

St Mary's
8/2/2023





Biodiversity in Horsham – action and future

Tim Thomas MBE
8th February 2023

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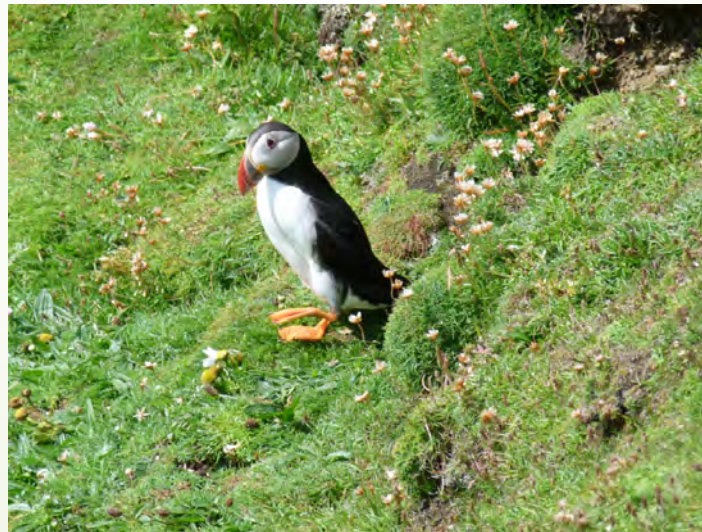
- ▶ Worked for 42 years at the RSPCA
- ▶ Primary role to advise on wild animal welfare and conservation to government, industry and the public
- ▶ Served on government committees from Badger rehab to zoo animal welfare to educational initiatives
- ▶ Undertook practical projects at home and overseas
- ▶ Now retired!
- ▶ Work on ecological projects



Advisory work

➤ Oiled wildlife response planning in

- Middle East
- Shetland
- Europe



Biodiversity

- What is biodiversity – a definition
- How it works in practice
- What Horsham is doing
- Practical opportunities

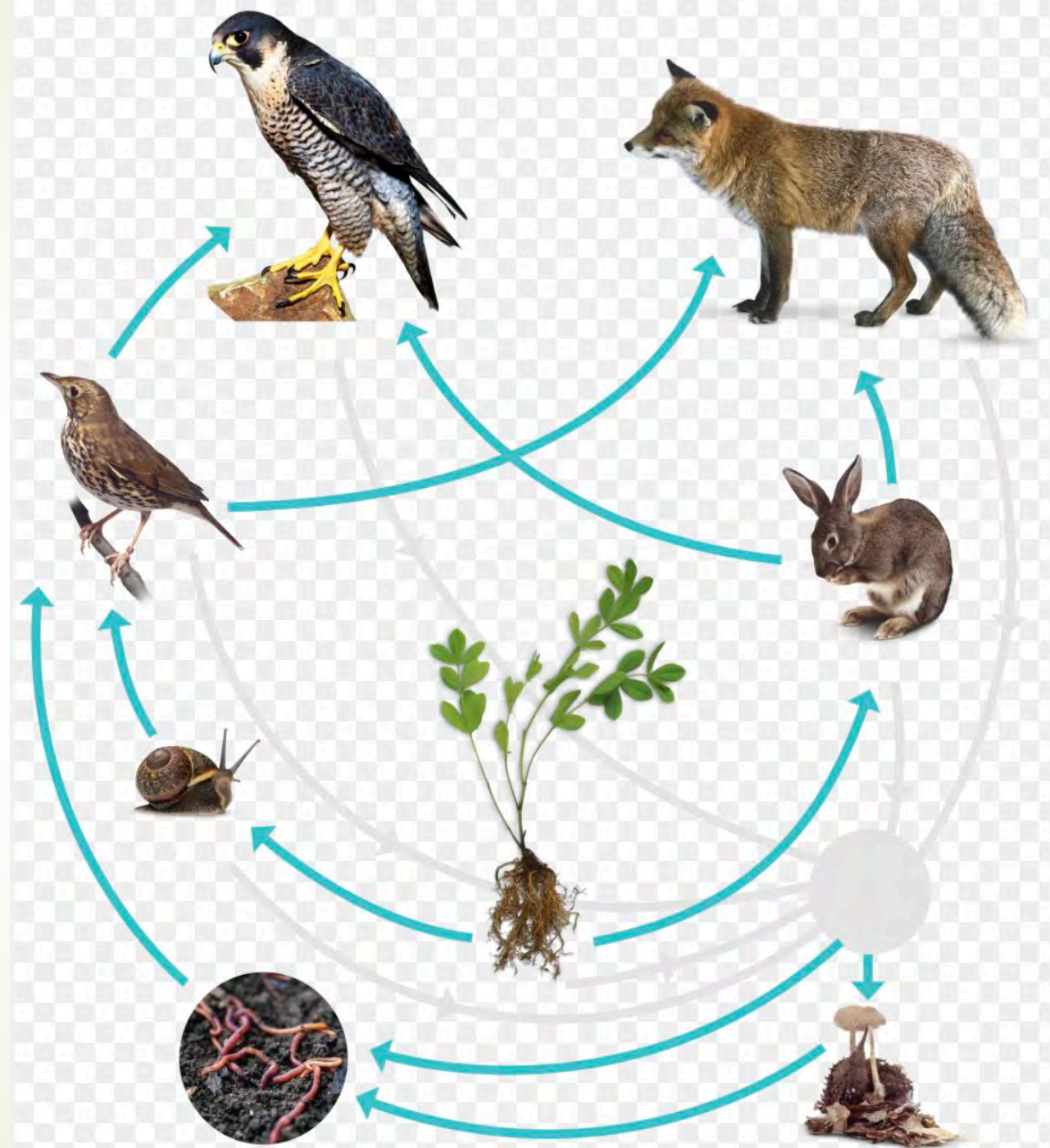


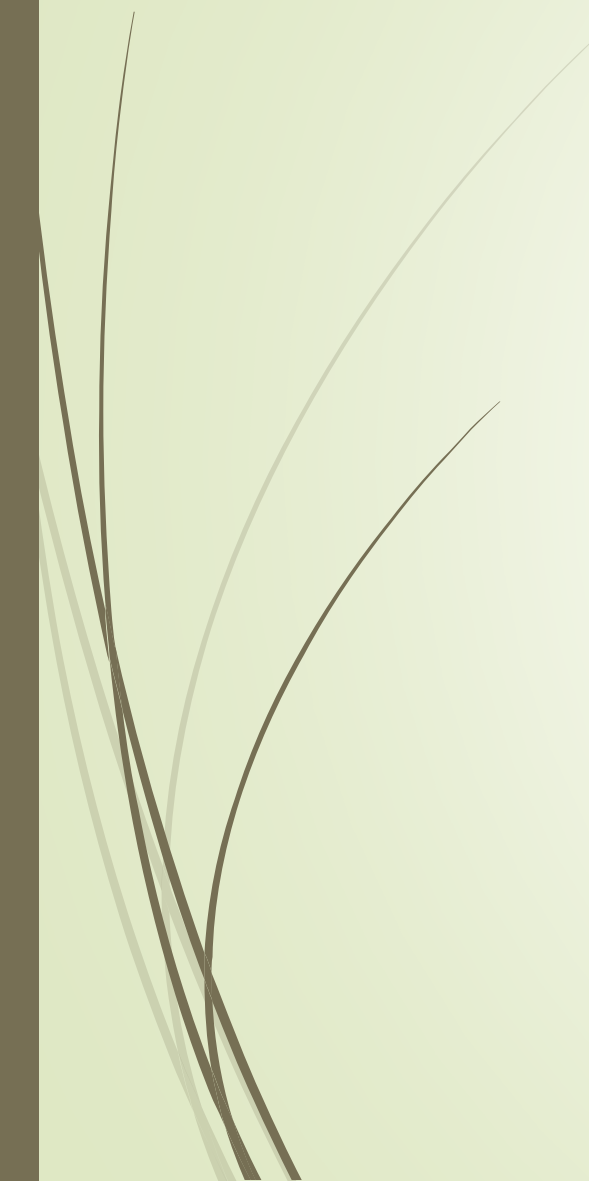
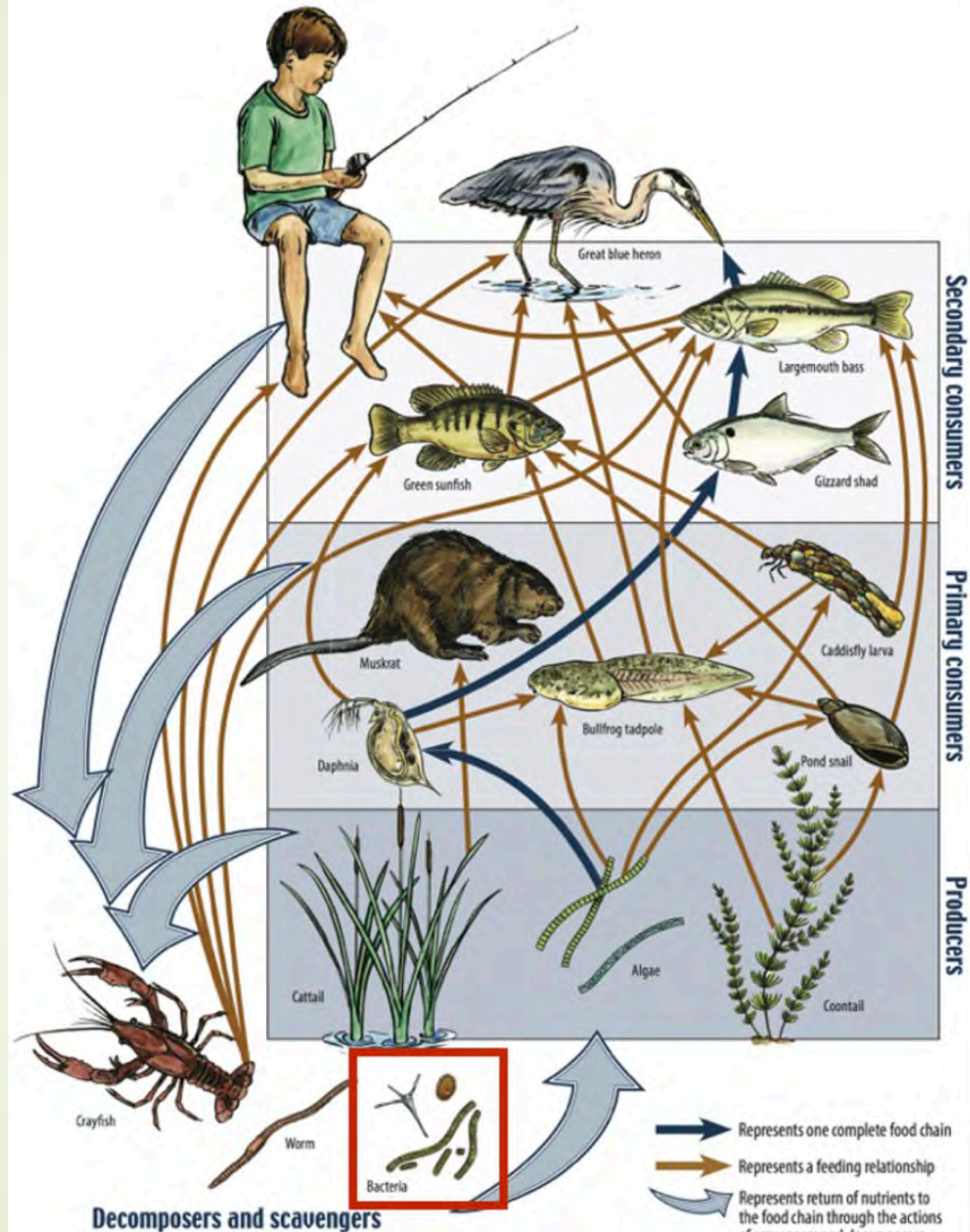


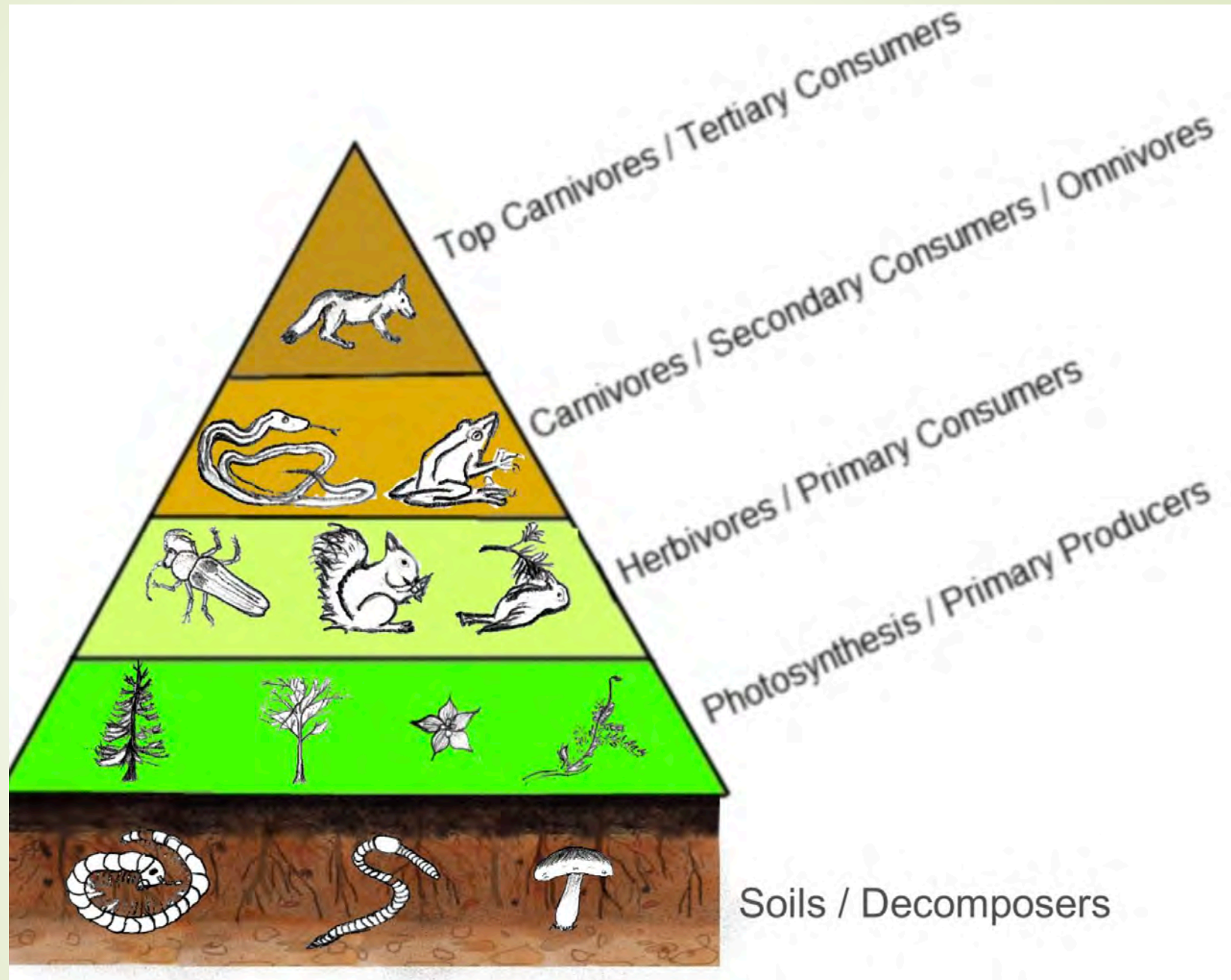
What is biodiversity?

- Biodiversity or biological diversity is the variety and variability of life on Earth. Biodiversity is a measure of variation at the genetic, species, and ecosystem level.
 - [Wikipedia](#)
- Biodiversity is **all the different kinds of life you'll find in one area**—the variety of animals, plants, fungi, and even microorganisms like bacteria that make up our natural world. Each of **these species and organisms work together in ecosystems**, like an intricate web, to maintain balance and support life.
 - [World Wildlife Fund \(WWF\)](#)

A simple food web







Individuals per hectare
on grassland in summer



90,000
secondary consumers

200,000 – primary consumers

1,500,000 – primary producers



Our primary producers

- ▶ The soil
 - ▶ Small “insignificant” animals, bacteria and other “digesters”
- ▶ Worms
 - ▶ Can raise plant productivity by 50%
 - ▶ Maintain soil integrity
- ▶ Fungi
 - ▶ Helps with soil production and fertilisation
- ▶ Plants are among the main bedrock of life
 - ▶ And don't forget the mosses, liverworts and lichens



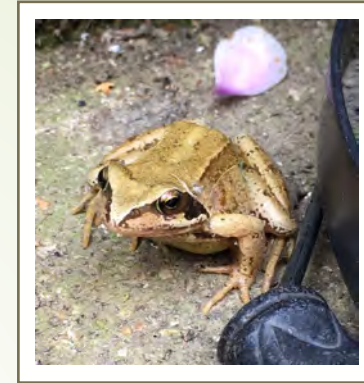
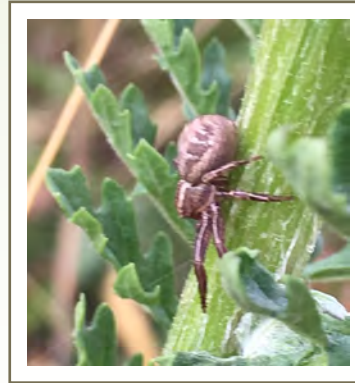
Primary consumers

- ▶ Most of these will be herbivores but among them will be those that eat smaller insects
 - ▶ Many of our songbirds come in this category
 - ▶ Our rodents
- ▶ Also hundreds of larval stages of insects (some of which are also found in the "primary producer category")
 - ▶ Caterpillars, "grubs"
- ▶ Rabbits, deer,



Secondary consumers

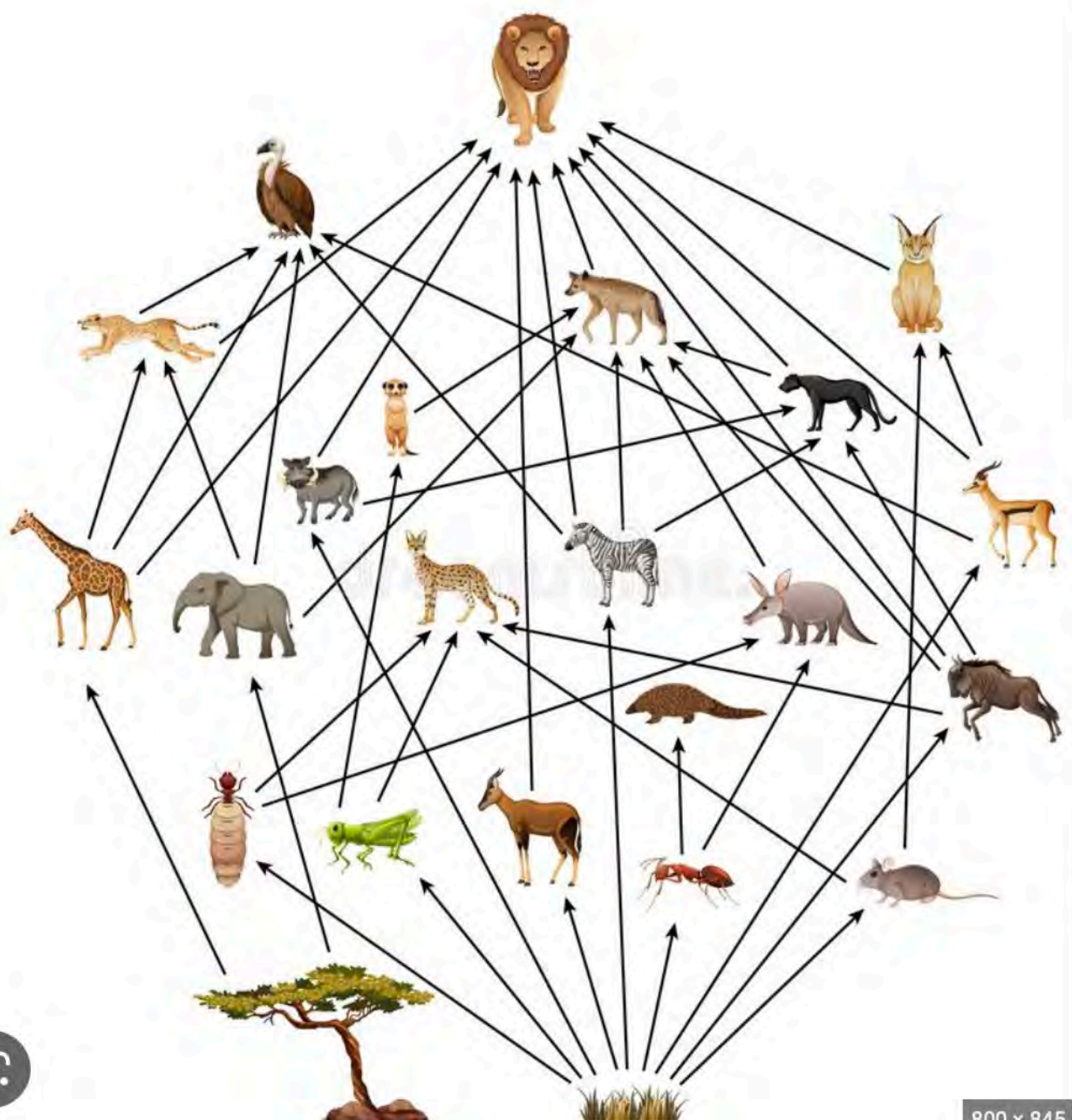
- ▶ Omnivores and carnivores
 - ▶ Many may have also appeared as primary consumers
 - ▶ Tadpoles, for example.
- ▶ Reptiles & amphibians
 - ▶ Snakes, lizards, frogs
- ▶ Birds
- ▶ Fish



Top predators

- ▶ Foxes
- ▶ Birds of Prey
- ▶ Fish
- ▶ Badgers





These simple facts carry a lot of weight



A mole may need to eat 60-100% of its 80gm bodyweight in worms per day



The White Stork can eat up to 30% of their 3.4kg body weight in earthworms

Badgers will eat around 0.5kg of worms per night

For you

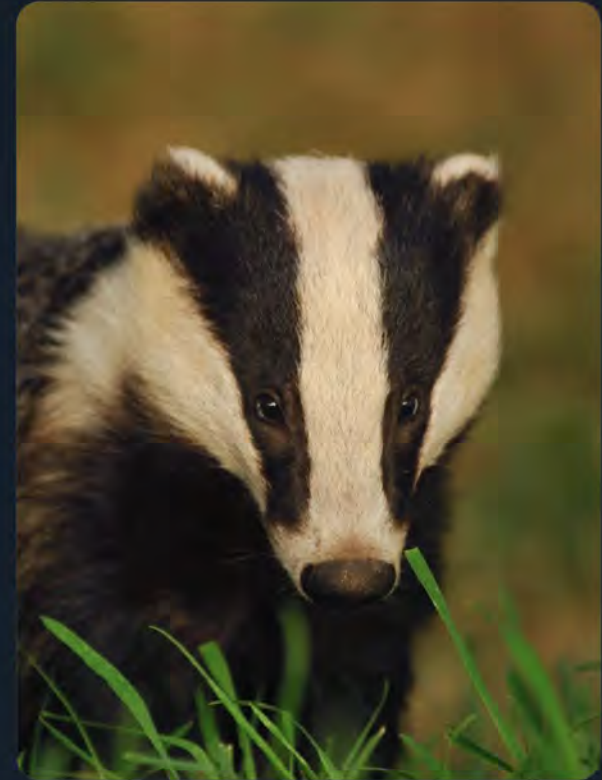
Following

Sussex Wildlife Trust 🦉 and Graeme Lyons follow



The Wildlife Trusts @Wil... · 18h ...

It takes a lot of work to look this good! Badgers sometimes eat several hundred earthworms a night 🦡 wildlifetrusts.org/wildlife-explo...

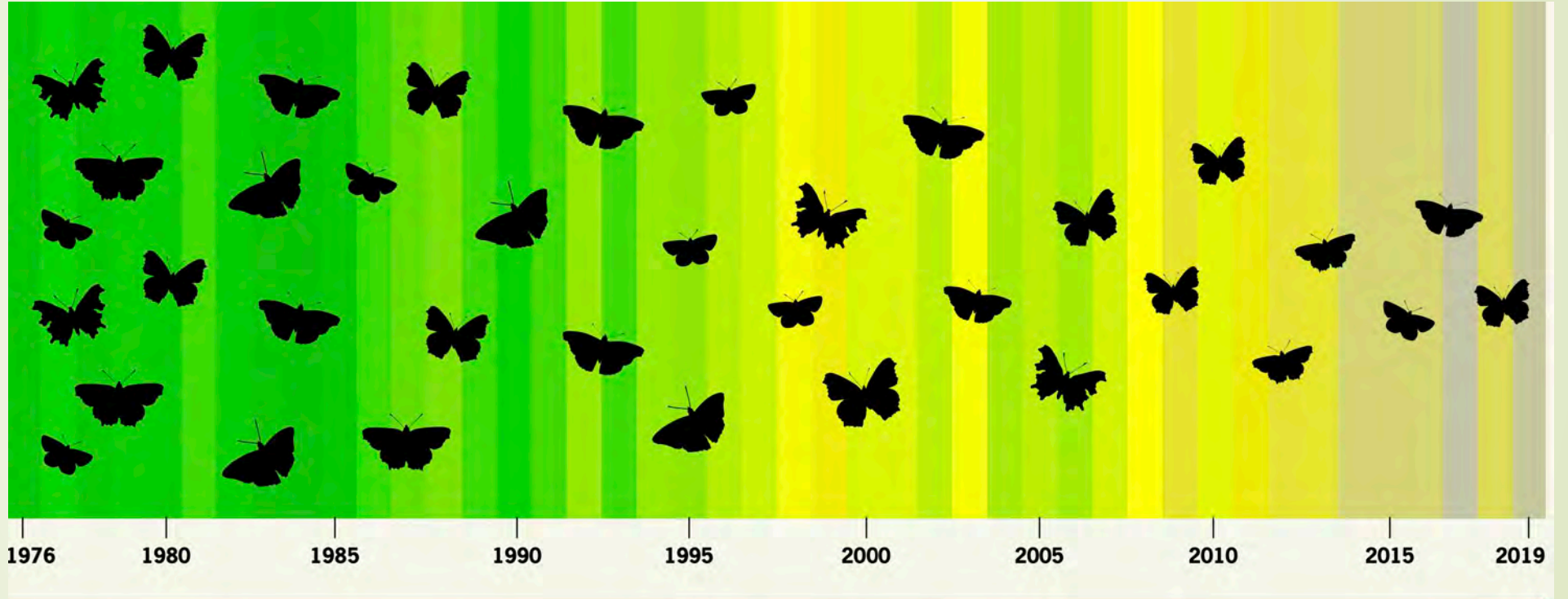


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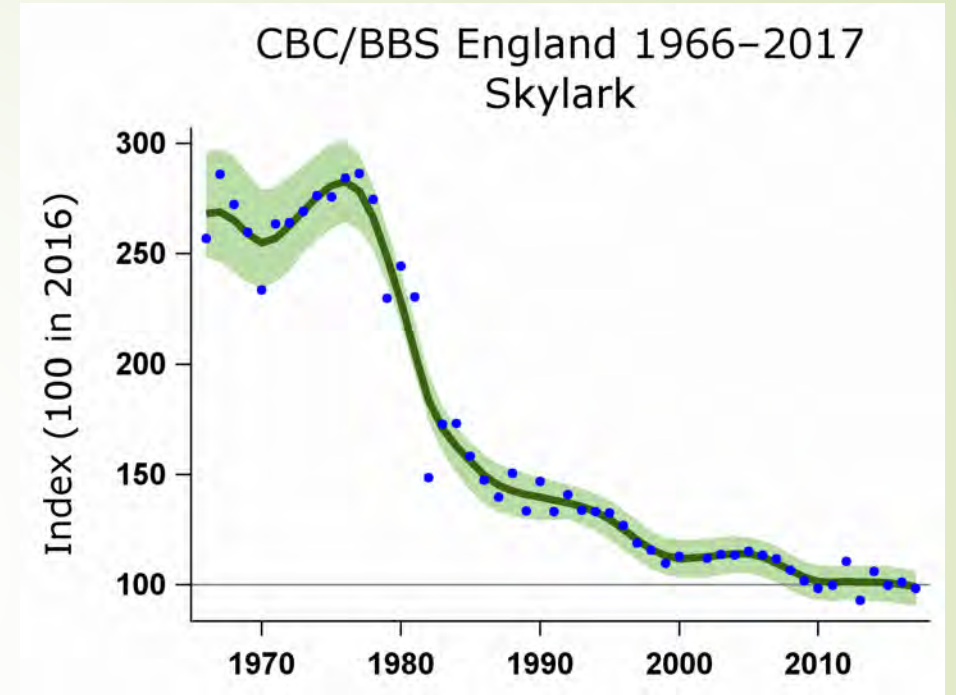
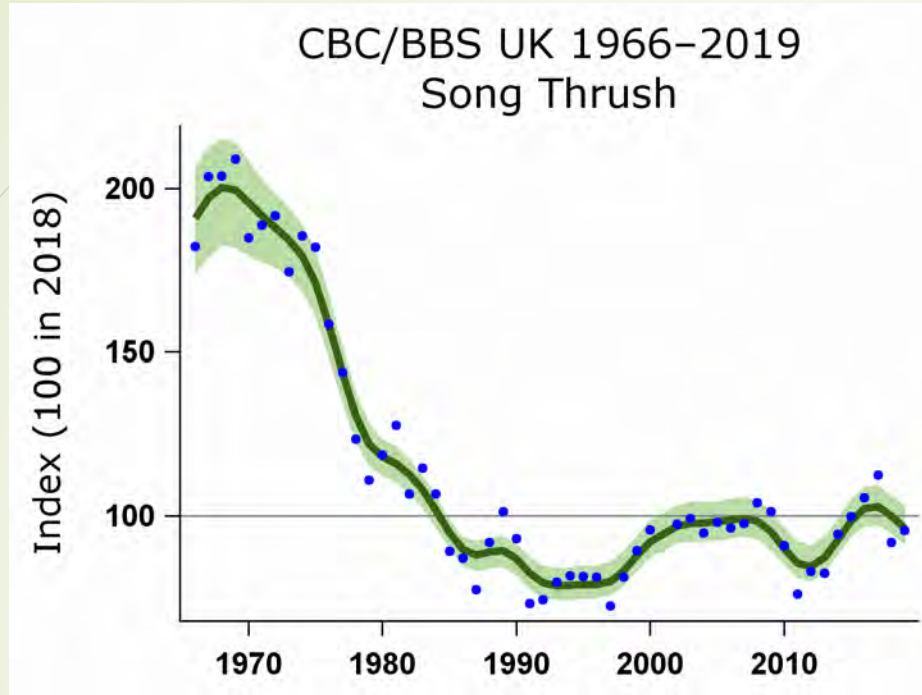




A marked decline in the distribution of butterflies since the 1970s



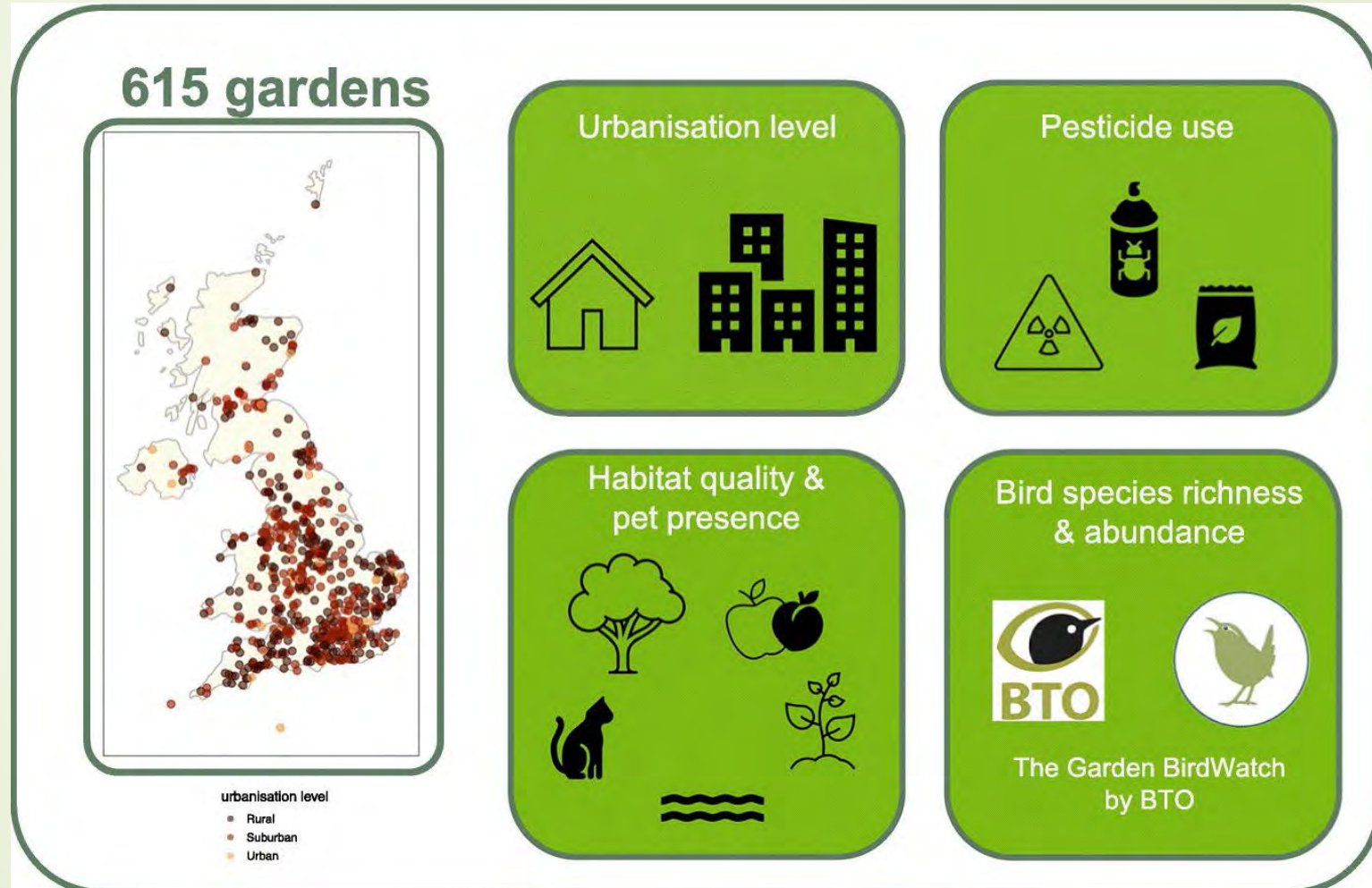
- 80% decline in abundance or distribution
- Most loss is in flower-rich grasslands, heathland & woodland clearings



Notable decline in Song Thrush and Skylark since the 1970's

Garden biodiversity – reported in *The Guardian* 6/2/23

Habitat quality, urbanisation & pesticides influence bird abundance and richness in gardens
Cannelle Tassin de Montaigu, Dave Goulson



- Biodiversity was lower in suburban gardens and
- Bird-friendly habitats positively influenced biodiversity



- 32% of gardens used pesticides
- The number of House Sparrows was lower in gardens that used any pesticide

A vibrant field of wildflowers under a bright blue sky with scattered white clouds. The foreground is dominated by tall green stems with several purple flowers in various stages of bloom. Some flowers are fully open, showing their five petals and dark centers, while others are still green buds. In the middle ground, a large, flat-topped cluster of small white flowers is prominent. The background shows more greenery and the clear sky, creating a sense of depth and natural beauty.

But how do we provide
& maintain biodiversity?



Be untidy and keep things moving

A suitable environment

The ability to move and spread

Most of our primary producers are "creepy-crawlies"

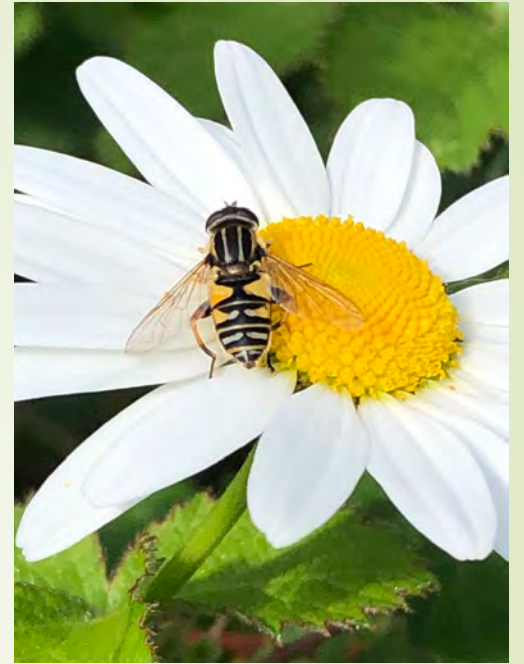
Soil condition is key

Look after the lower species and the rest will follow





“So, there’s a lot we
can do at home.”

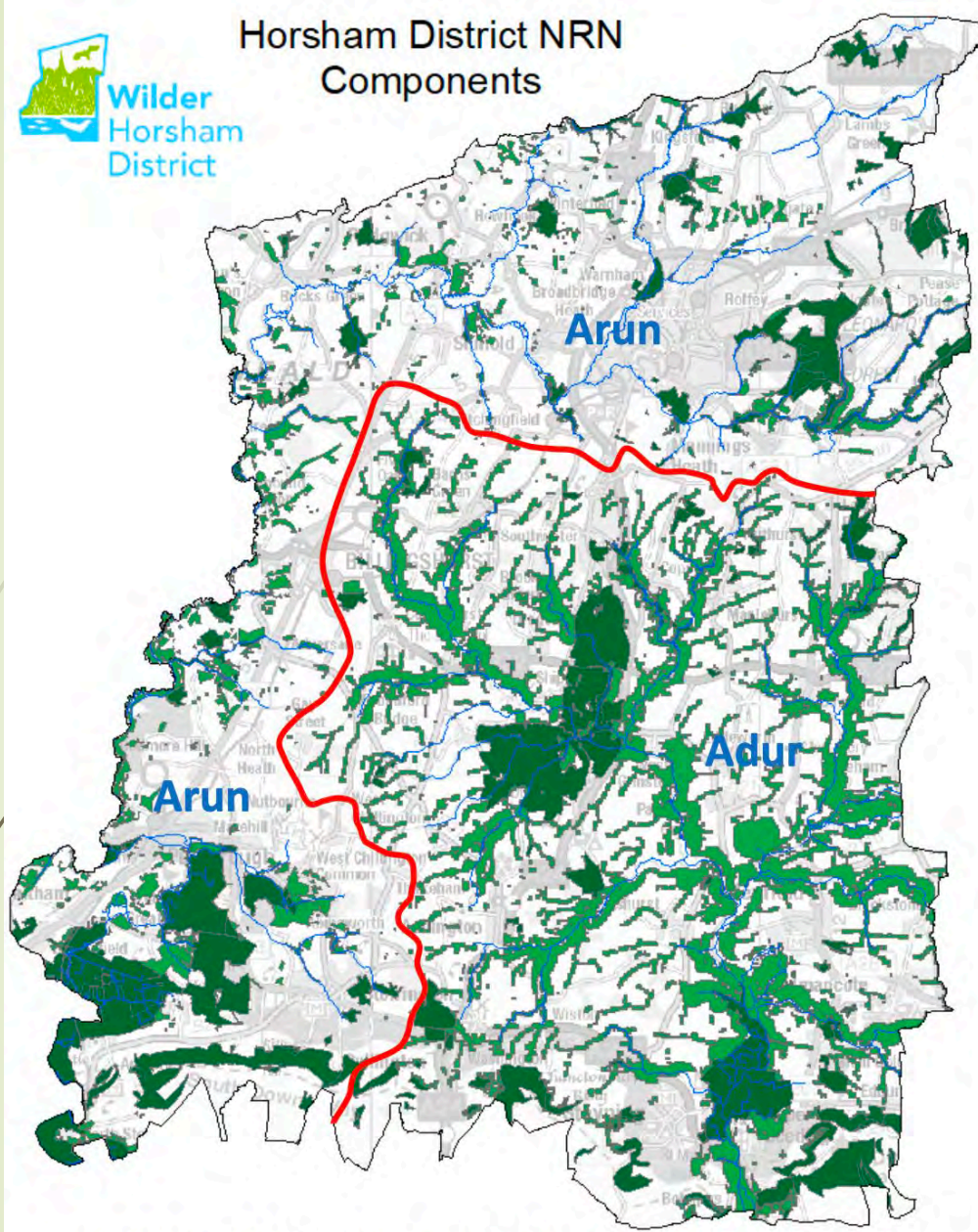


“But what’s going on
in Horsham?”

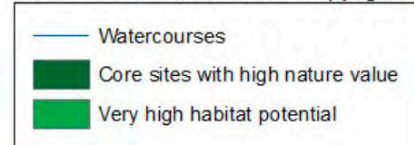


Wilder Horsham District

- A partnership between HDC and SWT
 - **An innovative five-year partnership between Sussex Wildlife Trust and Horsham District Council working to deliver a Nature Recovery Network for Horsham District.**
- Objectives include the creation of networks...
 - “to allow habitats to expand and for species populations to increase which will ensure that they are resilient to change.”



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Watershed
Arun & Adur Basins

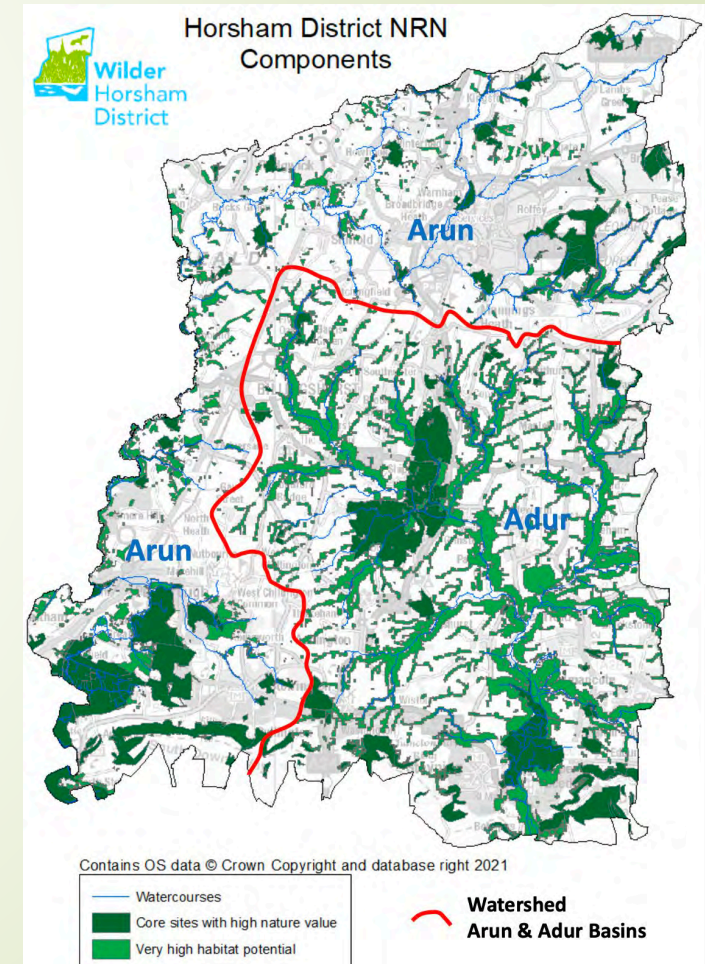
Nature Recovery Networks (NRN)

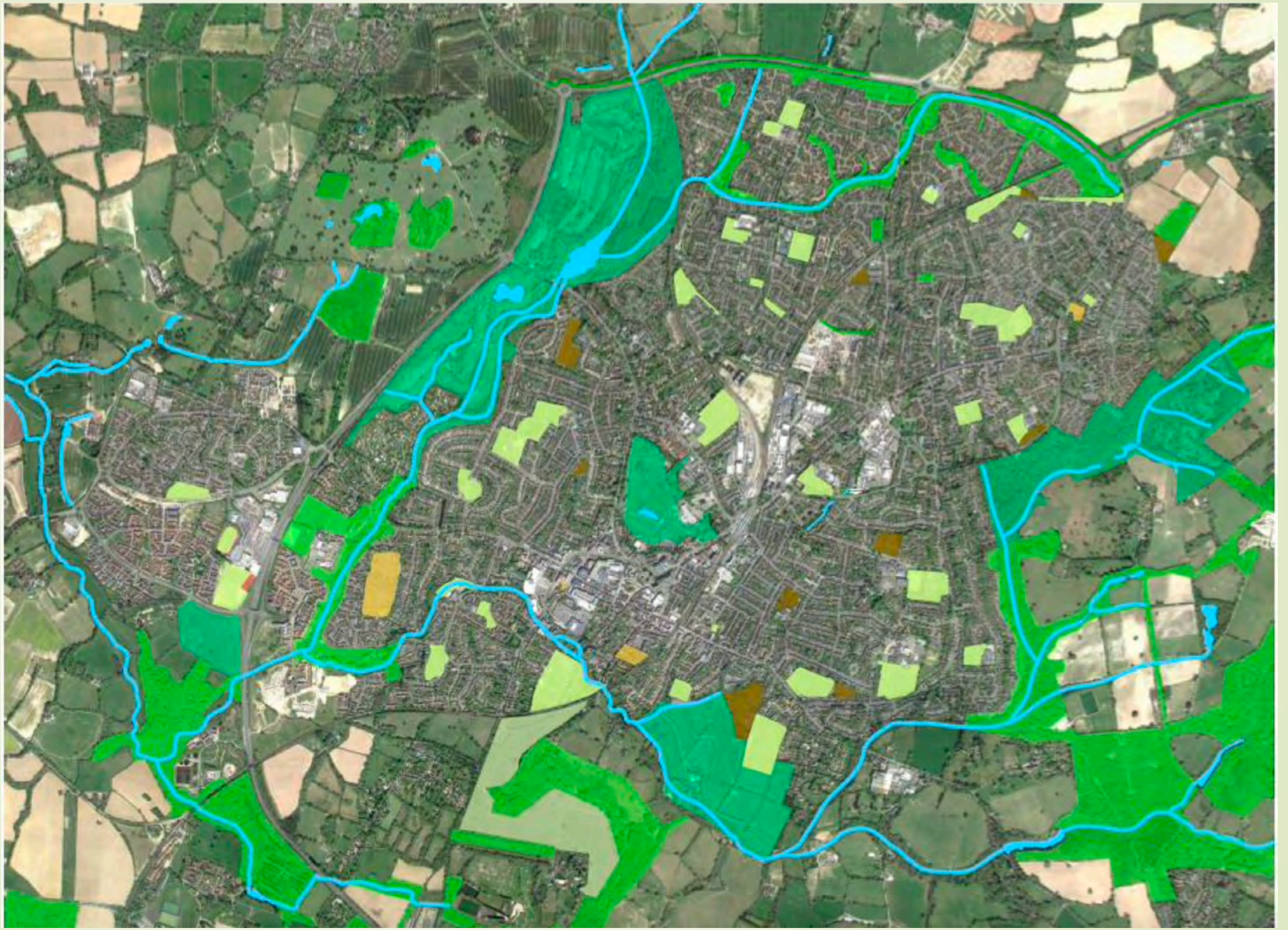
- ▶ The HDC/SWT partnership looks at the whole district
- ▶ Using the two river catchments as a key to its strategy
- ▶ Knepp is central to the Adur
- ▶ The Arun is less supplied with established corridors
- ▶ However, this does not make it less important
- ▶ *BUT* Horsham town has a significant proportion of the district's population



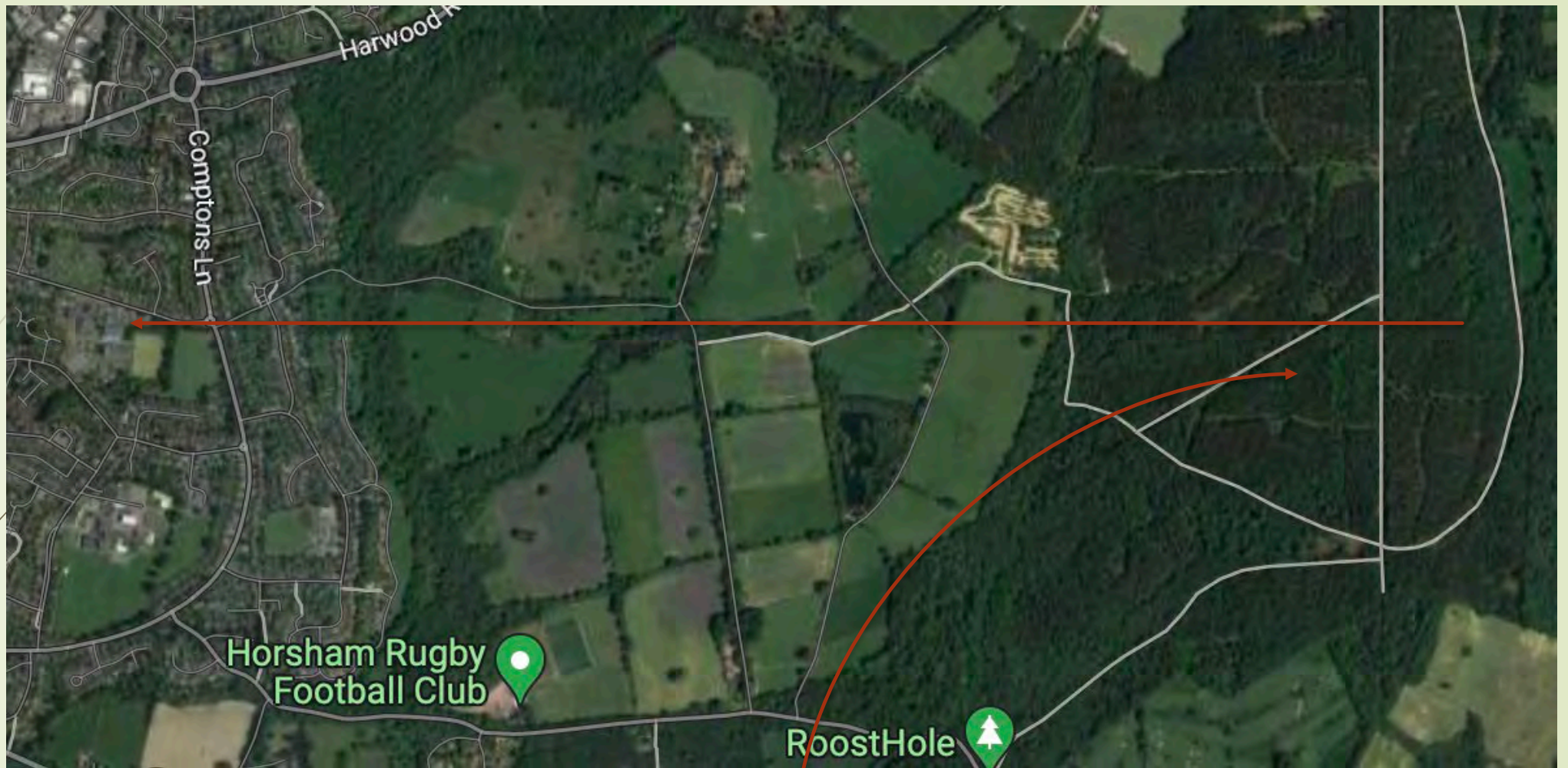
Horsham Green Spaces

- ▶ Small group involving a range of groups and individuals and reps from:
 - ▶ Our parks and nature reserves' friends groups
 - ▶ Parish's green space volunteers
 - ▶ Allotment owners
 - ▶ Denne Park
 - ▶ "Patch owners"
 - ▶ Horsham Society
 - ▶ Denne Cemetery
 - ▶ "Green" groups
 - ▶ Neighbourhood councillors









To St Leonards Forest and "The Weald"

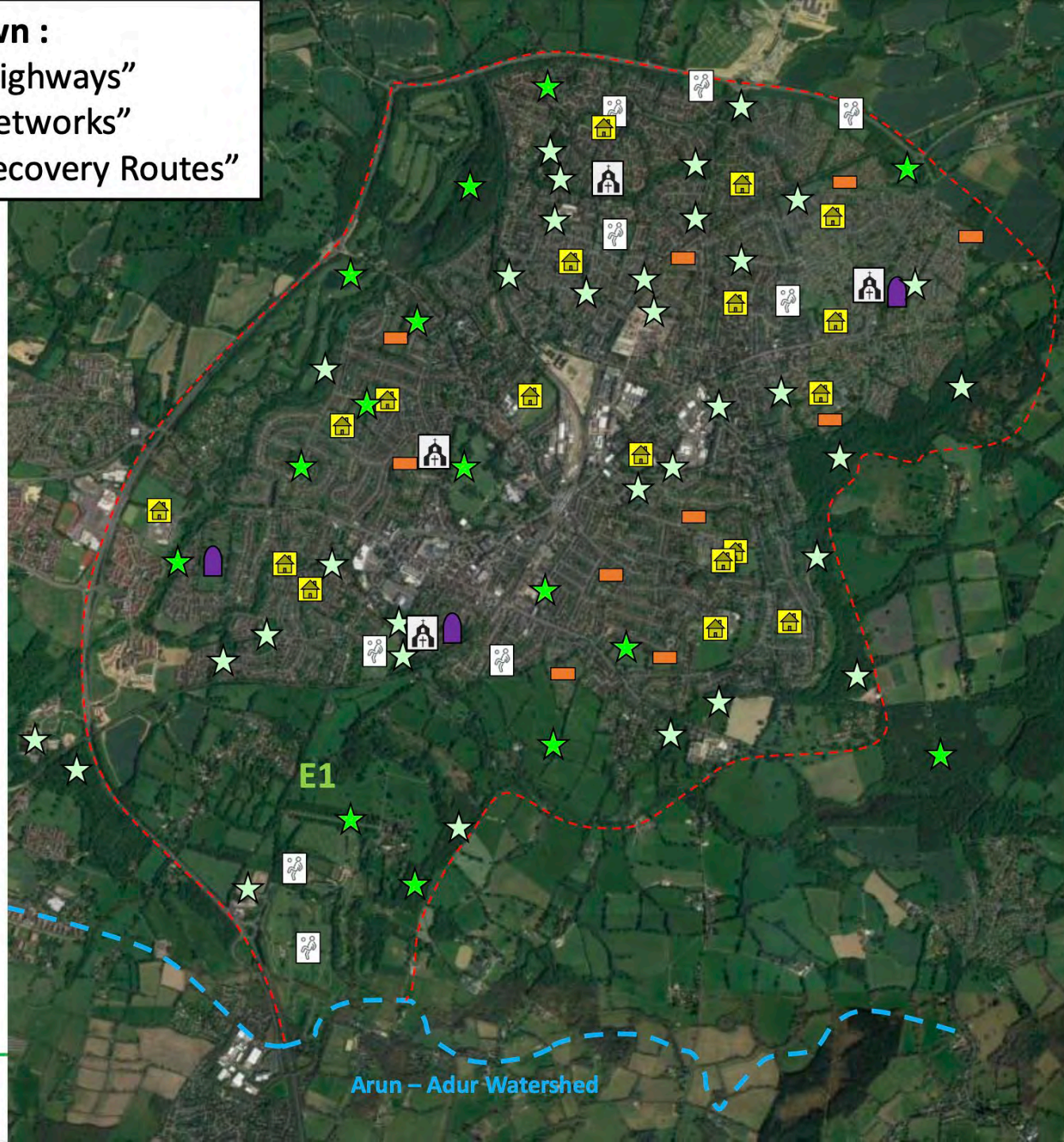
And back...








Horsham Town :

“Habitat Highways”

“Nature Networks”

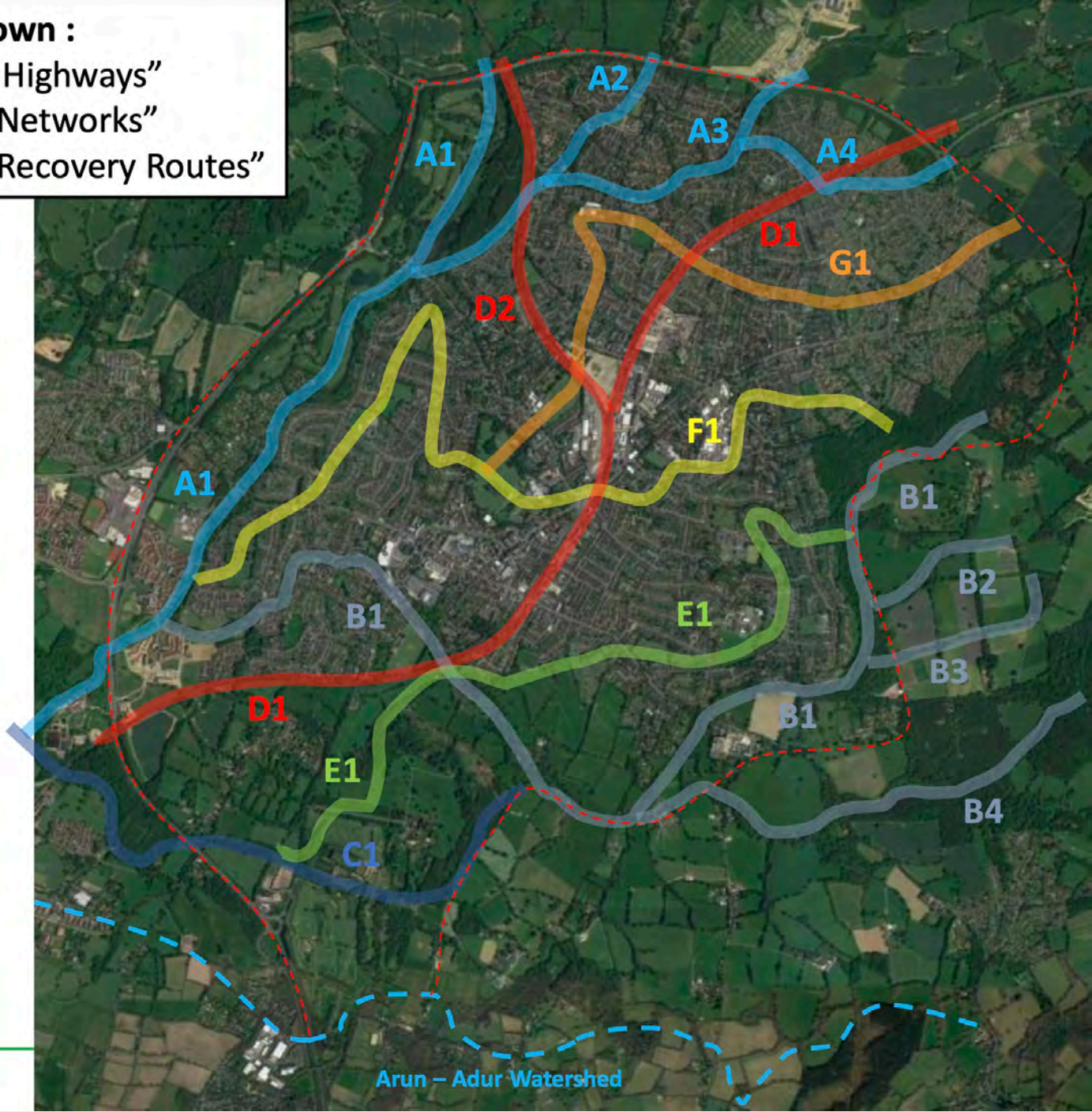
“Nature Recovery Routes”



-  Allotments (10)
-  Cemeteries (3)
-  Churches (4)
-  Schools (18)
-  Sports Clubs (9)
-  HGS (15)
-  Other G.S. (31)

Arun - Adur Watershed

Horsham Town :
"Habitat Highways"
"Nature Networks"
"Nature Recovery Routes"

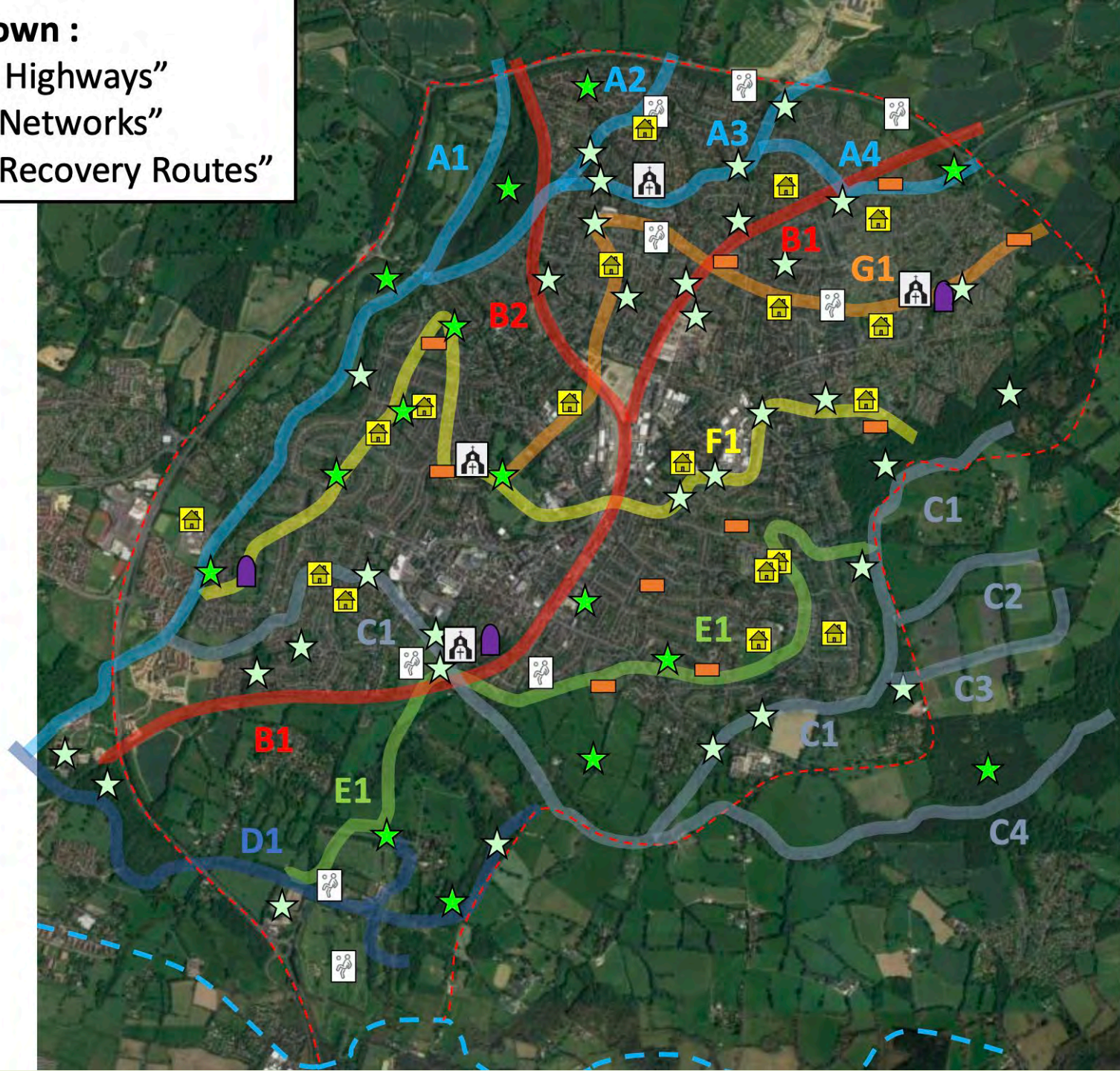


Horsham Town :

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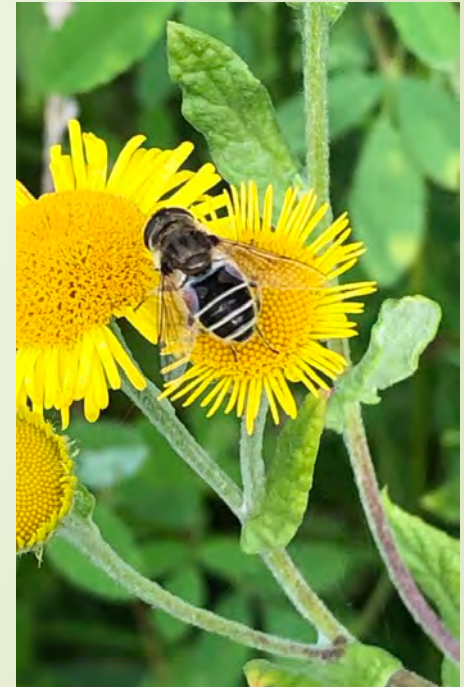


- Allotments (10)
- Cemeteries (3)
- Churches (4)
- Schools (18)
- Sports Clubs (8)
- HGS (14)
- Other G.S. (31)

... Add our gardens into the mix

And revel in the beauty of our visitors, their colour, their shapes their variety

Their biodiversity



How do we maintain and promote an increase in biodiversity

► Our gardens

- Be untidy
- Add a wild section
- Maintain a good quality soil
- Put up a bug hotel
- Add a nest box (or two)
- Provide a pond
- Make a log pile
- Look out for flowering and fruiting plants
- Stop using pesticides



► Our street

- Do the same - within reason!
- Cut the grass verge once annually (May or August)
- Remove all the cuttings - compost them!
- Create "garden highways" with your neighbours



The tail end!

Thank you

Leaf-cutter Bee
Megachile sp.



