



**JBA**  
consulting

## **NATURALISATION vs LAND USE – THE NEW FOREST SAC, SPA, RAMSAR AND SSSI.**

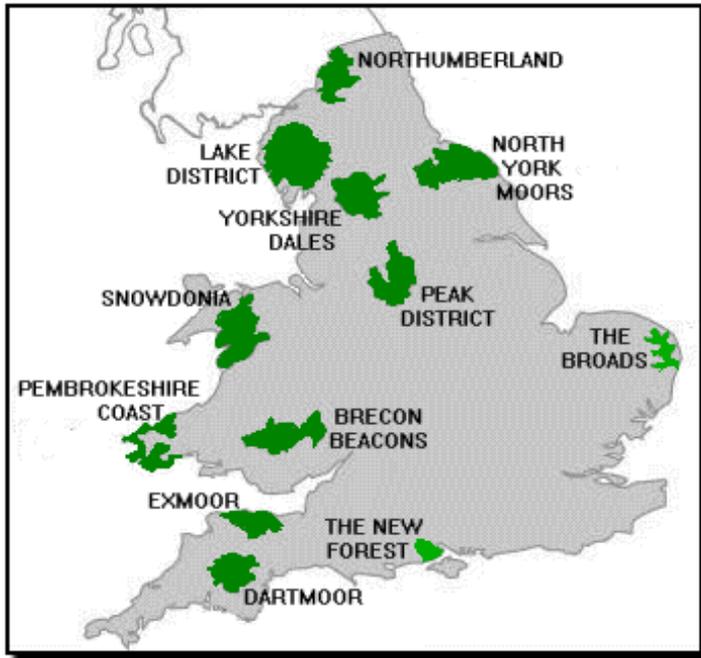
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Speaker:

S. Bentley (JBA Consulting)

# Background



The 570km<sup>2</sup> New Forest is one of 12 National Parks in England. It is the most intact surviving example of a medieval hunting forest and pastoral system in England owing its origin to William the Conqueror who, in 1079, decreed that the area should be set aside as a royal hunting ground.



# Competing interests

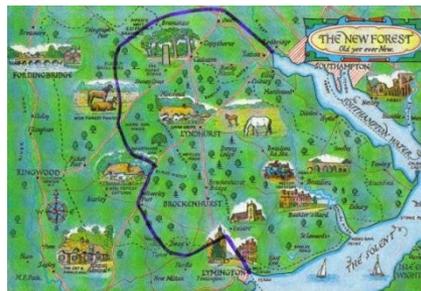
## Landscape Diversity

The diversity of its landscape is unique, and includes woodland, open heathland, river and coastal habitats. Around a half has nationally or internationally valuable (SSSI, SAC, SPA or Ramsar).



## Culture & History

The New Forest landscape is shaped by history and culture. Oversight of livestock management on the commons remains the responsibility of the New Forest Verderers and Agisters



# Landscape diversity



## Forest Rights

Commoners of the New Forest are those who occupy land or property to which attaches one or more rights over the Forest. These rights are:

- **Common of pasture:** commonable animals - ponies, cattle, donkeys and mules - are turned out into the Open Forest;
- **Common of pasture for sheep:** although some of the large estates have this right, it is infrequently exercised;
- **Common of mast:** the right to turn out pigs in the autumn to devour the acorns - this provides food for the pigs and reduces the threat to ponies and cattle from the poisonous acorns;
- **Estovers (Fuelwood):** the free supply of a stipulated amount of firewood to certain properties;
- **Common of marl:** the right to dig clay to improve agricultural land - this right is no longer exercised;
- **Common of turbary:** the right to cut peat turves for the Commoner's personal use.

# Landscape diversity



## Protected Habitats

extensive tracts of semi-natural vegetation including lowland heath (13,633 ha); valley mire (1,450 ha); and ancient woodland pasture (3,692 ha).

## Protected Species

honey buzzard, Montagu's harrier, kingfisher, woodlark, nightjar, Dartford warbler, Stag beetle, Southern damselfly, Great crested newt



# Culture & History

There are around 500 to 600 active commoners grazing 6,500-7,000 animals on the Open Forest.

These practices have helped shape and maintain the existing pattern of woods, heaths and open, grassy “lawns”.



# Culture & History

There are around 500 to 600 active commoners grazing 6,500-7,000 animals on the Open Forest.

These practices have controlled riparian development



# Culture & History

Historic and current clearance and drainage activities influence riparian zones



These practices have helped led to the loss of anastomosing channel systems

# Culture & History

Historic and current clearance and drainage activities influence riparian zones

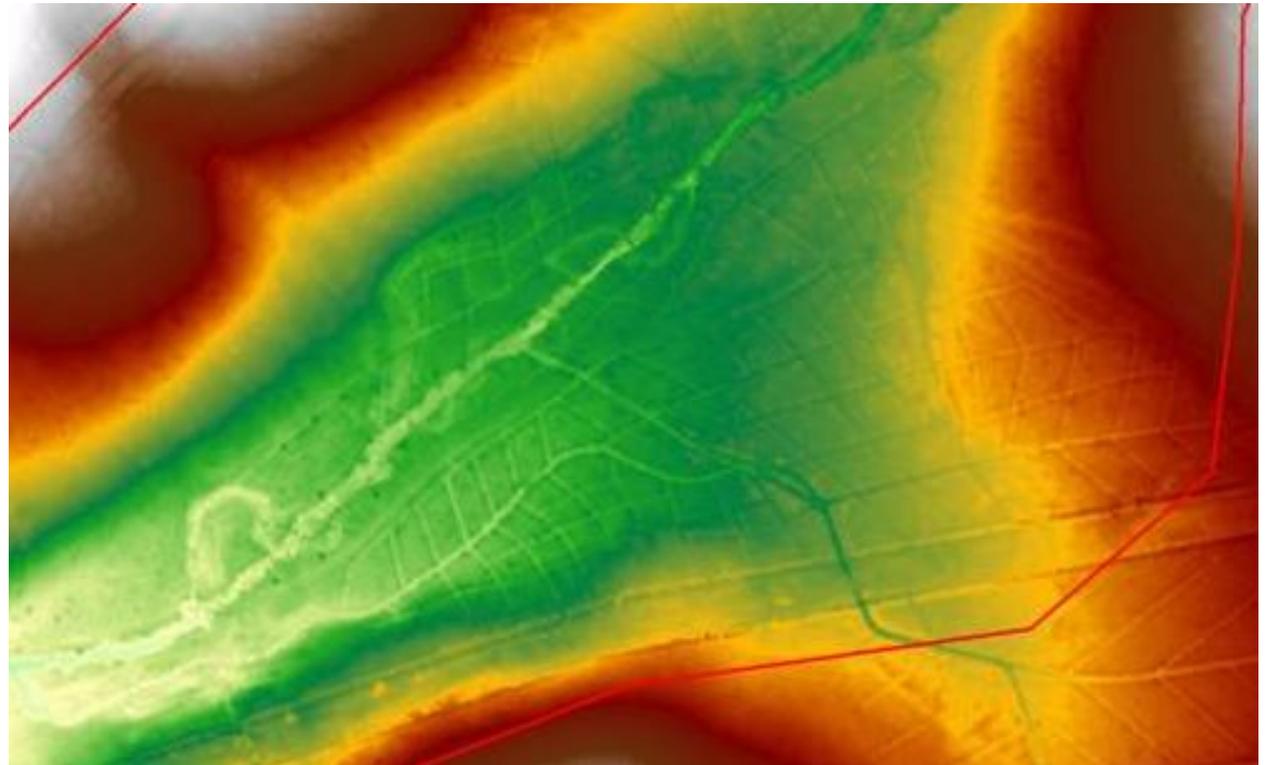


These practices have helped led to disrupted flow regimes

# Culture & History

Historic and current clearance and drainage activities influence riparian zones

These practices have helped led to disrupted floodplain water tables



# Naturalisation



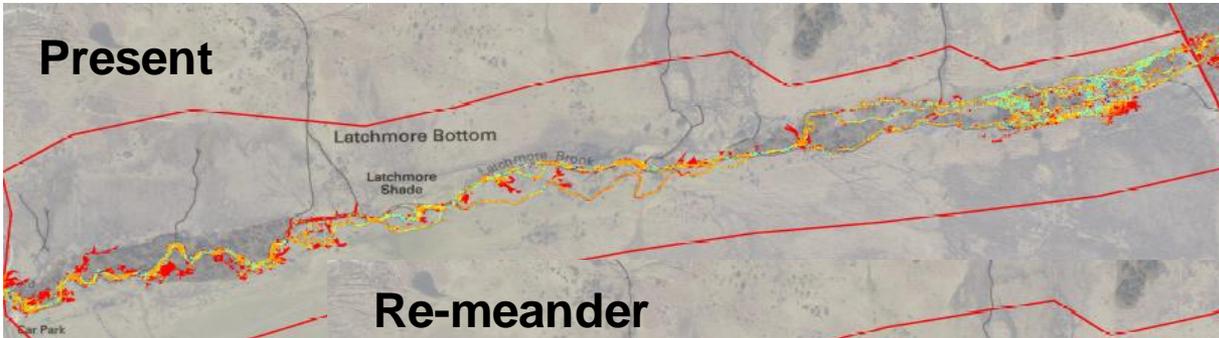
One of the key factors causing concern in the New Forest is the damage caused by historical drainage activities and contemporary engineering/management of the mire systems and modification of rivers and streams which impacts on the eco-hydrological functioning of these interlinked systems.

# Naturalisation

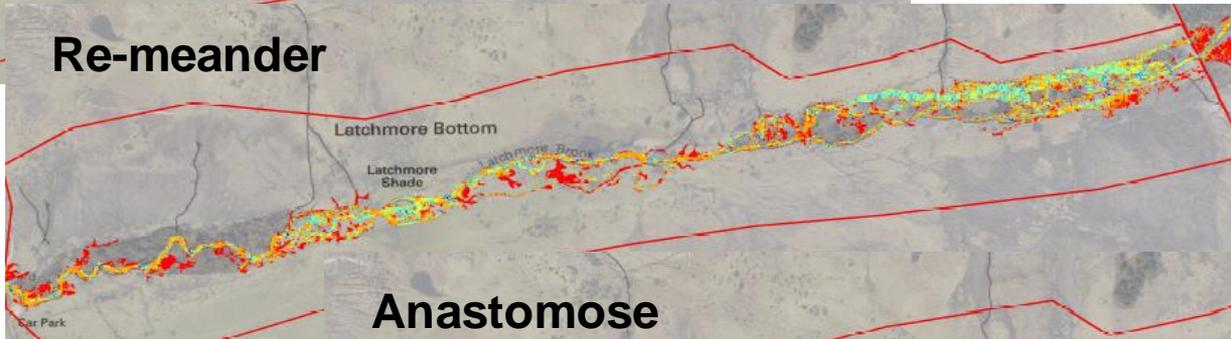
Unconstrained plans involve artificial drain infilling of mire and forested areas, reducing stream flashiness and helping to restore the natural flow regime. Other plans aim to encourage improved floodplain reconnection through assisted natural channel blocking, wetting the riparian zone and rejuvenating disconnected secondary channel networks. Natural conditions would see these units recover to riverine woodland with an anastomosed channel type.

# Modelling

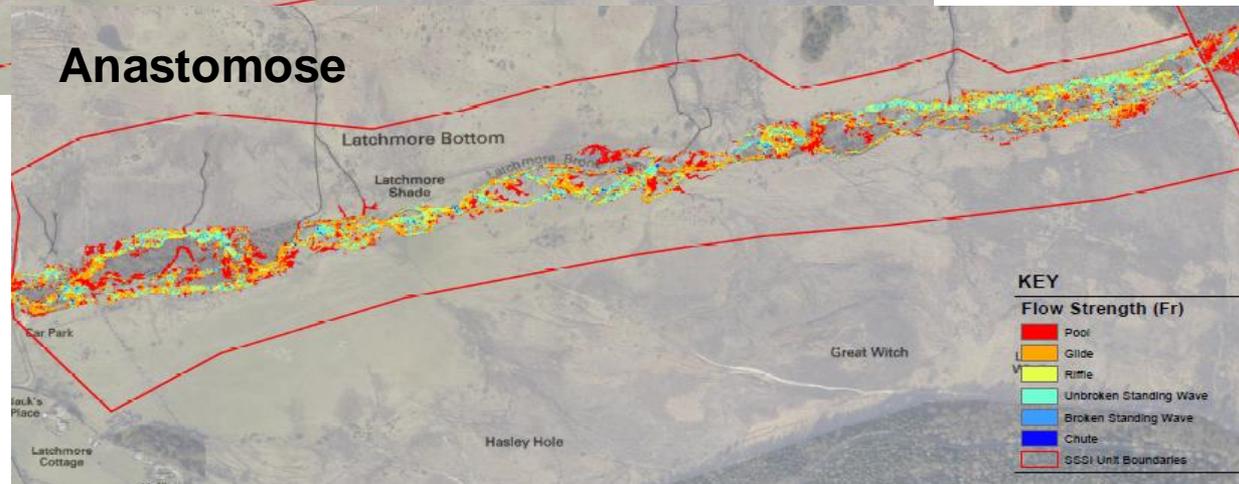
**Present**



**Re-meander**



**Anastomose**

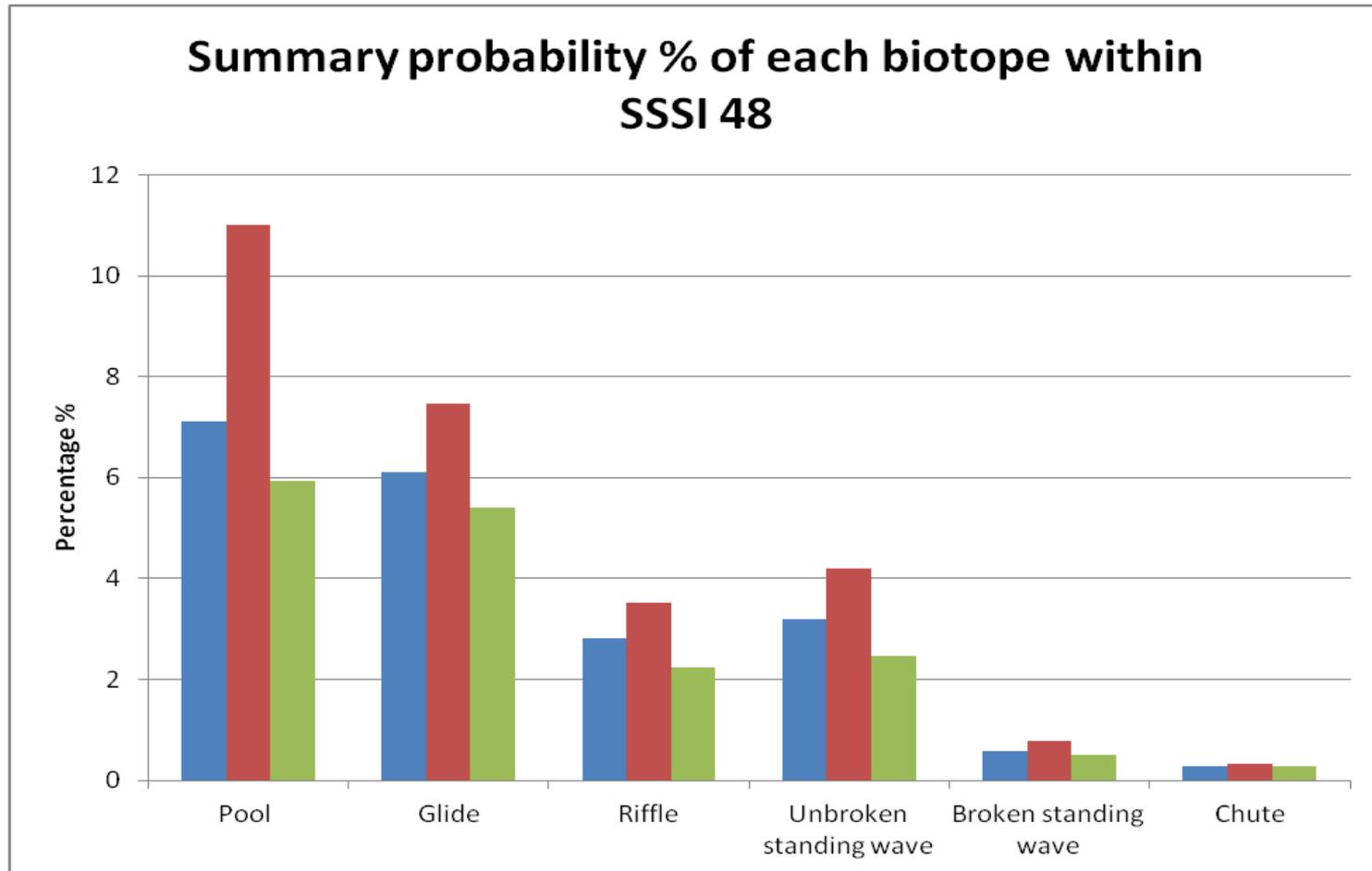
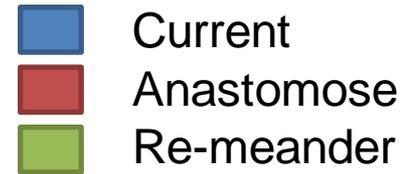


System hydraulic habitat change modelled using JFLOW+ 2d cellular flow model

Flows from q95 to Q25 modelled. q5 (elevated winter flow) illustrated.

# Modelling: Habitat

Integrated results across whole flow regime

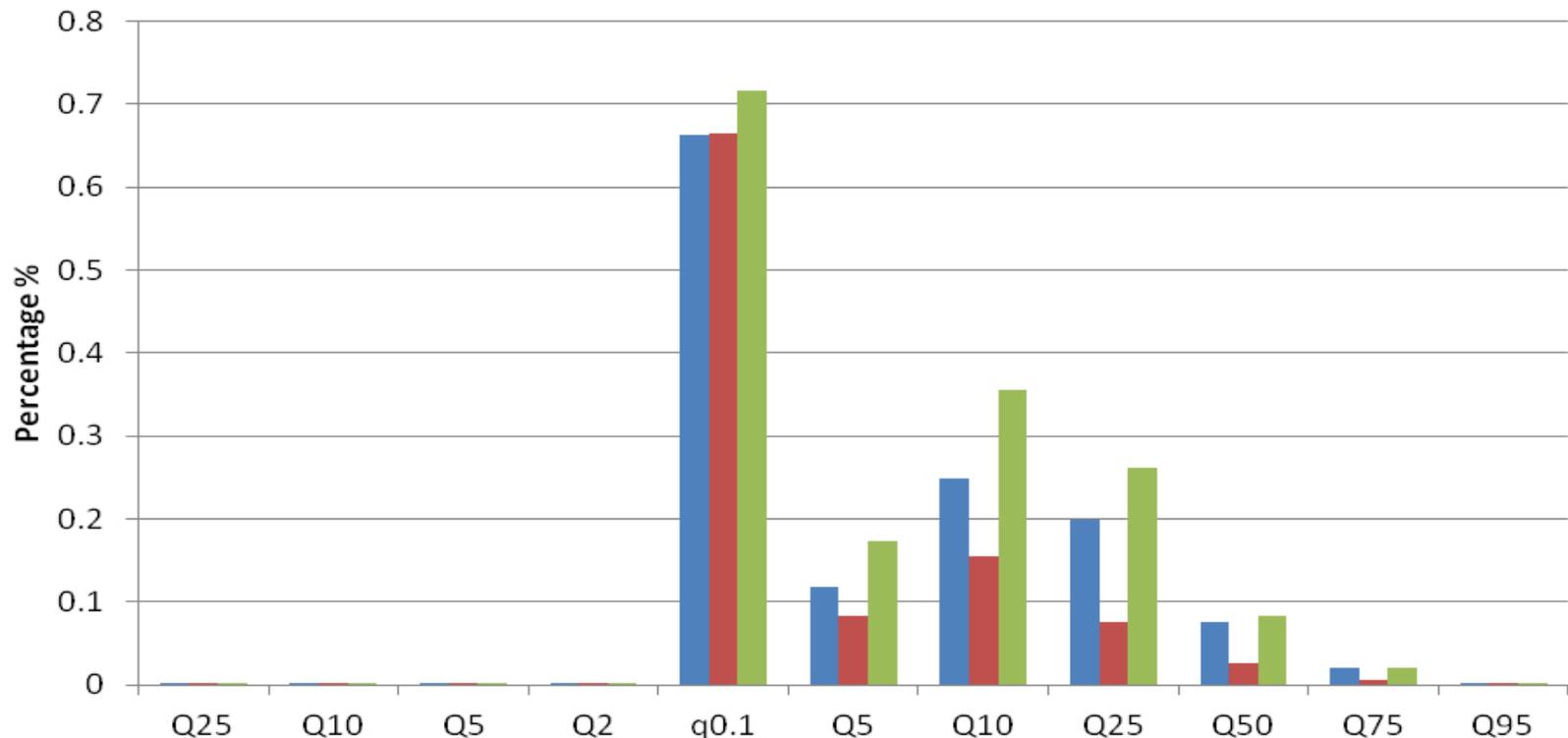


# Modelling: Change

Integrated results across  
whole flow regime

- Current
- Anastomose
- Re-meander

## Probability % of shear exceeding threshold at each flow in SSSI 48



# Opportunities & Constraints

**Studies have identified naturalisation opportunities that will help restore river – floodplain connectivity**

**Utilisation of palaeo-features across floodplain will encourage re-development of functional anastomosing networks**

**Habitat diversity (in-channel and floodplain) will be improved as will wider system dynamics linked to floodplain feature rejuvenation.**

**Wider over-grazing issue yet to be addressed, without this floodplain woodland is unlikely and lateral channel instability will occur.**

**Forestry pressures yet to be adequately addressed although ditch blocking will start to improve things.**

**Consultation is the key and the innovative habitat and channel change modelling used is helping greatly to help demonstrate system gains and illustrate probably system development to interested parties.**