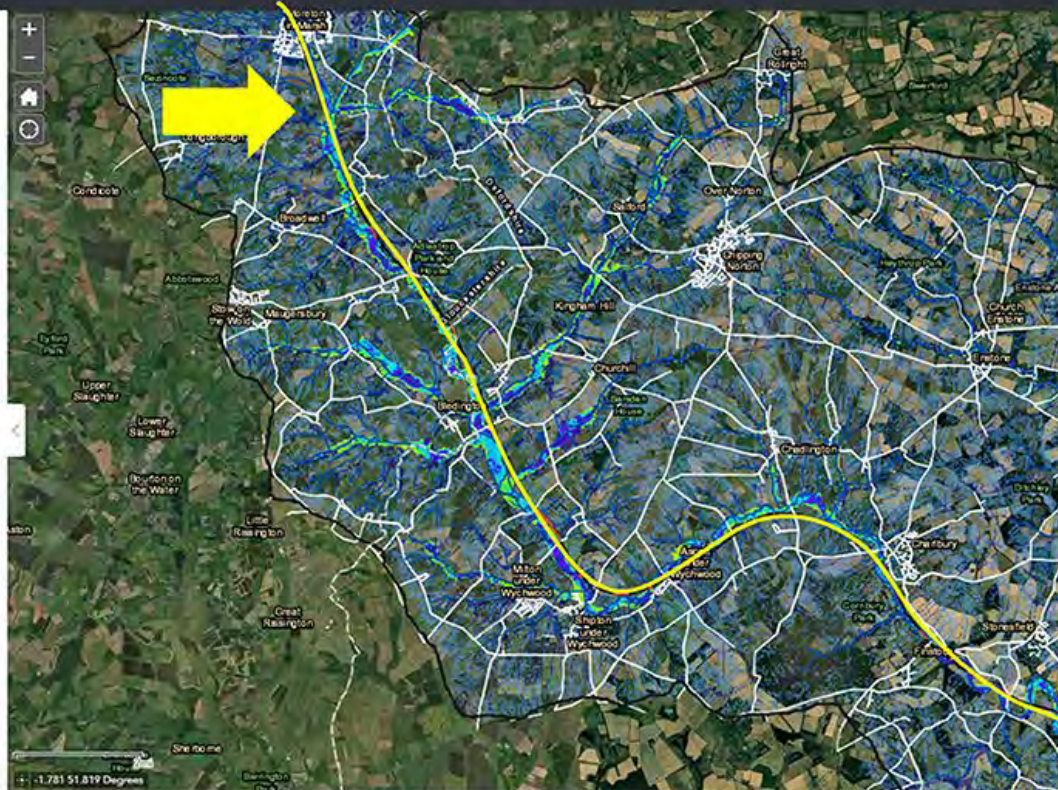
Nature Based Solutions in the Evenlode



- Nature Based Solutions in the Evenlode
- Stage zero ecosystem services
- How can we create stage zero?
- What might stage zero look like?
- Floodplain reconnection map**
- Natural Flood Management map
- Soil management map

ATKINS

- River near railway
- Evenlode catchment boundary
- Landscape features
 - Watercourses
 - Rail
 - Road Or Track
- Stage 0/wetland potential topographic model
 - Stage Zero Potential (m)
 - < -1.0
 - 1.0 - -0.5
 - 0.5 - -0.2
 - 0.2 - 0.0
 - 0.0 - 0.2
 - 0.2 - 0.5
 - 0.5 - 1.0
- Flow path connectivity
 - Evenlode_sim1_connectivity_project.tif
 - Least connected
 - Less connected
 - More connected
 - Most connected



The map identifies areas for floodplain reconnection potential and wetland creation potential in the Evenlode catchment:

< -1.0 m	Wetland potential (areas to fill for stage zero)
-1.0 to -0.5 m	
-0.5 to -0.2 m	
-0.2 to 0.0 m	Stage zero potential
0.0 to +0.2 m	
+0.2 to +0.5 m	Riparian planting potential (areas to cut for stage zero)
+0.5 to 1.0 m	
+1.0 m	Outside of floodplain

Click the buttons on the left hand side of the screen to turn maps on and off.

Floodplain reconnection potential
Reconnecting a river to its floodplain requires the natural valley gradient, or Geomorphic Grade Line, to be identified. *High potential opportunities for stage zero restoration occur where the valley floor is near to the natural valley gradient (+/- 0.2 m above or below).* These are areas where base-flow would be expected to accumulate and flow across the floodplain if stage zero restoration was implemented under current conditions. Areas lower than -0.2 m may have to be filled to create a multi-thread system to prevent ponding whereas areas over 0.2 m may have to be cut to increase floodplain connectivity. Areas 1 m or more above the natural valley gradient have a low potential for stage zero restoration.

Wetland potential
Areas -0.2 m below natural valley gradient also have the potential for wetland creation as they are areas of the floodplain where water would naturally collect if the floodplain were reconnected.

Earthstar Geographics | OS, Esri, HERE, Garmin



Nature Based Solutions in the Evenlode



- Nature Based Solutions in the Evenlode
- Stage zero ecosystem services
- How can we create stage zero?
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Landscape features

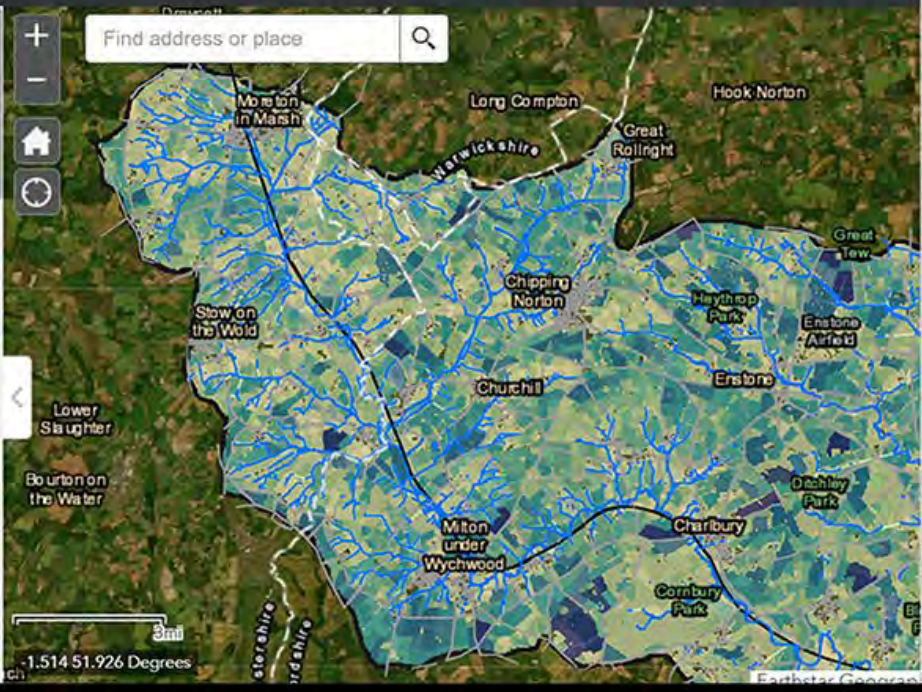
- Watercourses
- Rail
- Road Or Track

Evenlode catchment boundary

In Channel Attenuation

In channel Attenuation (m3)

- 1000 - 2000
- 500 - 1000
- 300- 500
- 150- 300
- 50 - 150
- 0 - 50



segment from implementing NFM features in the channel e.g. woody barriers.

2. Flow Pathway Storage map shows the modelled storage that could be provided to each field based on implementing flow pathway storage bunds across flow pathways. Two scenarios have been modelled: 1 bund per field and the maximum bunds per field.

3. Land use Change Volumetrics map shows the modelled reduction in runoff that could be achieved per field for three land use change scenarios: Successional land use change, Woodland creation and Soil recovery.

Click the buttons on the left hand side of the screen to turn these maps on and off.





Vital Connections

Chimney Meadows, Oxfordshire

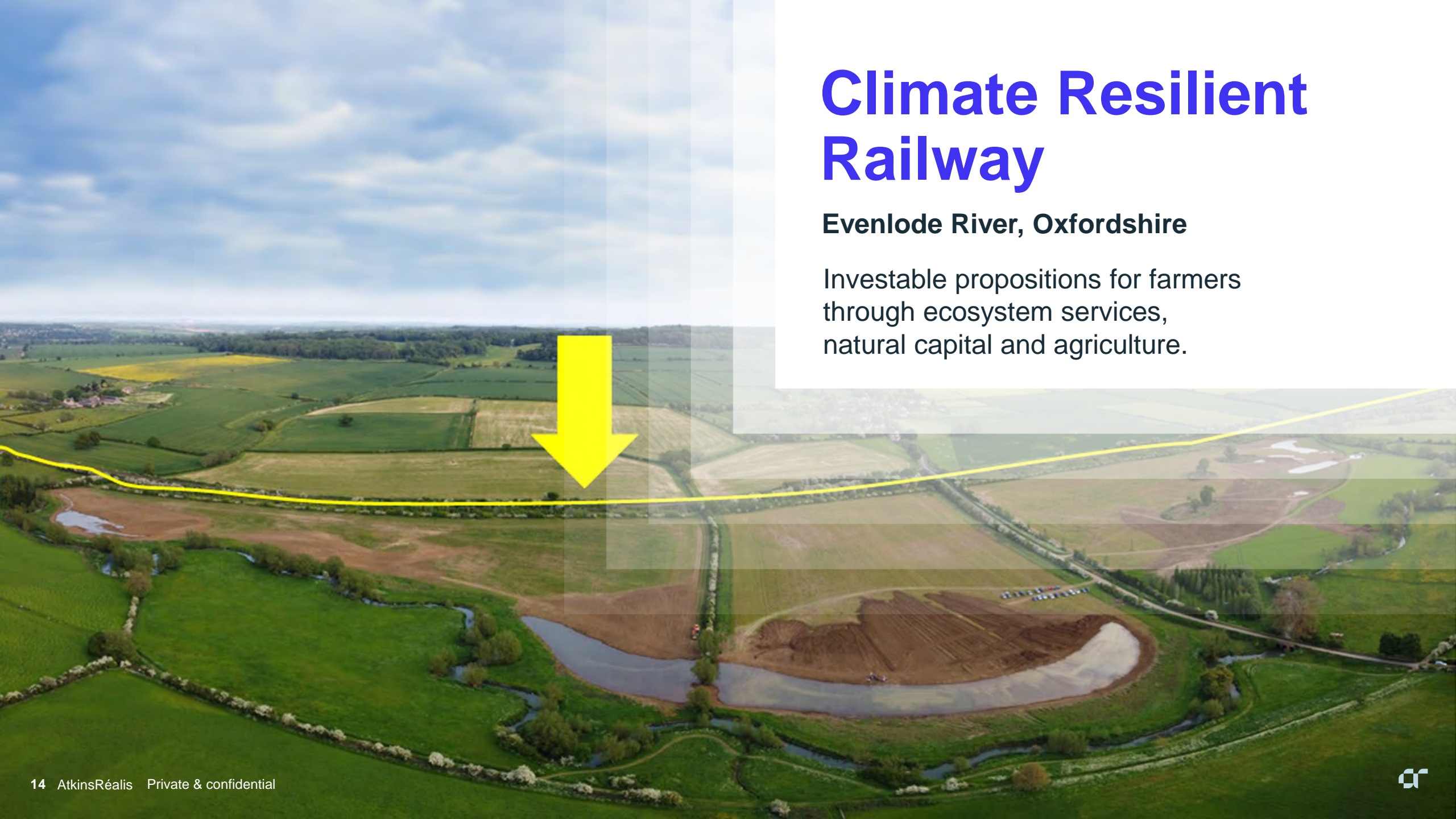
A wetland restoration project to reconnect the River Thames to its floodplain, creating multiple benefits for nature and people.

A new 30km route for fish enabling fish to spawn upstream.

Climate Resilient Railway

Evenlode River, Oxfordshire

Investable propositions for farmers through ecosystem services, natural capital and agriculture.

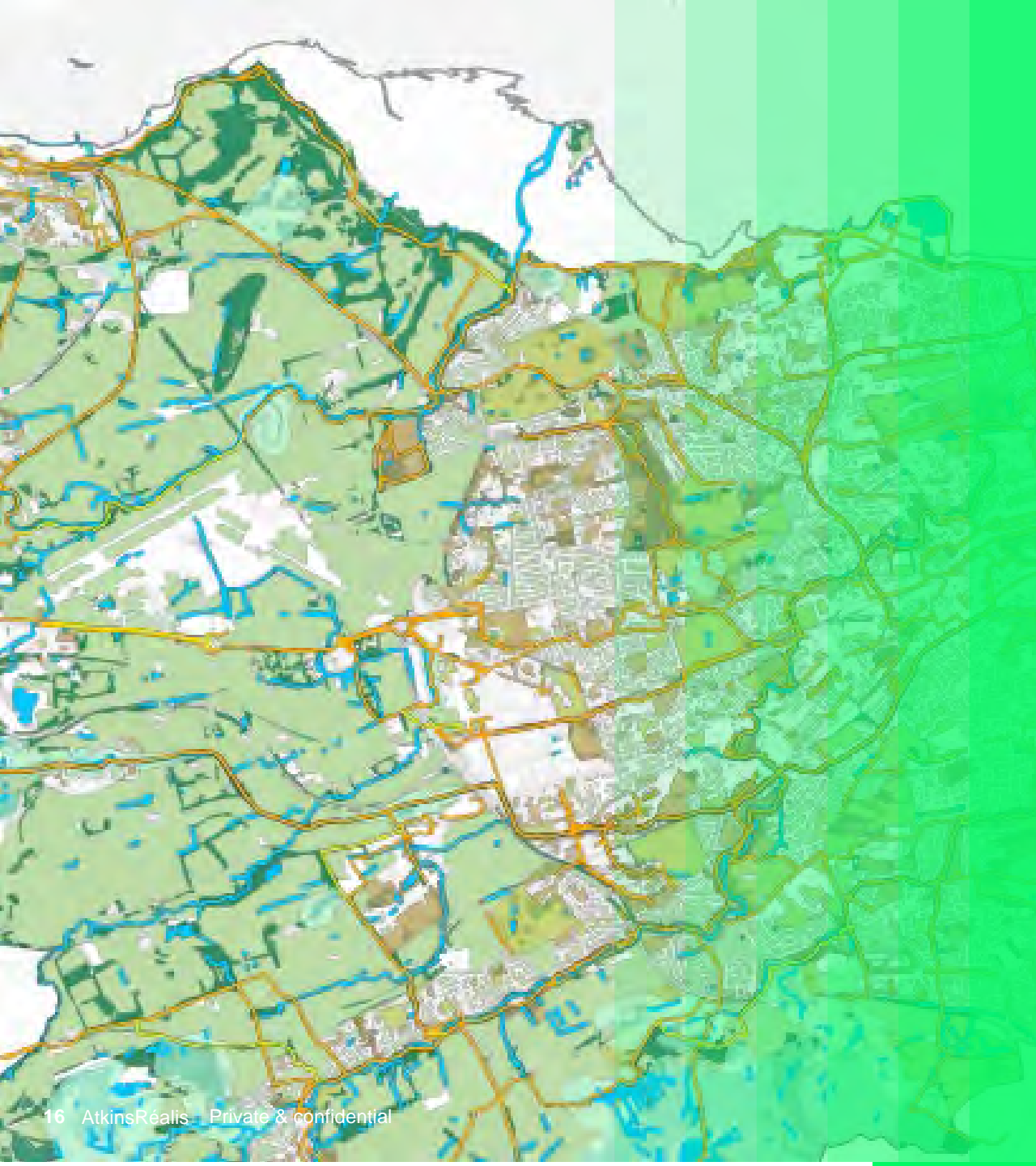


Biodiversity Conservation

Camley Street Nature Park, Kings Cross

- Recreation
- Health & well-being
- Education
- Volunteering & employment
- Biodiversity





Connected Thriving Places

Partnerships

Nature is the World's
best multi-tasker

The opportunity for
Space-enabled
connected thriving
places is significant.



thank you