Surrey Nature Partnership

Healthy Environment | Healthy People | Healthy Economy

Biodiversity & Planning Conference

2025

Photo credit: Jon Hawkins, Surrey Hills Photography

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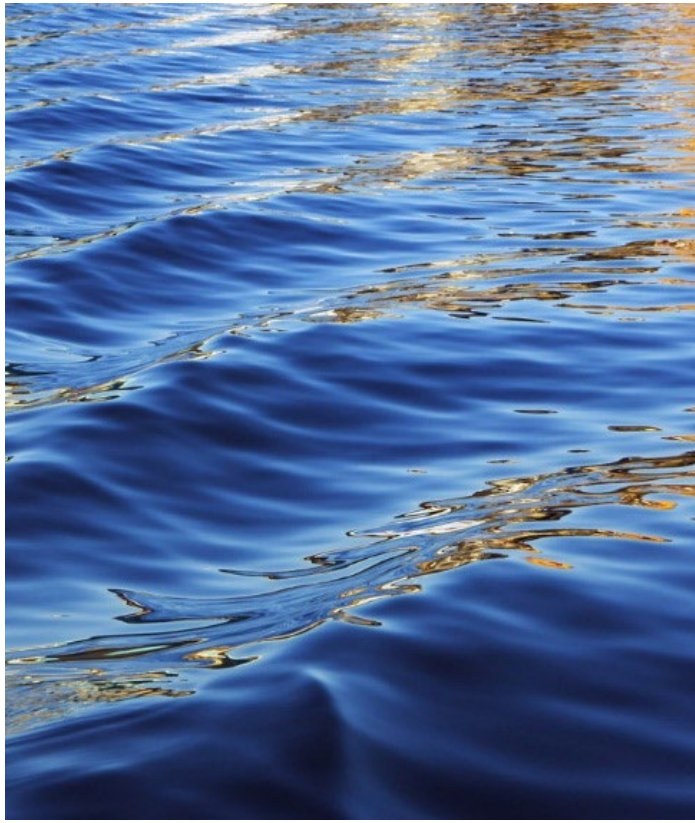
Case Studies



Reflections on the Watercourse Metric

Paul Davy, Biodiversity Officer

Environment Agency

Contents

- What is the watercourse metric and what is the EAs role?
- Why is it needed?
- When is it required and how is the watercourse assessed?
- Hot topics
- What does good river restoration look like?

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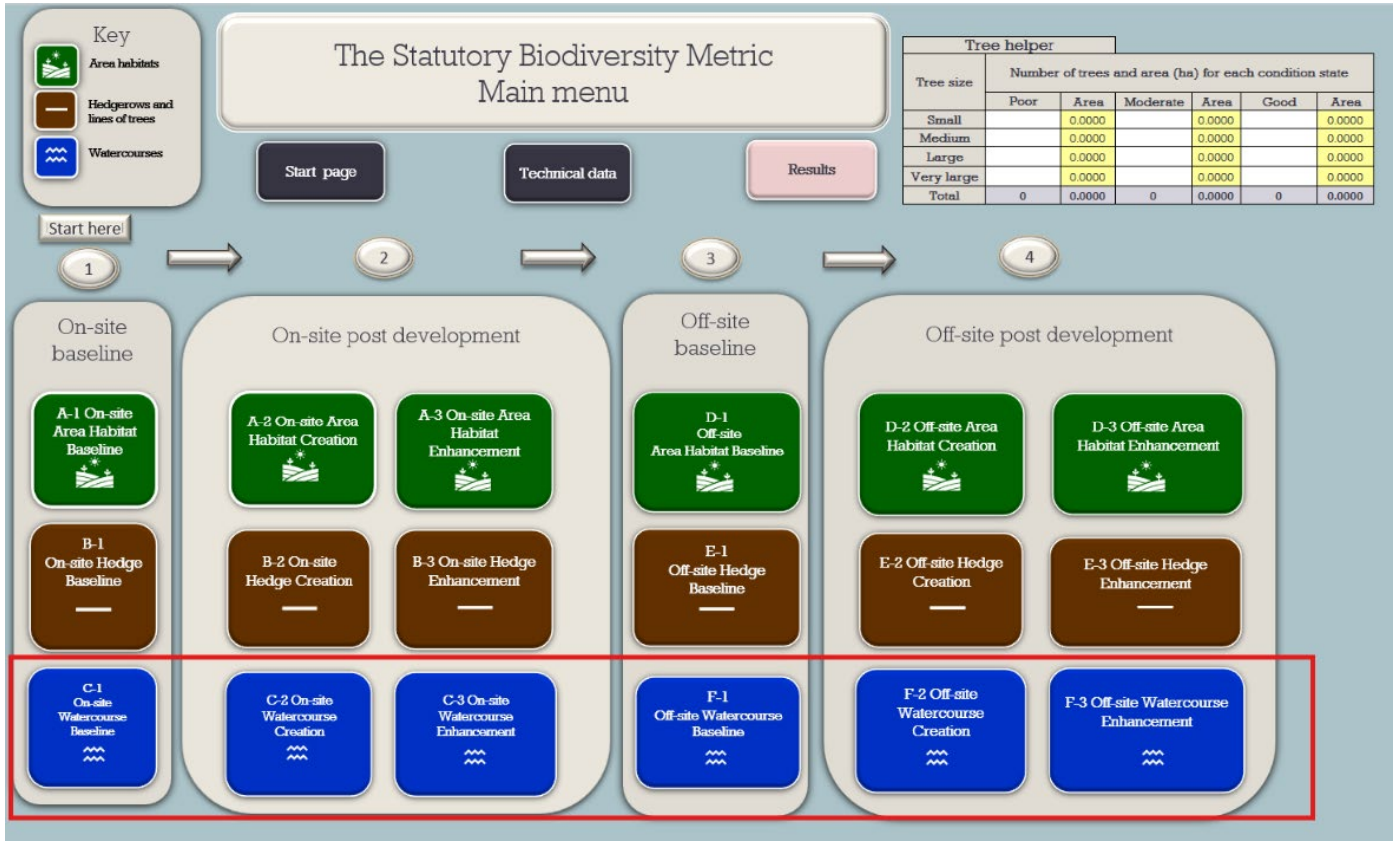
What is the watercourse metric and what is the Environment Agency's role?

- Introduced as part of BNG to provide a measurable biodiversity gain for watercourses
- One of three modules in the BNG metric.
- Watercourse condition assessed with River Condition Assessment
- Environment Agency's role:
  - Watercourse metric developed by the Environment Agency with support from Natural England
  - EA not a statutory consultee
  - Focus on strategic level rather than individual development level
  - However, we do provide informative comments



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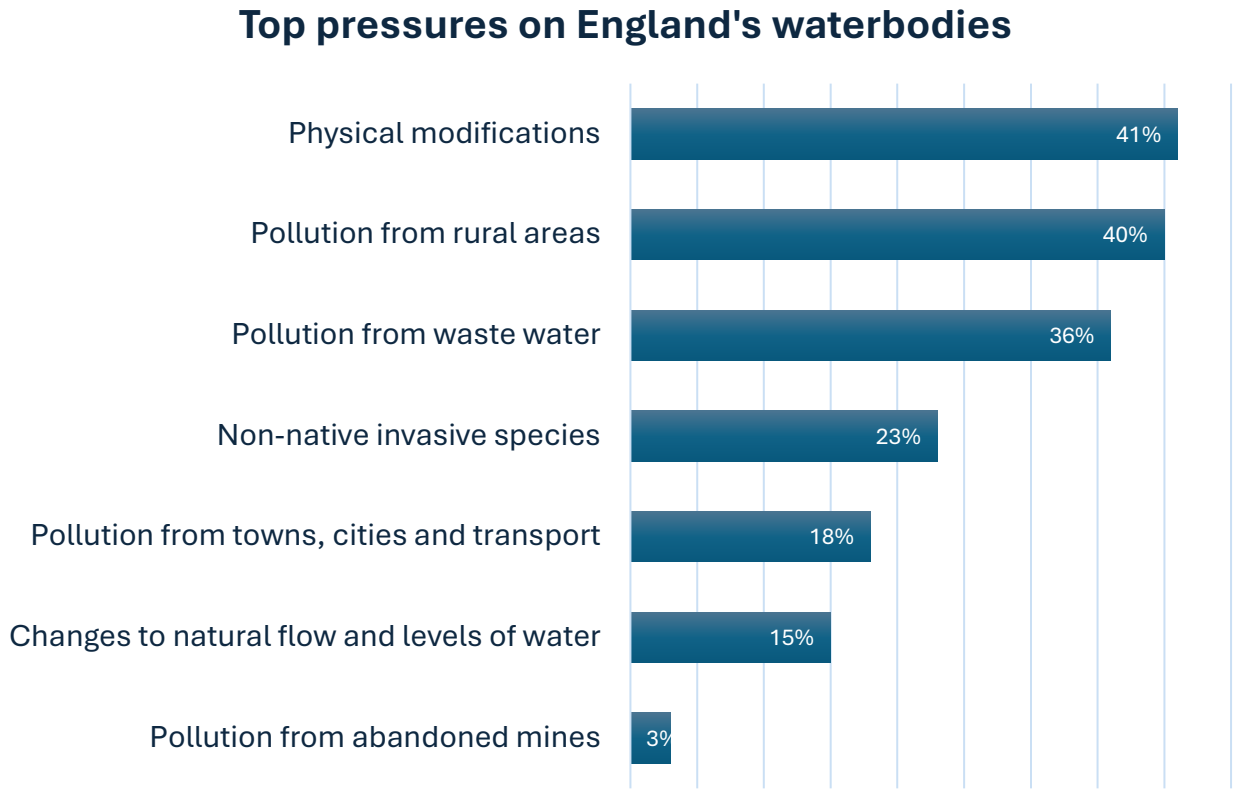
Why is the watercourse metric needed?

- Physical modifications the top pressure on water environment – 41% of waterbodies
- BNG…
  - Reduces existing physical modifications
  - Mitigates new pressures
  - Can help to create healthy, resilient river systems
- Renewed focus on rivers
- Watercourse BNG is not difficult – simple SWYS approach



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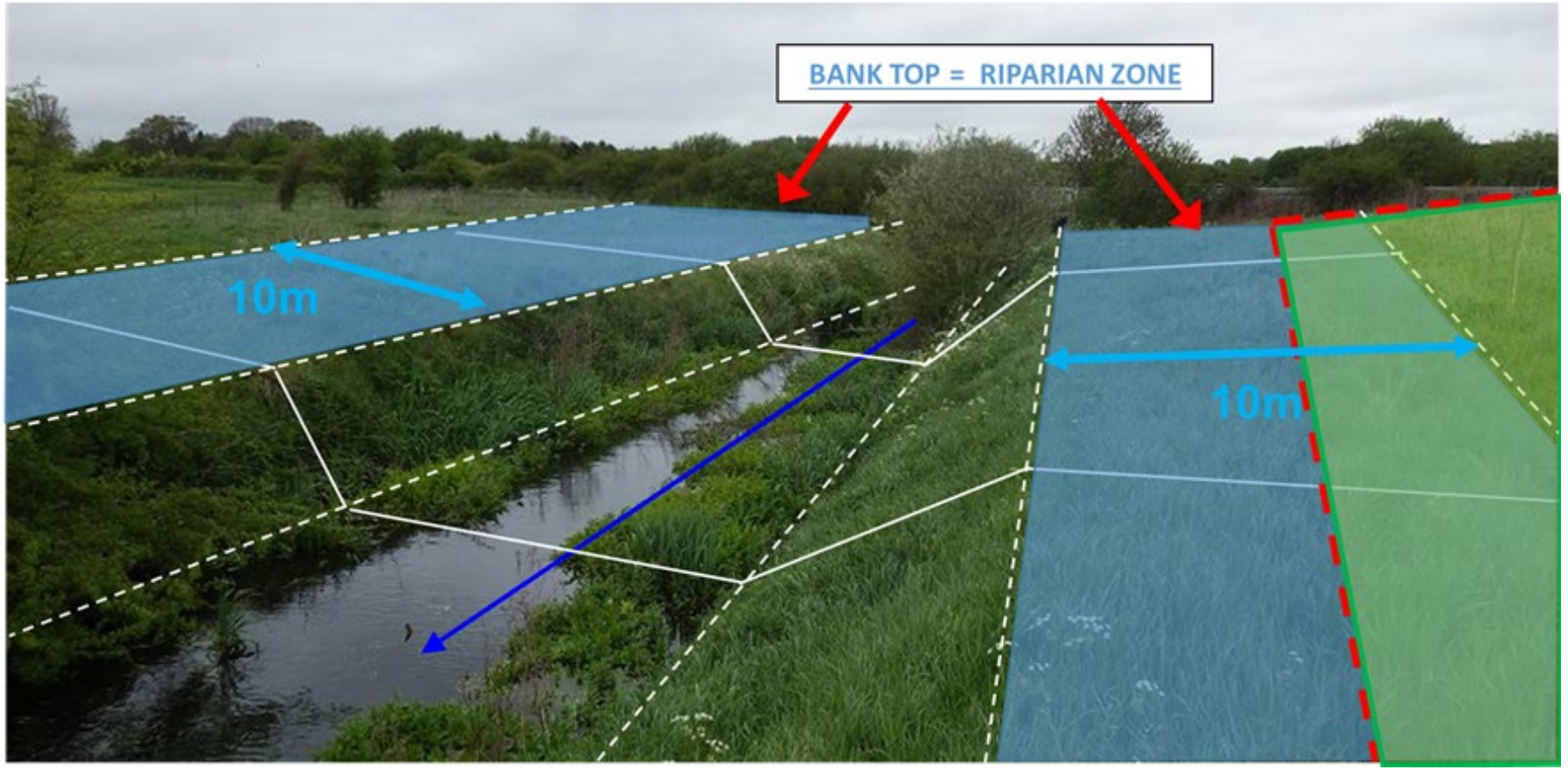
When is a watercourse metric required and how is it assessed?

- Watercourse metric required when a development's Red Line Boundary falls within 10m of a river (or 5m of a ditch)
- Riparian zone critical for healthy river functioning
- River Condition Assessment required
- River and Riparian Encroachment Assessment required



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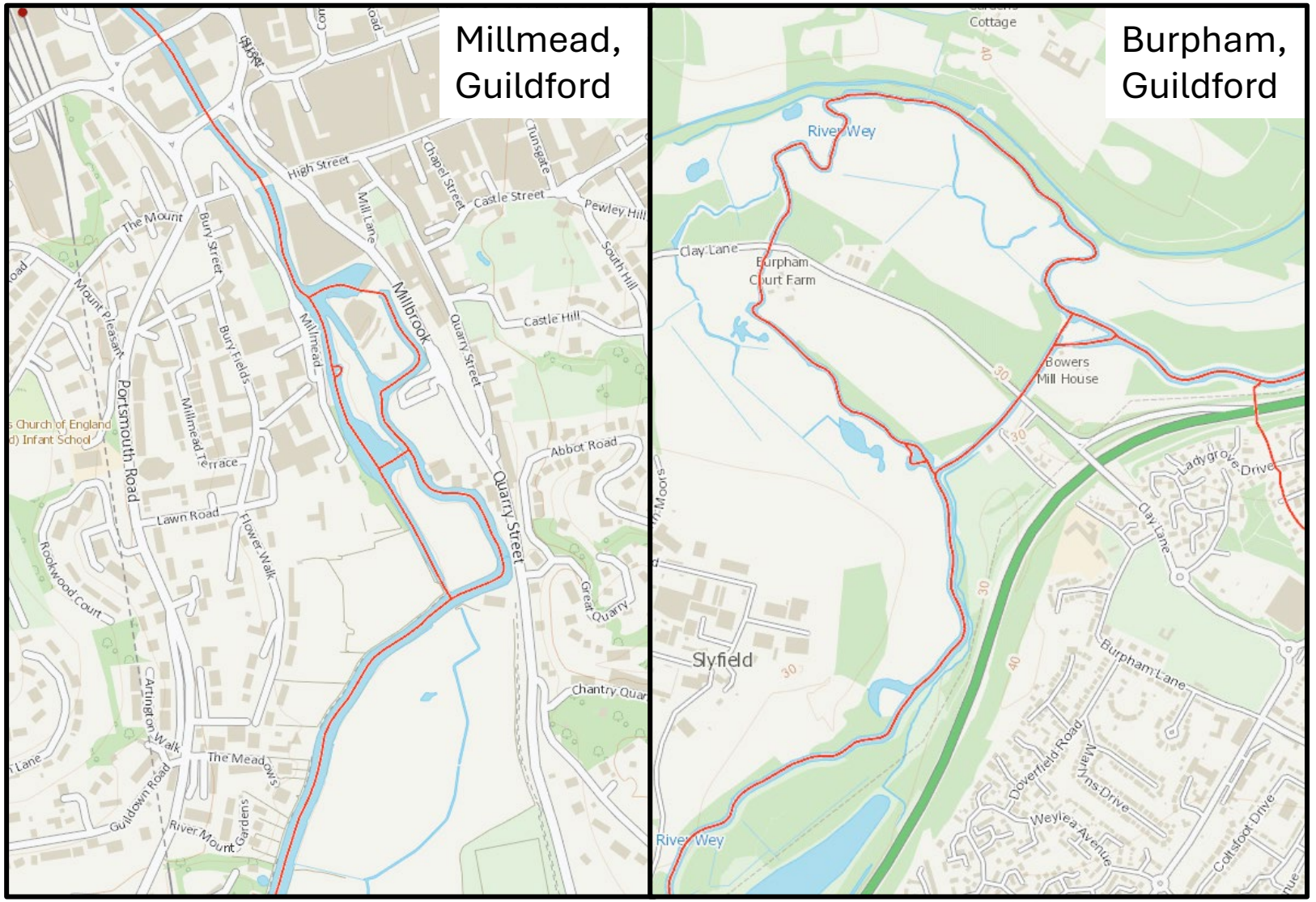
Baseline Watercourse Type

Ref	Watercourse type	Length (km)
1	Other rivers and streams	
2	Priority habitat	
3	Other rivers and streams	
4	Ditches	
5	Canals	
6	Culvert	
7		
8		

- Single criteria can have a big impact
- Definition of a canal in BNG:
  - *"An artificial body of water originally created for the purposes of navigation, whether it is currently navigable or not"*.
- Is the River Wey Navigation a canal?
  - Navigable
  - Tow path
  - Canalised
  - But also a functional river…
- Pushing for guidance update



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Other planning policies for protecting and restoring rivers

- Buffer zone policies in local plans:
  - *“the Council will seek to protect and enhance benefits to the existing river corridor… This will be partially achieved, on development sites, by retaining or creating undeveloped buffer zones to all watercourses of 8 metres for main rivers…”*
- Consulting early in the planning process is critical to achieving the best outcomes for rivers
- Much more difficult after planning submission
- Consider buffer zones, BNG and river restoration in site selections
- How do we get this message into Planning Policy teams?

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Before

After

Securing river enhancements through planning

- River restoration secured through planning
- Removal of concrete wall and hard bank protection
- Early engagement led to good outcome for the river
- Created attractive riverside properties

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Let nature do the work

We should **work with natural processes** and harness the power of nature to drive river and coastal restoration wherever possible. This may simply involve allowing a river or coast to recover without intervention (natural recovery) or through measures designed to facilitate recovery (assisted natural recovery). Interventions that work with the natural energy of rivers and coasts require less intensive interventions.

Natural recovery River Caldew

Assisted natural recovery Swindale Beck

Think bigger

We should undertake restoration actions across whole landscapes. Resilient catchments are made up of numerous interconnected environments. Sediment, vegetation and organic materials are all essential components of our aquatic environments. By taking action at the system-scale across the full range of environments we can deliver multiple benefits.

Channel-floodplain environments Aln estuary

Flow, sediment, wood and riparian vegetation interaction on Raise Beck

Connect

We should increase our focus on restoring connectivity between environments. Prioritise the removal of barriers within environments (e.g. weirs) and between environments (e.g. embankments and walls) including connection to the hyporheic zone and groundwater. We should give greater focus to restoring natural connectivity of sediment between source, transfer and deposition zones.

Weir removal River Medlock

Channel-Floodplain connectivity River Glen

Give space and time

We should make the space and then allow time for processes to create new physical habitat, for vegetation to grow and for ecosystems to recover. Rivers and coasts require space to adapt to changes in energy, sediment supply and biological influences. Resilient systems are those that have space to change and accommodate natural fluctuations without damaging infrastructure. Natural recovery or assisted recovery takes time.

Coastal roll-back and natural breach closure Cley-Salthouse

Allowing space for natural sediment storage in Ennerdale

Plan and Prioritise

We should take an increasingly planned and less opportunistic approach to restoration if we want to achieve catchment scale ecological improvement and climate resilience. We must place increasingly co-ordinated restoration effort across land and water. We must place greater emphasis on planning to improve morphology just as we do planning to improve flow and water quality.

Preventing grazing pressures River Esk

Coastal spits such as Spurn rely on up-drift sediment sources

Using the Systematic Conservation Planning Approach

What is Systematic conservation planning?

Systematic conservation planning is a participatory approach integrating ecological, social, and economic data, including stakeholder perspectives, to determine spatial priorities for achieving ecological goals.

Aligns ecological goals with socio-economic contexts to identify efficient and effective spatial solutions for nature recovery.

Why use Systematic conservation planning?

- **Integrates ecological, social, and economic data** for balanced, evidence-based decision-making.
- **Sets clear, adjustable targets** for outcomes to meet stakeholder needs and guide planning.
- **Uses mathematical methods** to minimise costs and redundancy while maximising ecological benefits.
- **Applicable to diverse contexts**:
  - Design of protected area networks to safeguard species, habitats, and ecosystem services.
  - Spatial targeting of management actions, such as nature recovery approaches and agri-environment schemes.
- **Proven success for spatial planning in England**:
  - Used to develop **Nature Recovery Networks** for Wildlife Trusts.
  - Applied in **Local Nature Recovery Strategies (LNRS)**, including Oxfordshire.

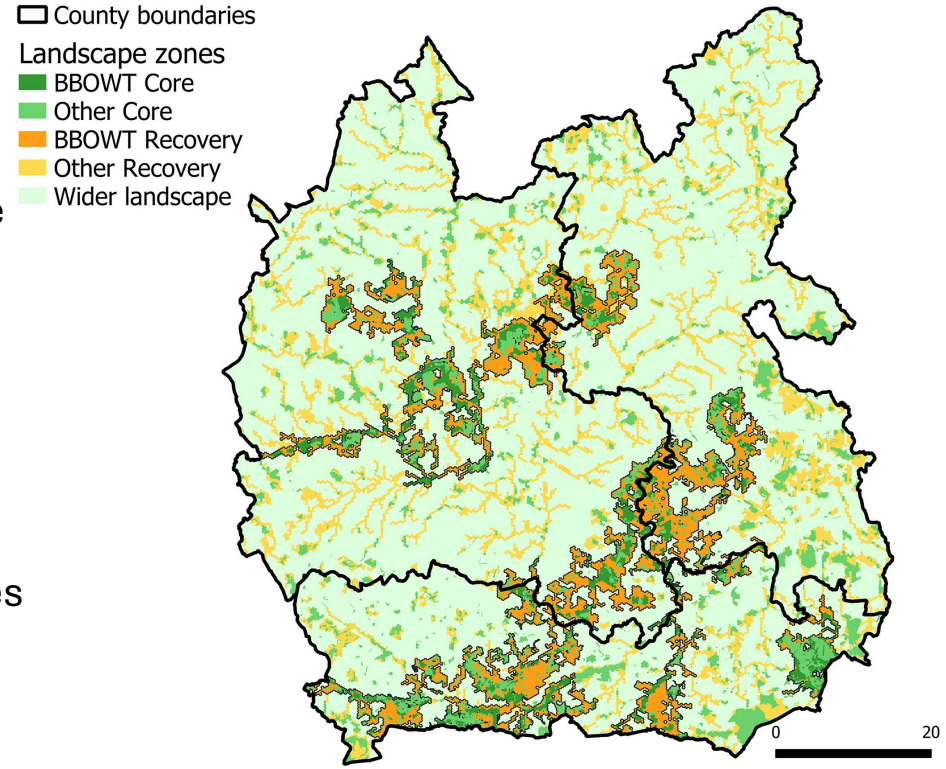

Figure 1. BBOWT's nature recovery network (Smith *et al.*, 2021).