25 years of wildflower grassland restoration and creation in east kent

Agri environment schemes

Setting the scene..... 30 years of AE schemes

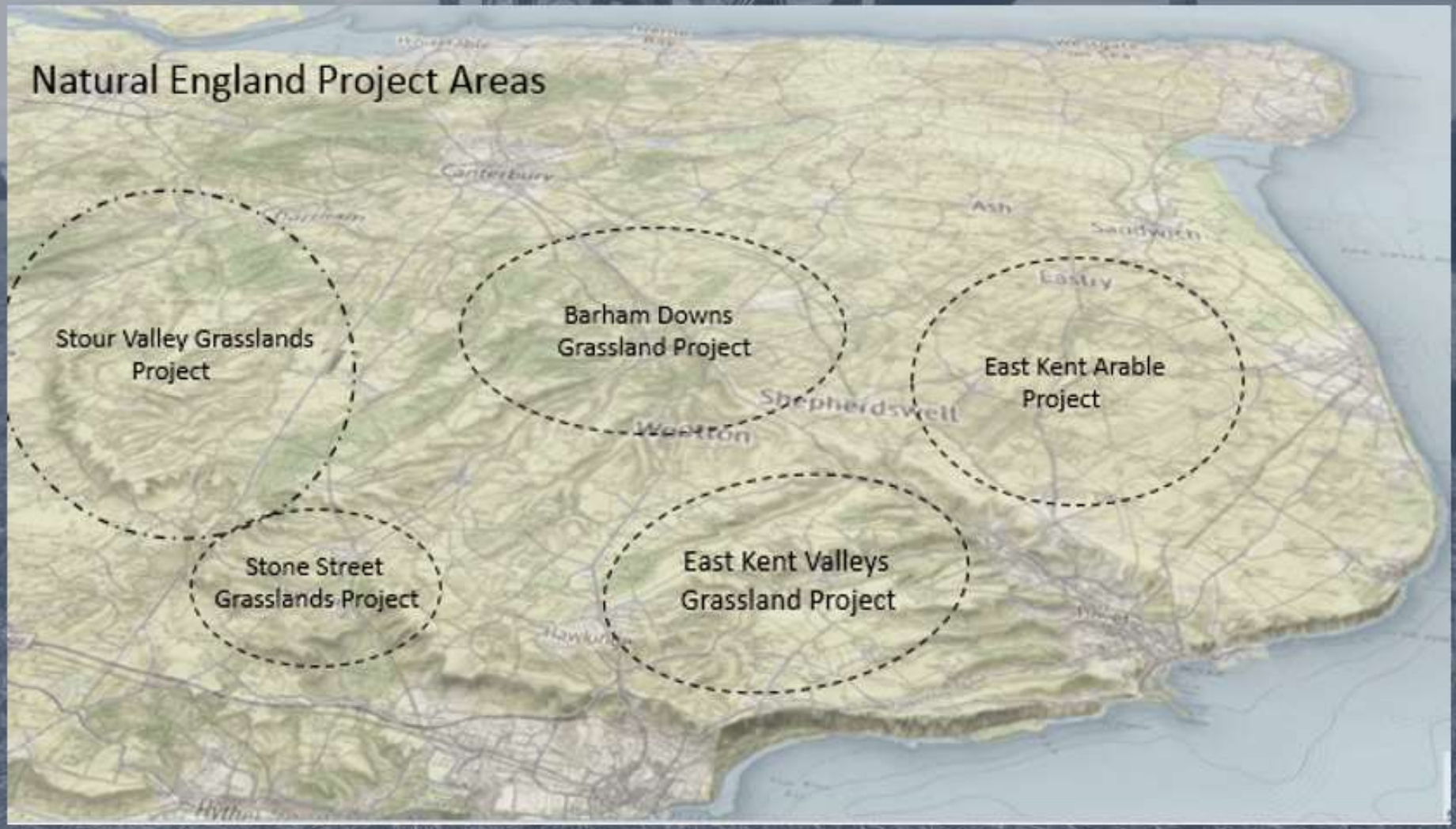
Set aside scheme

1994 – 1997
Habitat Scheme
(20 year schemes)

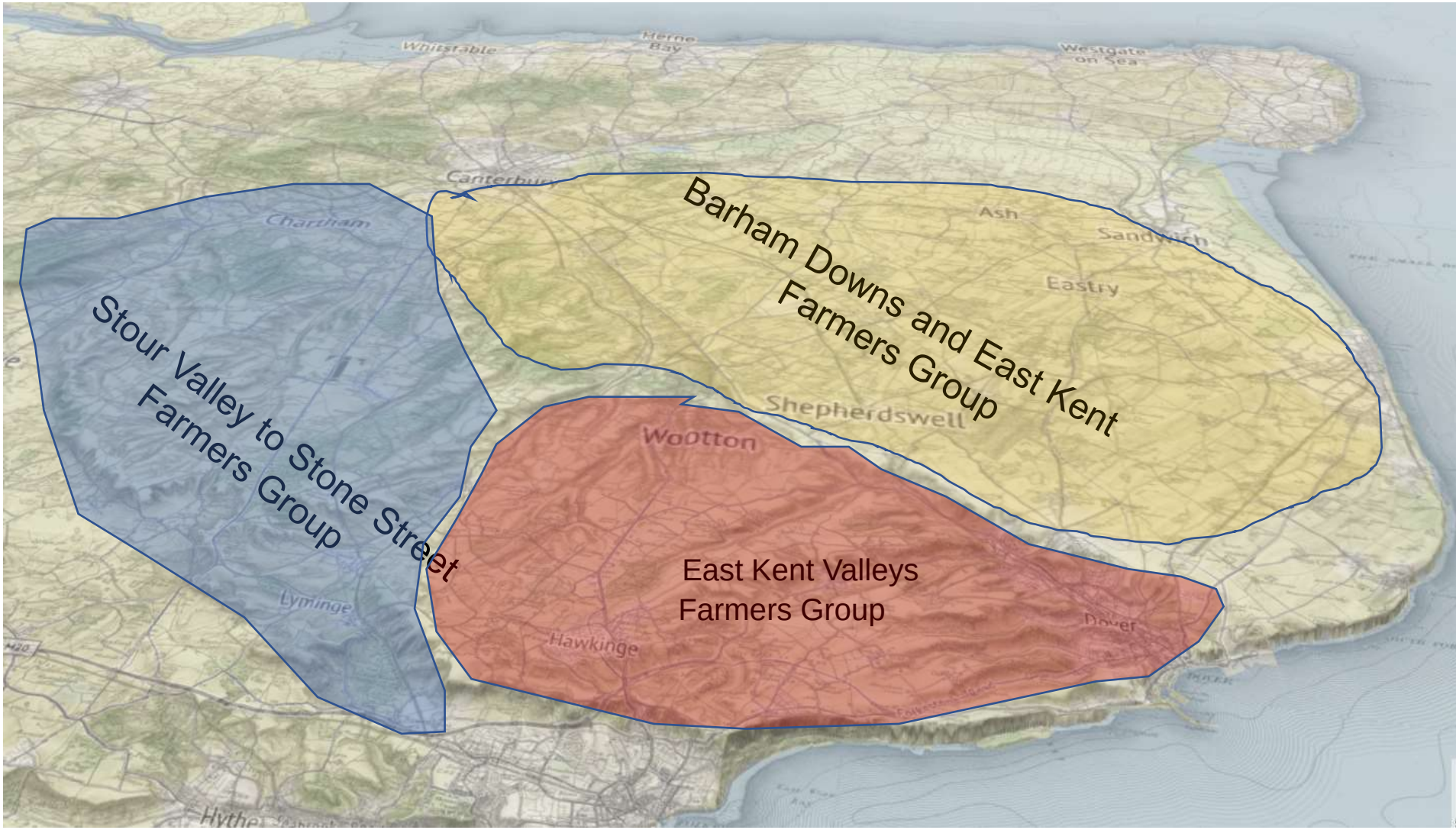
Agri environment schemes in the Kent Downs

Building the network

Agri environment schemes in The Kent Downs



Natural England Farmer Groups



Working with farms on a 1-1 basis

Long term continuity

Annual intake of new farms/sites – opportunity driven

Focusing on species diverse/wildflower-rich grassland habitat creation

‘Landscape’ groups of 15 -30 farms

Wildflower grassland creation

Arable reversion/grassland restoration through natural colonisation

Arable reversion/grassland restoration through green hay spreading

Arable reversion/grassland restoration through native provenance wildflower seeding

Arable reversion/grassland restoration through native provenance wildflower seeding

Management

Flexibility and compromise

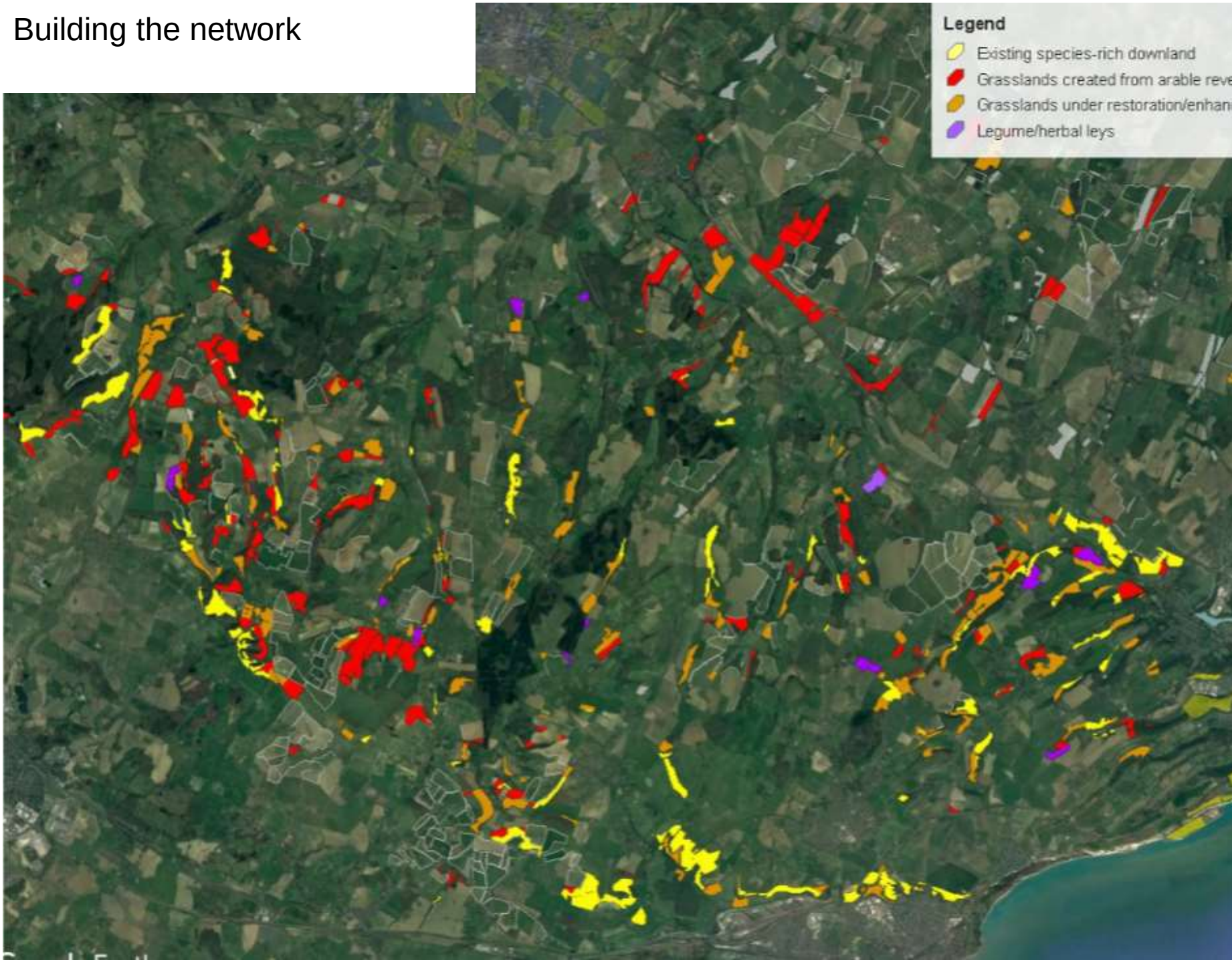
A mix of grazing, hay cutting/aftermath grazing and non intervention depending on farm's situation



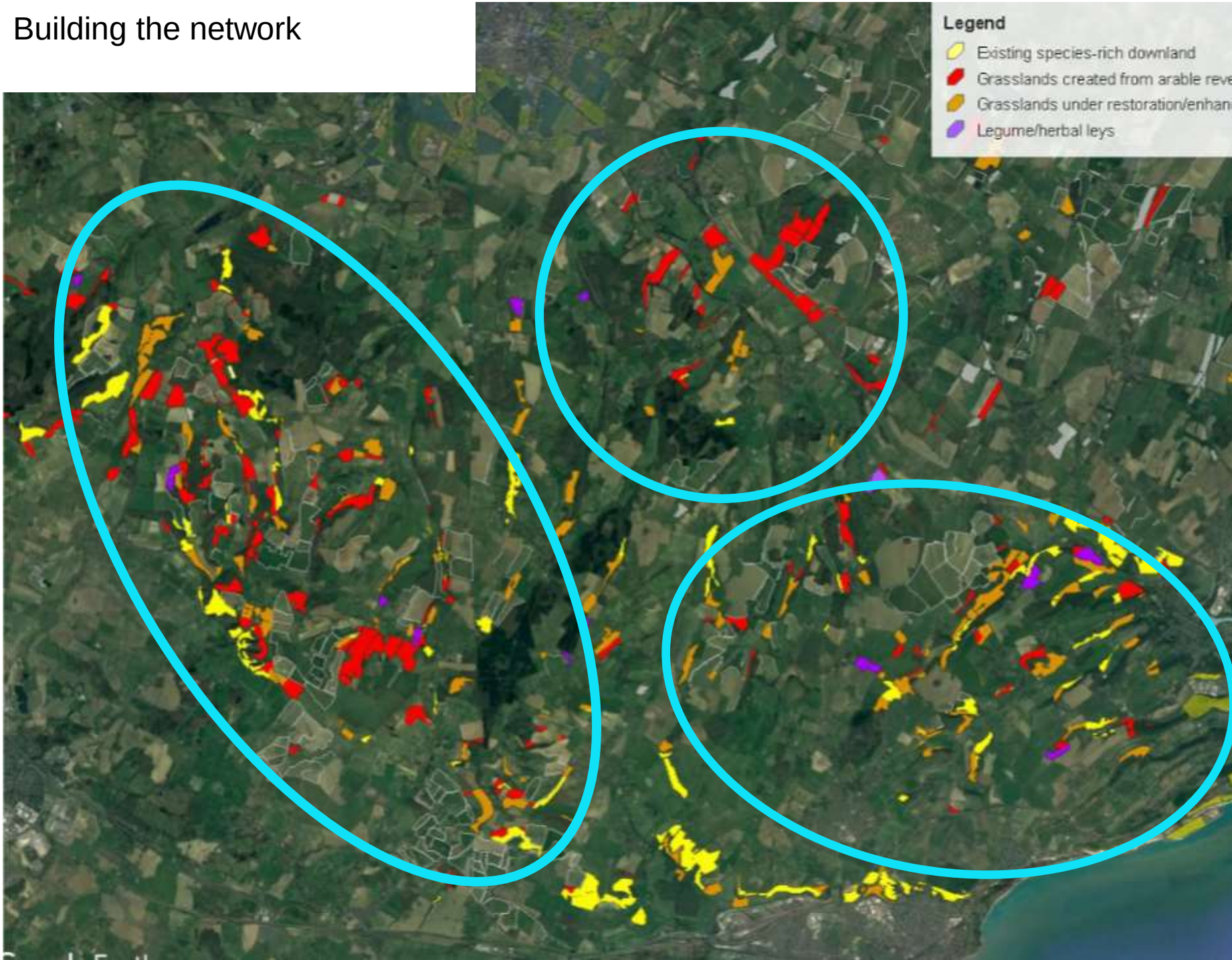





Building the network



Building the network

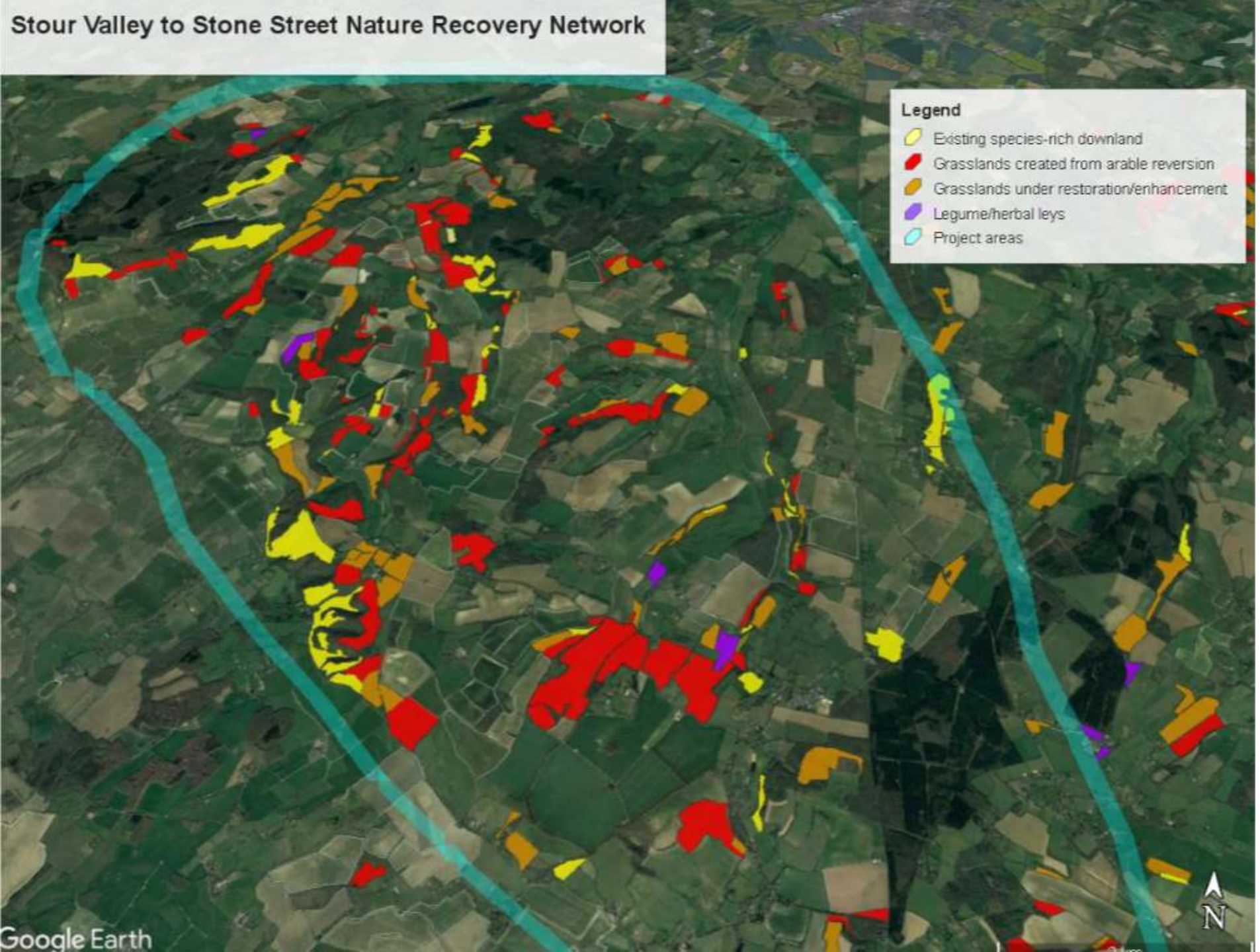


Agri environment schemes in the Kent Downs

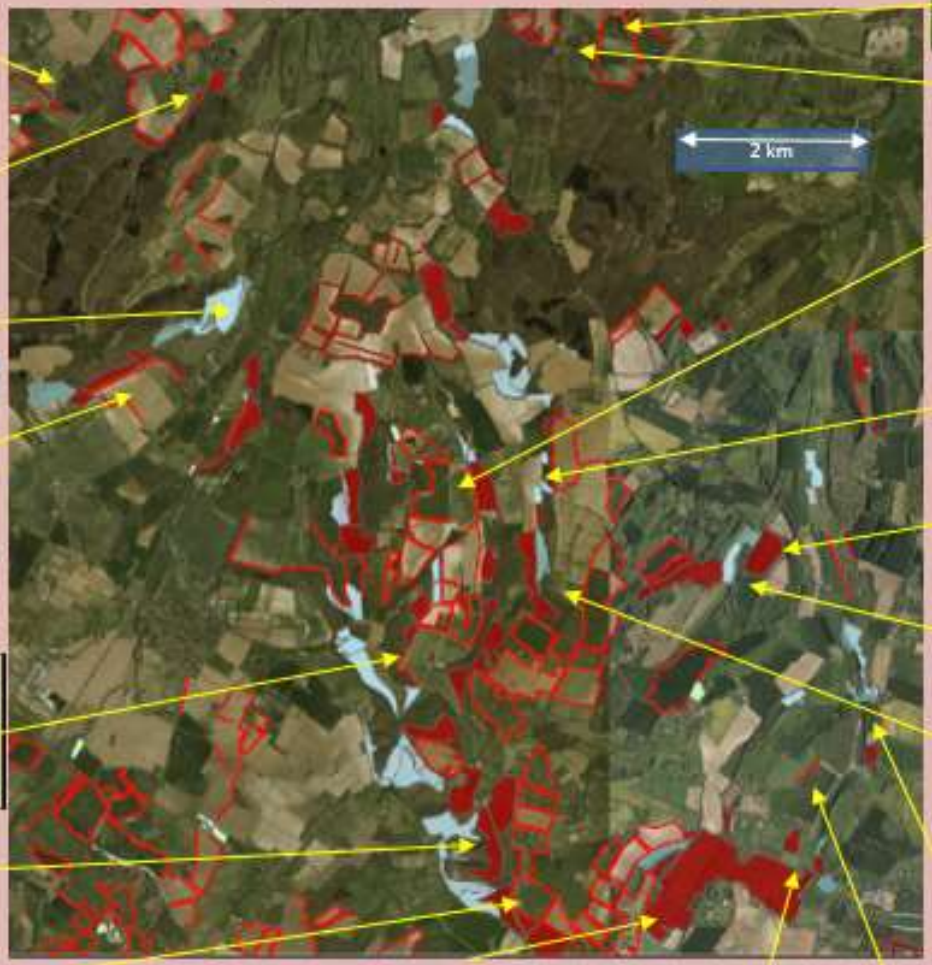
Building the network – where we are now

	Species-poor grassland restoration (ha)	Arable reversion (ha)	Native wildflower seeding (ha)
East kent valleys	310	125	137
Stourvalley/ stone st	238	342	114
Barham Downs	85	348	272
	633	815	523

Stour Valley to Stone Street Nature Recovery Network



Stour Valley to Stone Street Nature Recovery Network



Dane Court Farm
10ha arable reversion, part enhanced with native wildflower mixes

FWP arable plots/margins

Young Manor Farm
4ha native wildflower sown reversion

FWP arable plots /margins

Godmersham Estate

26ha sp rich grassland
Native wildflower sown margins

FWP arable plots and margins.
Extensive scrape creation

Bilting Grange Farm

14ha restored sp.rich grassland,
14ha wildflower sown reversion

FWP arable plots and margins

Dean Farm

40ha arable reverted sp.rich grassland
20ha sp. rich grassland

FWP arable plots /margins

Cold Blow Farm

35ha reverted grassland - part native wildflower seeded

South Hill Farm

35ha native wildflower sown reversion

FWP arable plots and margins

Kingsmill Down Farm

110ha long term sp.rich / semi improved arable reversion

Trinity Farm

2ha native wildflower sown reversion
5ha sp.rich grassland

Legume rich swards

Elmsted Court Farm
4ha grassland restoration
FWP arable plots and margins

Thruxted Farm
5ha sp.rich arable reversion
FWP arable plots/margins

Upper Mystole Farm
14ha scrub mosaic management

Crundale Estate

5ha sp. rich grassland
44ha sp.rich and semi improved arable reversion/grassland with 7ha sown with native wildflower seed

Hunt Street Farm
17ha native wildflower sown grasslands
6ha sp.rich grassland

FWP arable plots/ margins

Yockletts Farm
4ha native wildflower sown reversion
17ha sp.rich/semi improved grassland

FWP Arable plots and margins

Springhill Farm
5ha sp.rich arable reversion
2ha sp. rich grassland

Grandacre Farm
36ha reverted sp.rich and semi improved grassland
9ha sp.rich grassland

FWP Arable plots and margins

Great Dowles Farm
3ha native wildflower seeded reversion
7ha sp.rich grassland

Arable reversion/restoration/ margins (360ha including 60ha sown to native wildflower mixes)

Existing species-rich grassland

Flagship species : Duke of Burgundy, Black veined moth

Stour Valley to Stone Street Project Area

Arable reversion through natural recolonisation 342ha since 1995

Native wildflower meadow seeding projects :

Stour Valley Project Area : 114ha across 36 sites


Managing for different sward structure

University of Kent study
Invertebrate communities in arable reversion

Dingy Skipper on arable reversion in the Stour Valley to Stone Street Project

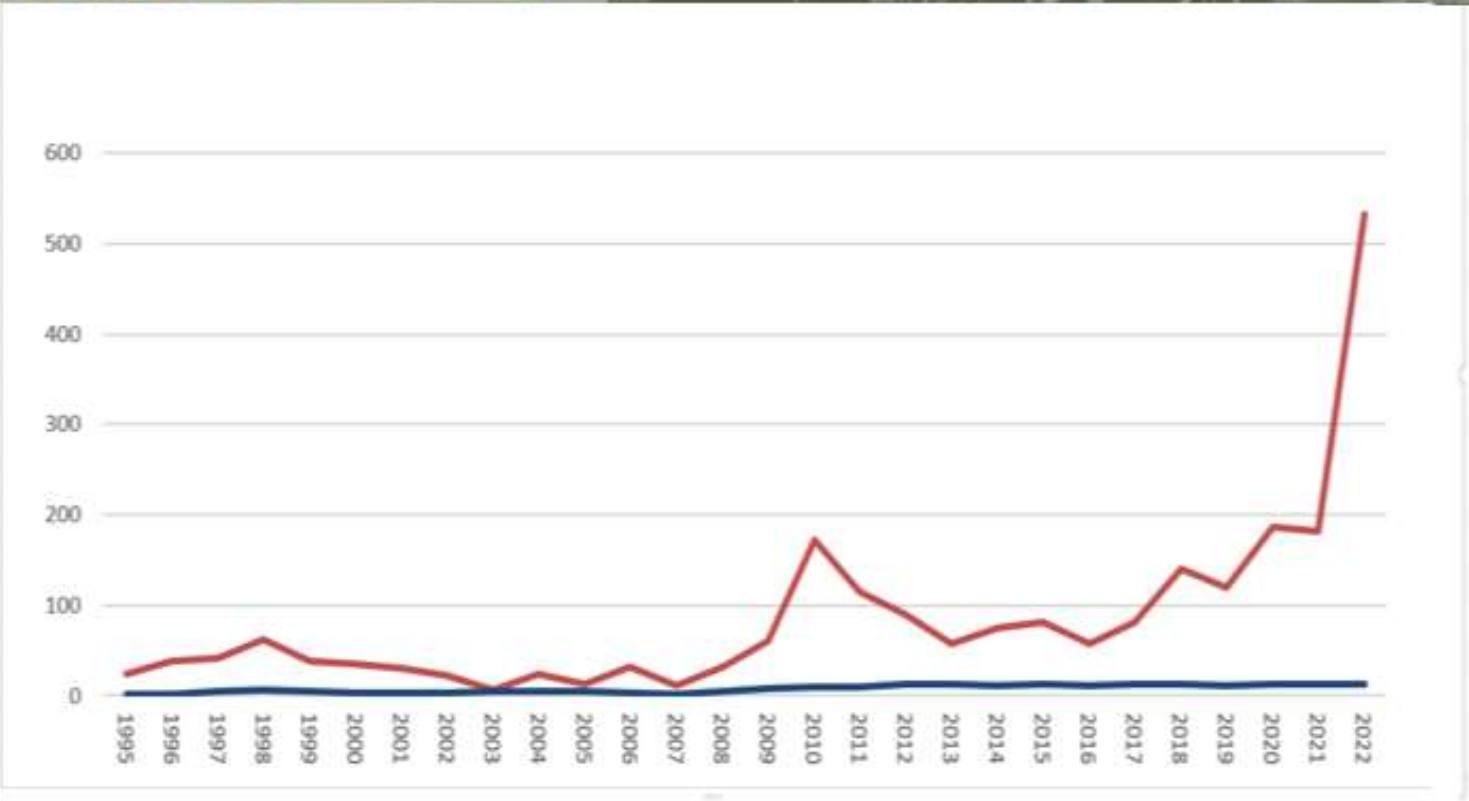
Dingy Skipper records 2020

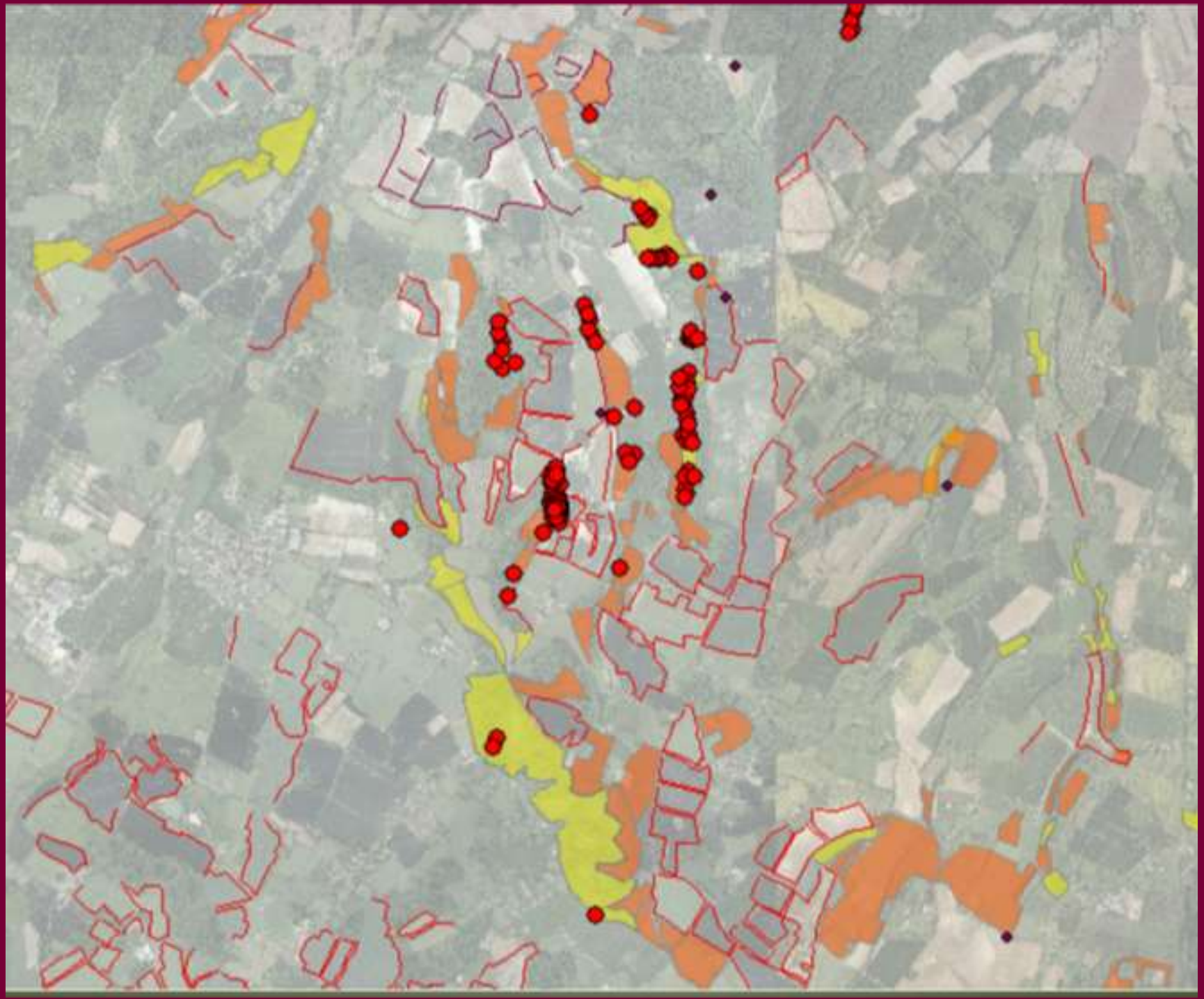
Dingy Skipper records 2020 on arable reversion land

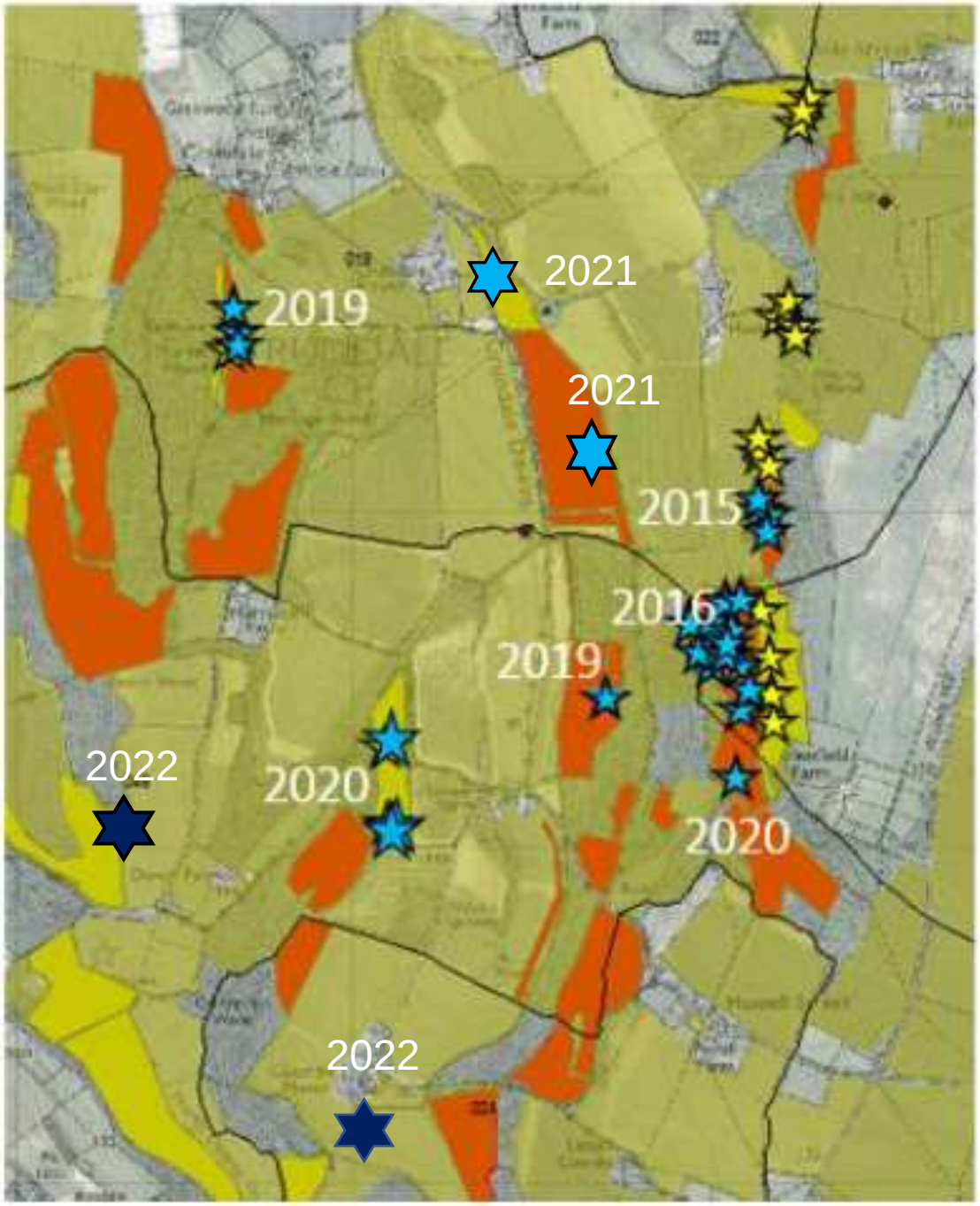
Arable reversion/restoration

Farm holdings under schemes

Duke of Burgundy







The expansion of Black veined moth in the Hunt Street and Crundale area

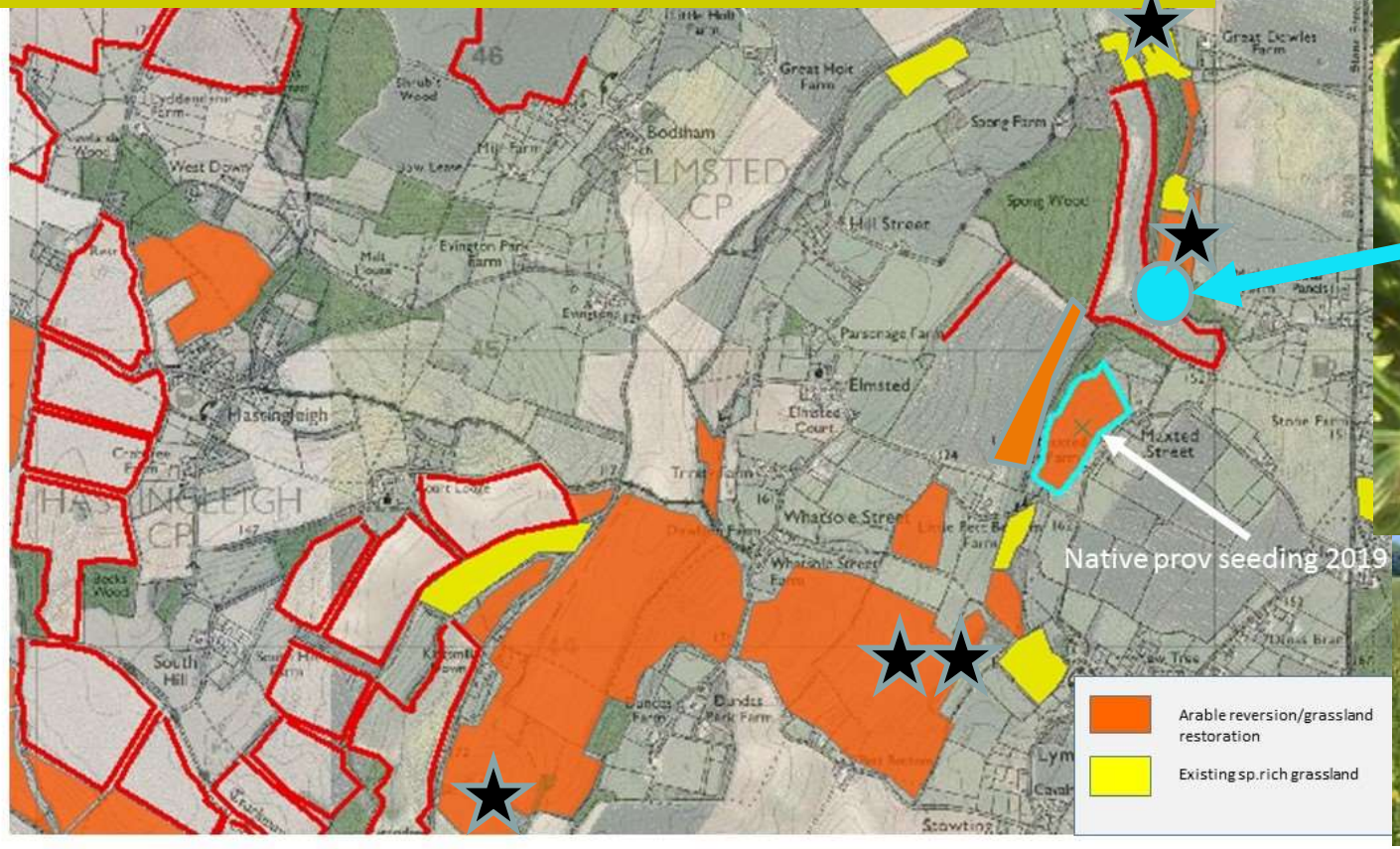
Colony Sites/records pre2015

Records/colony sites since 2015 (date) shows the year first recorded

Relic downland

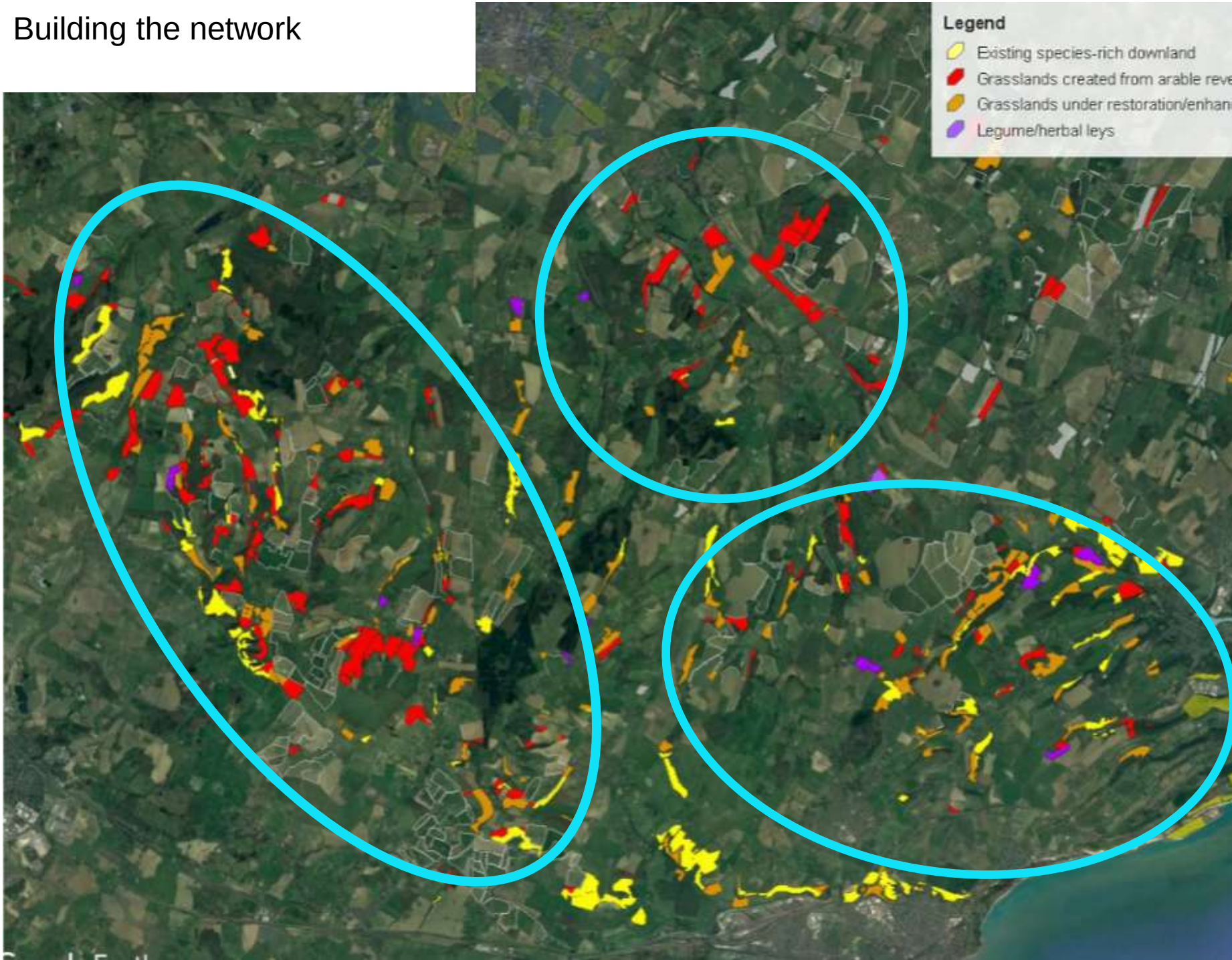
Arable reversion/restoration sites

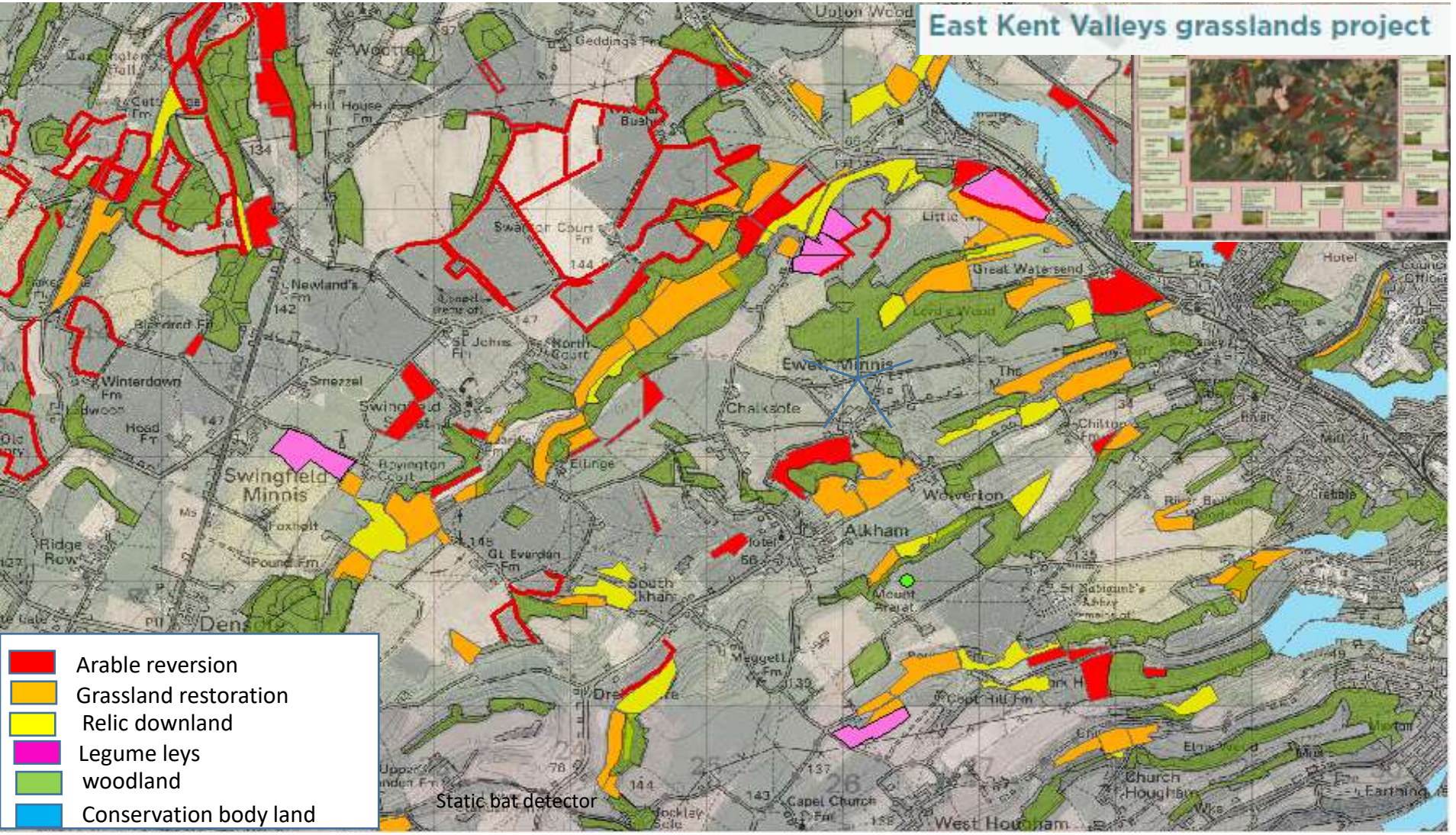
Habitat Creation for Adonis blue and Small blue - Elmsted

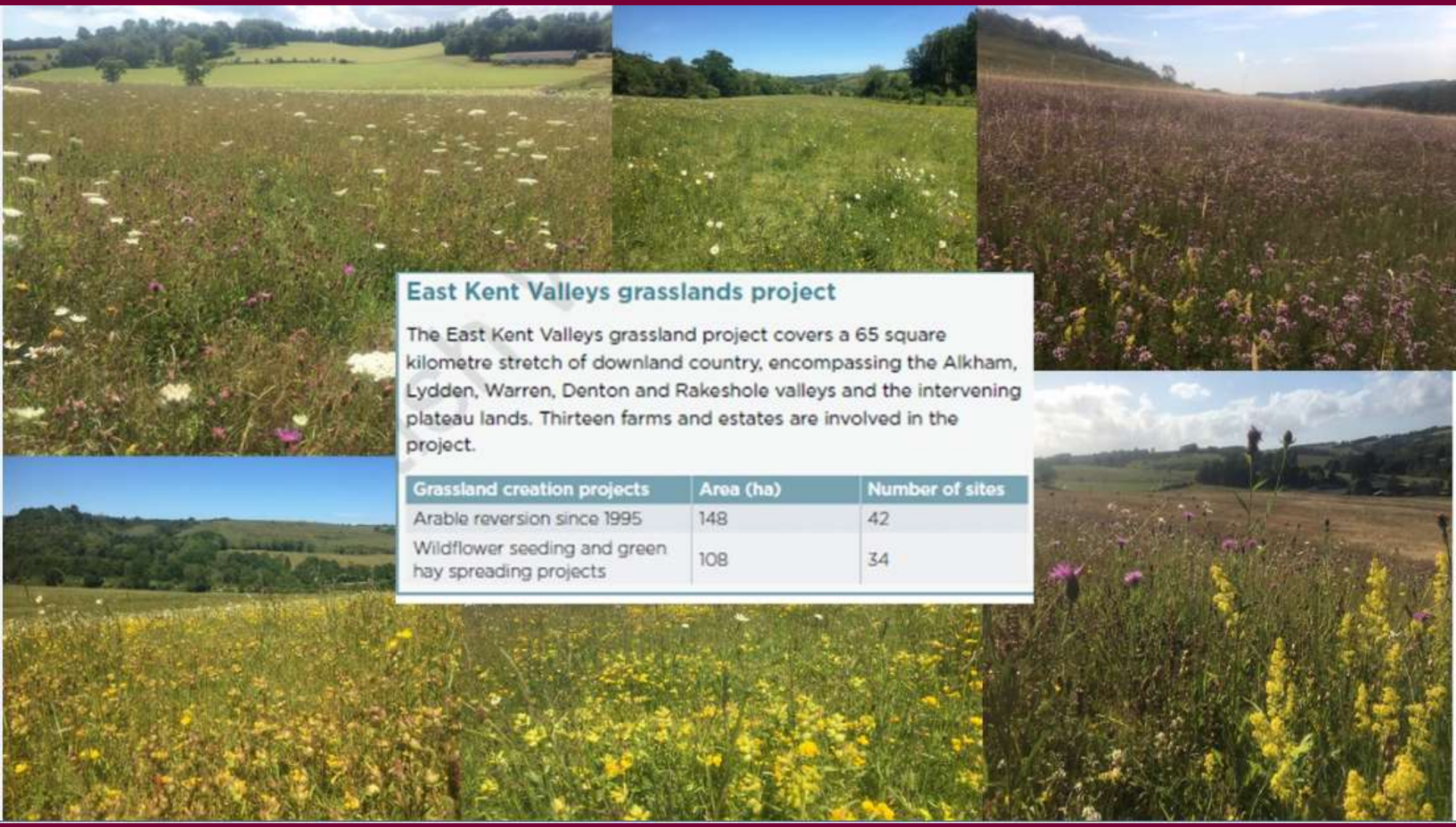



FUNC.
PHOTO
ZOOM

Building the network




East Kent Valleys grasslands project
Arable reversion
Grassland restoration
Relic downland
Legume leys
woodland
Conservation body land
Static bat detector

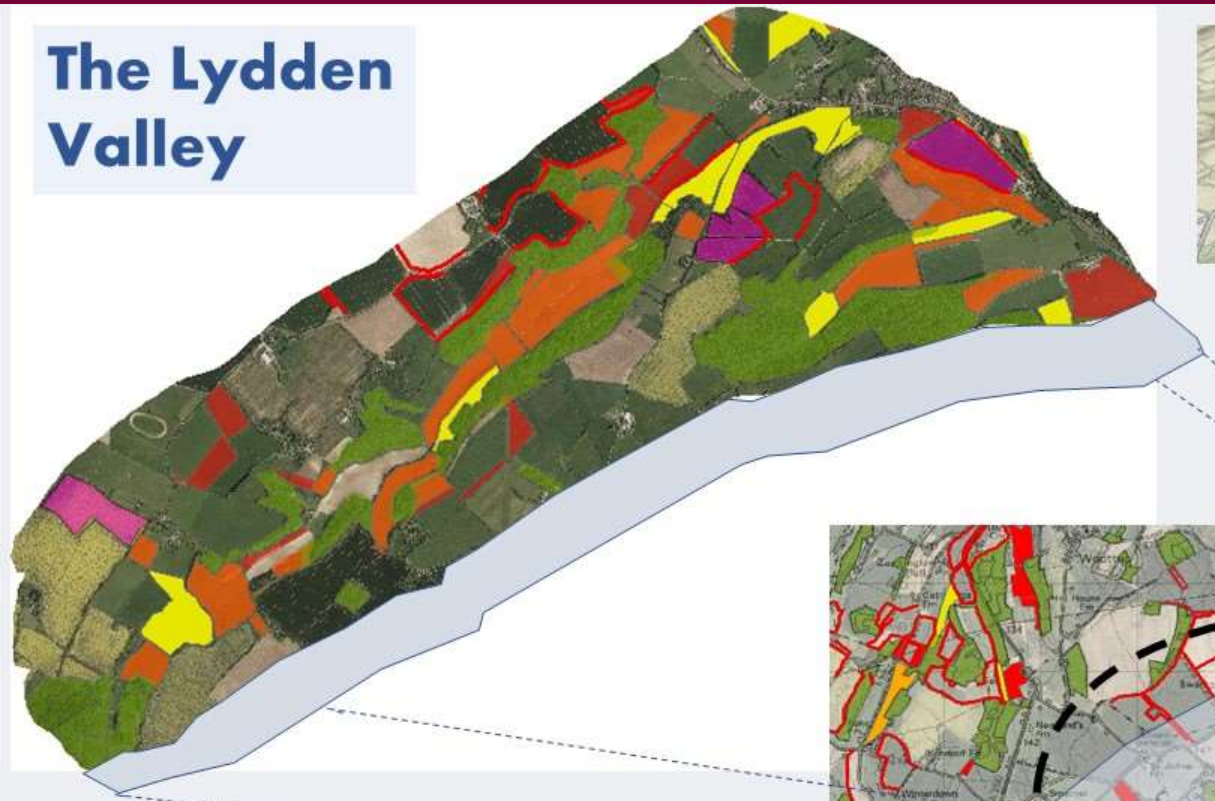


East Kent Valleys grasslands project

The East Kent Valleys grassland project covers a 65 square kilometre stretch of downland country, encompassing the Alkham, Lydden, Warren, Denton and Rakeshole valleys and the intervening plateau lands. Thirteen farms and estates are involved in the project.

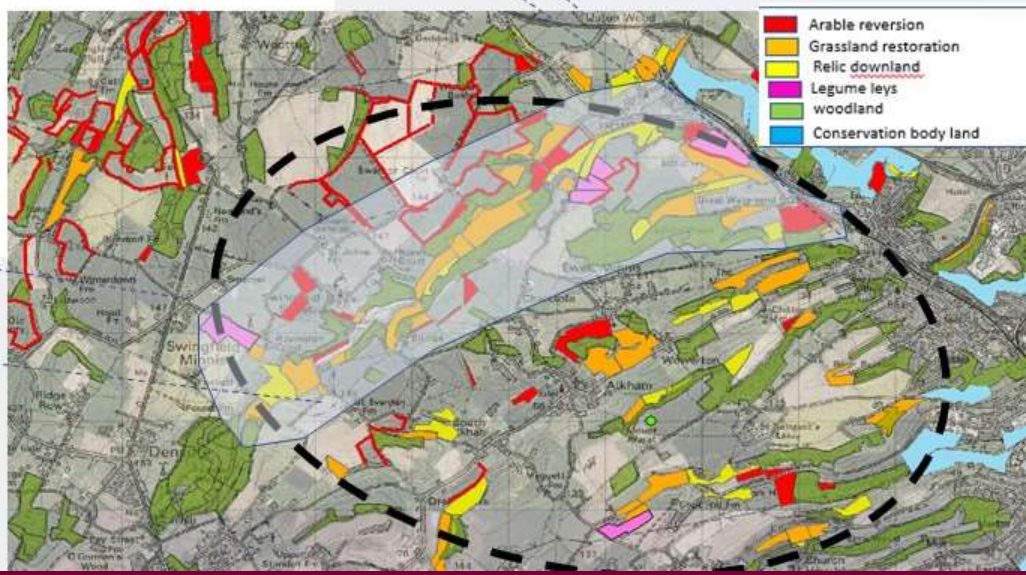
Grassland creation projects	Area (ha)	Number of sites
Arable reversion since 1995	148	42
Wildflower seeding and green hay spreading projects	108	34

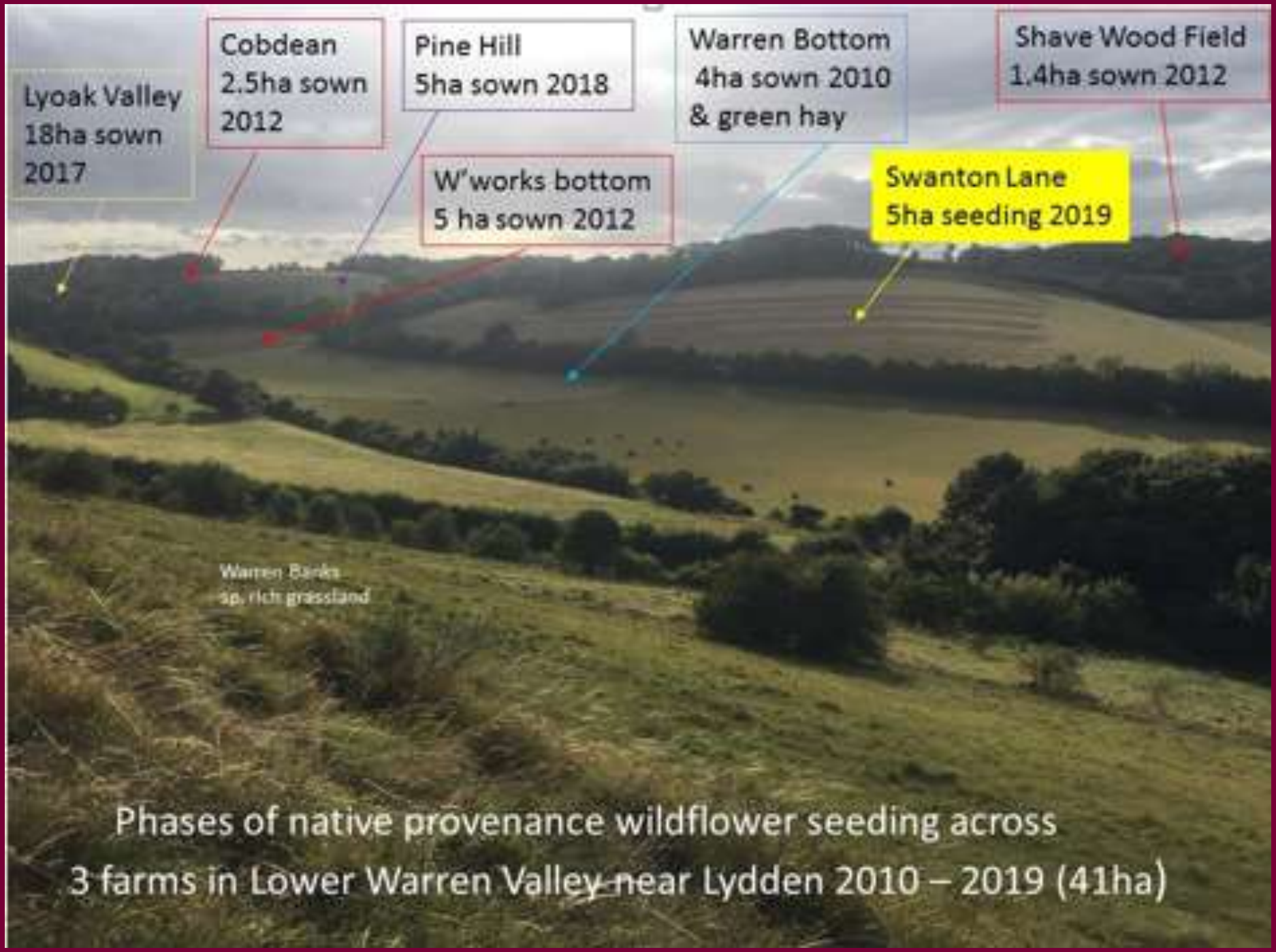
The Lydden Valley



arable reversion
grassland restoration
relic downland
legume leys
woodland
conservation body land

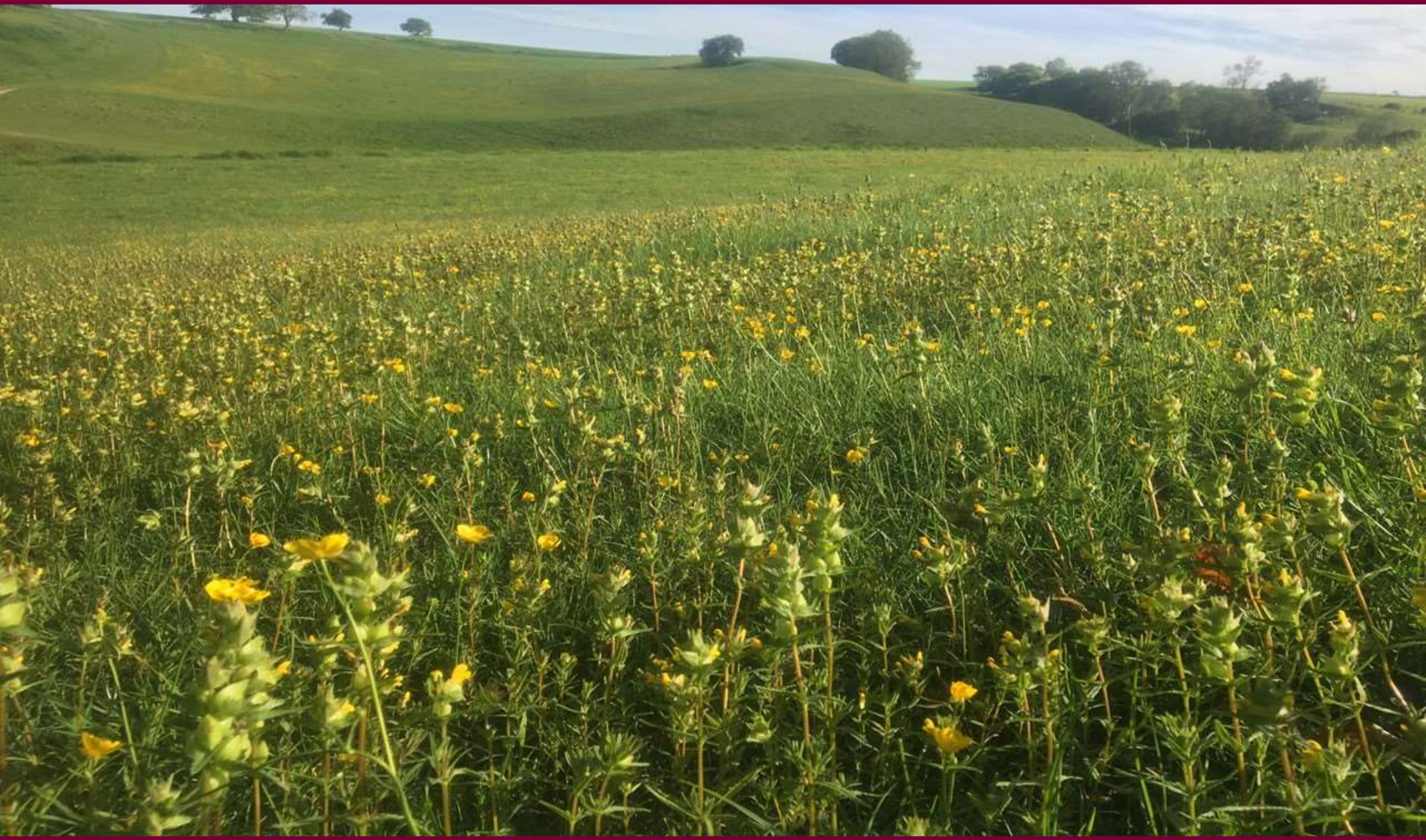
East Kent Valleys Project



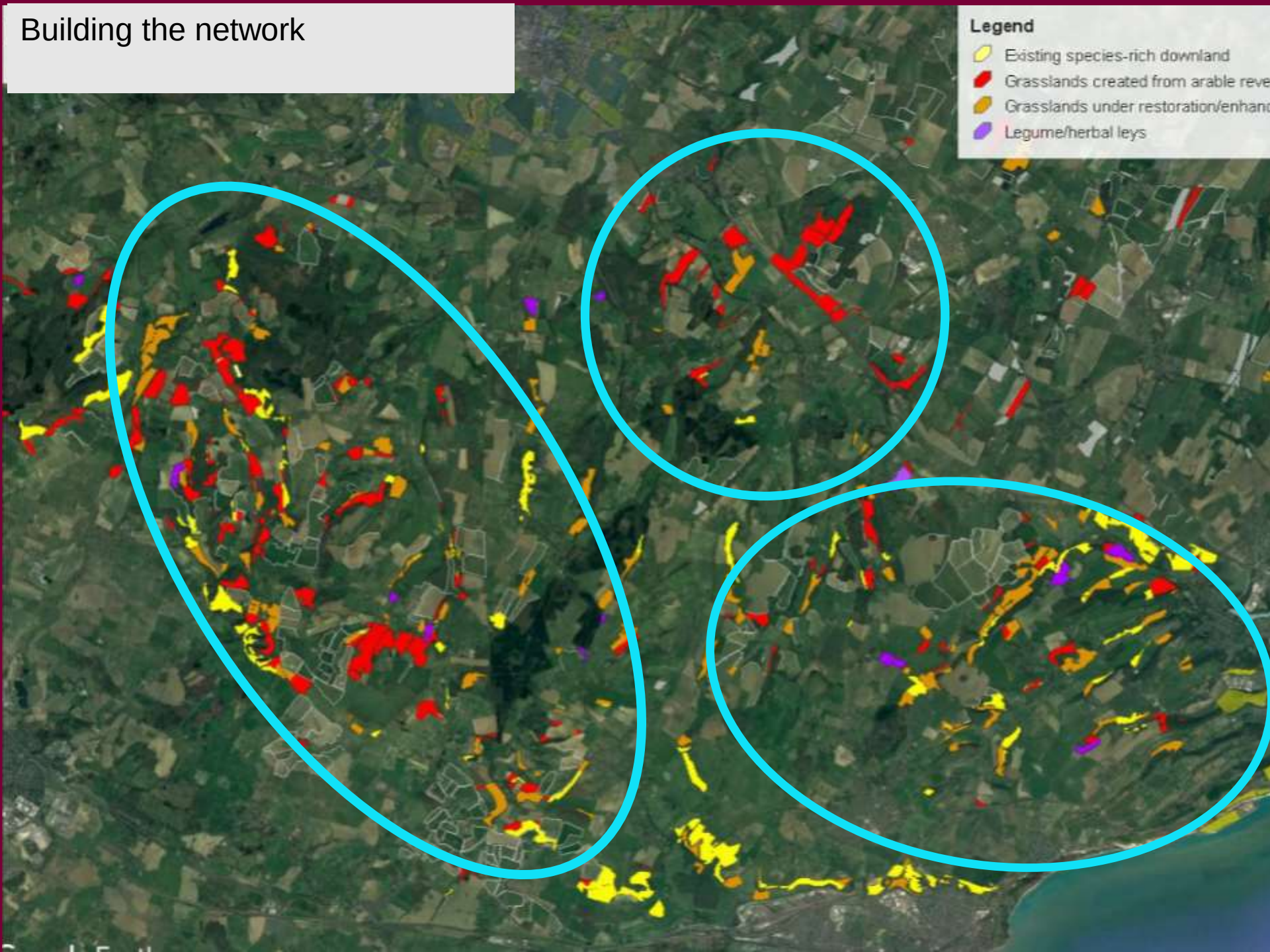

Lyoak Valley
18ha sown
2017
Cobdean
2.5ha sown
2012
Pine Hill
5ha sown 2018
W'works bottom
5 ha sown 2012
Warren Bottom
4ha sown 2010
& green hay
Swanton Lane
5ha seeding 2019
Shave Wood Field
1.4ha sown 2012
Warren Banks
sp. rich grassland
Phases of native provenance wildflower seeding across
3 farms in Lower Warren Valley near Lydden 2010 – 2019 (41ha)

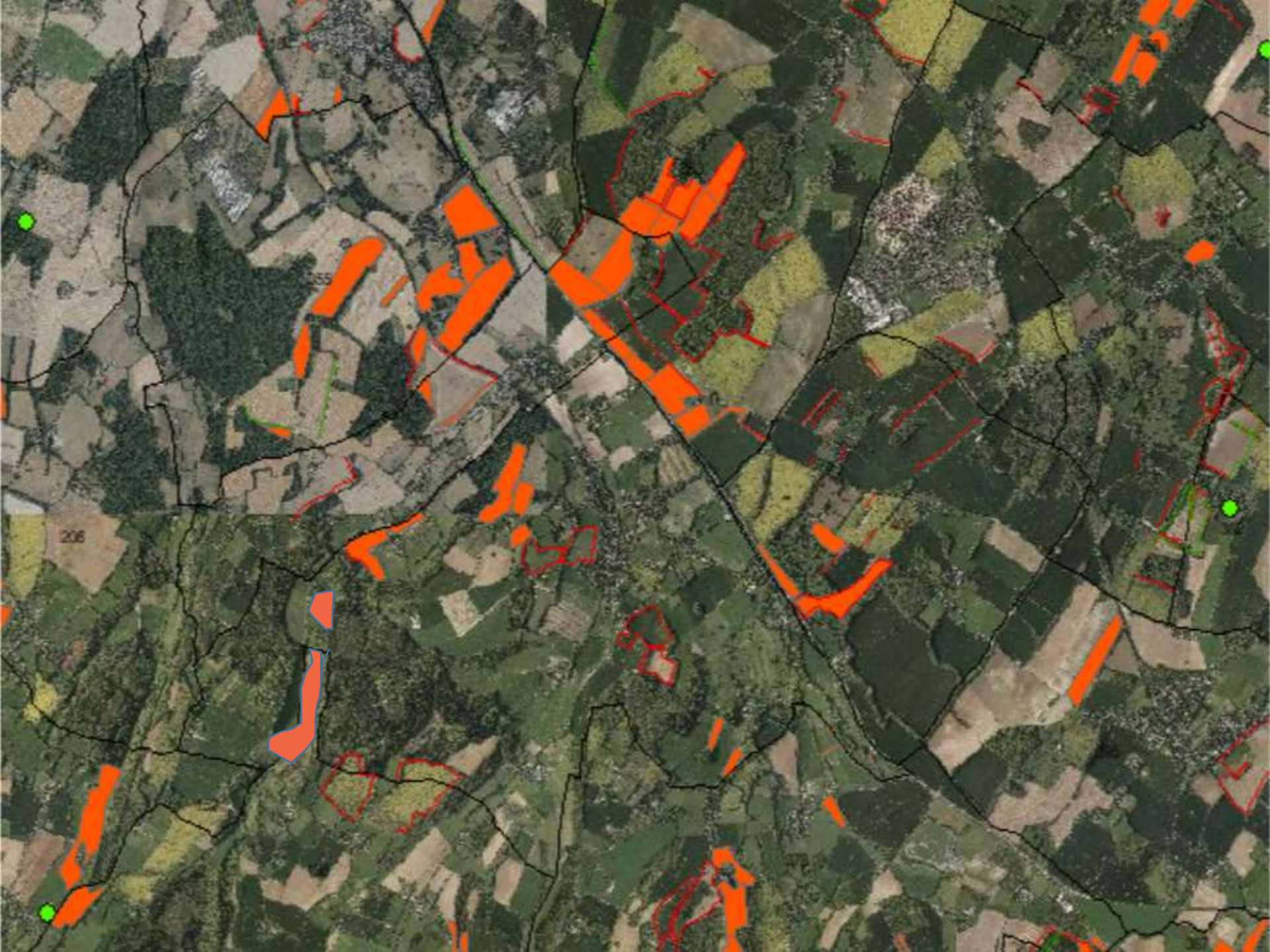
Lower valley area

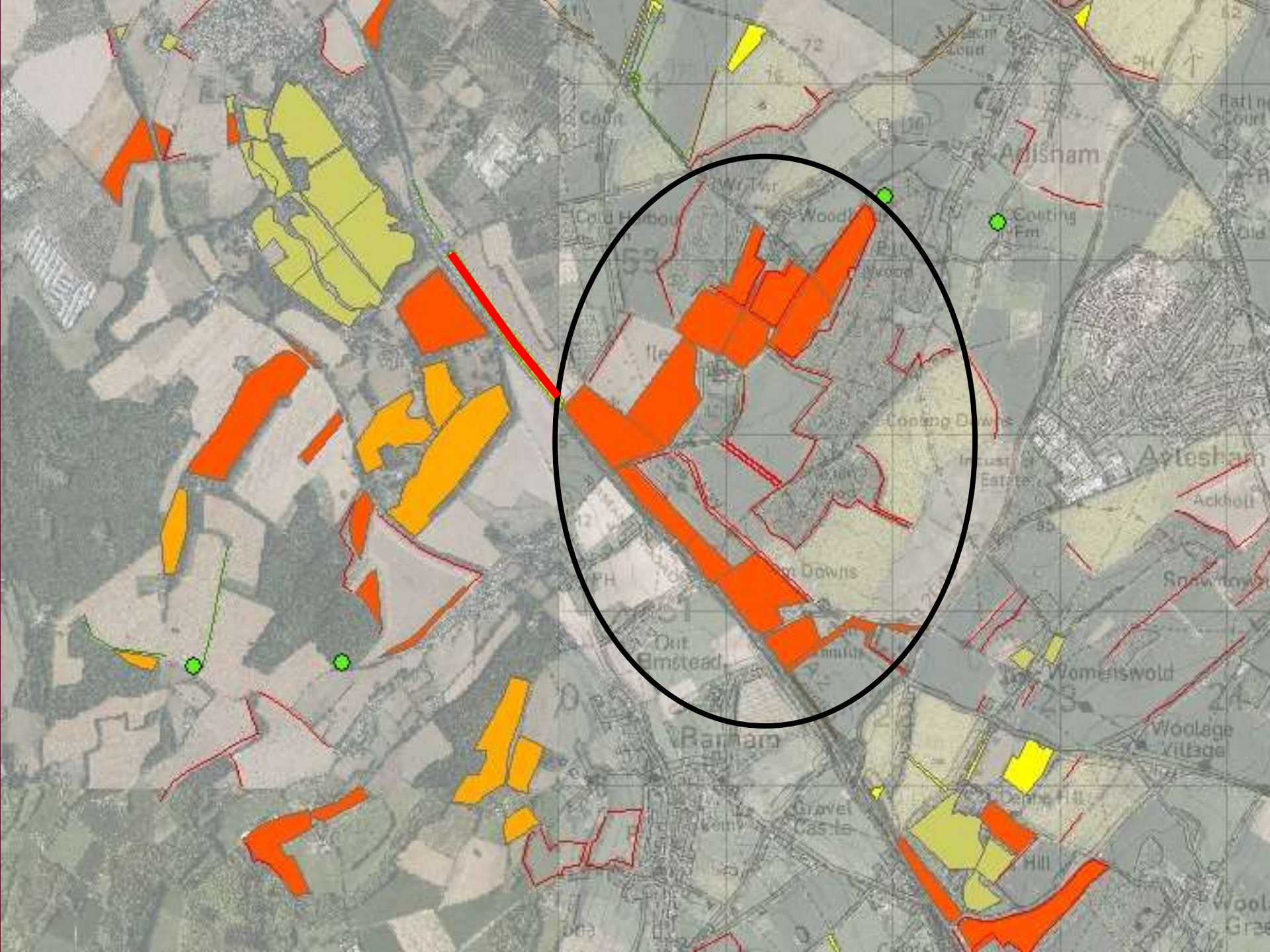

Native wildflower seeded
grasslands in central valley area



Building the network






Aylesham
Cooting Fm
Aylesham
Womenswold
Barham
Woolage Village
Gravel Castle
Hill

Barham Downs core area 120 ha wildflower seeded arable reversion - 6 farms




Barham Downs Project Area

- Wildflower seeded arable reversion
- Grassland restoration – wildflowers seeded
- Existing parkland
- New small blue colony








Delivering Landscape Scale Nature-based Solutions through Farmer Clusters

Kent's Plan Bee summit

22 Nov 2022

Farmer Cluster Approach – What is it?

Who – Farmers/landowners, a facilitator, relevant reps from NGOs, reps from other stakeholders.

What – Group or cluster of land managers based around a specific geographical area.

How – Regular meetings, targets across the landscape, connection through surveying, funnelling funds for habitat work, facilitating peer-peer exchange of knowledge, sharing of resource.

Where – >120 clusters across the UK. Can be anywhere there is a need.

www.farmerclusters.com

WHY work through Farmer Clusters?

70% of Kent (give or take) is farmland. To meet the aims of the government's 25 Year Environment Plan and the promise to protect 30% of land by 2030, a collaborative approach to sustainably managing farmland and establishing Nature Recovery Networks is vital.

- Restore and create habitats
- Boost biodiversity and bio-abundance
- Reduce flood risk
- Improve water quality
- Reduce inputs (e.g. pesticides)

View of the M20 and surrounding farmland of Kent

“Ours is a special landscape which we grew up in. If we don’t care about it, who will?”

Photos and quote: Lou Carpenter, Marden farmer (Green-winged orchid, true fox sedge, yellow loosestrife bee)

Rare Weald Meadow

The area covered by meadows in England has declined by 97%.

Farmers across the Cluster are working to create species rich lowland meadows and reverse local plant extinctions.

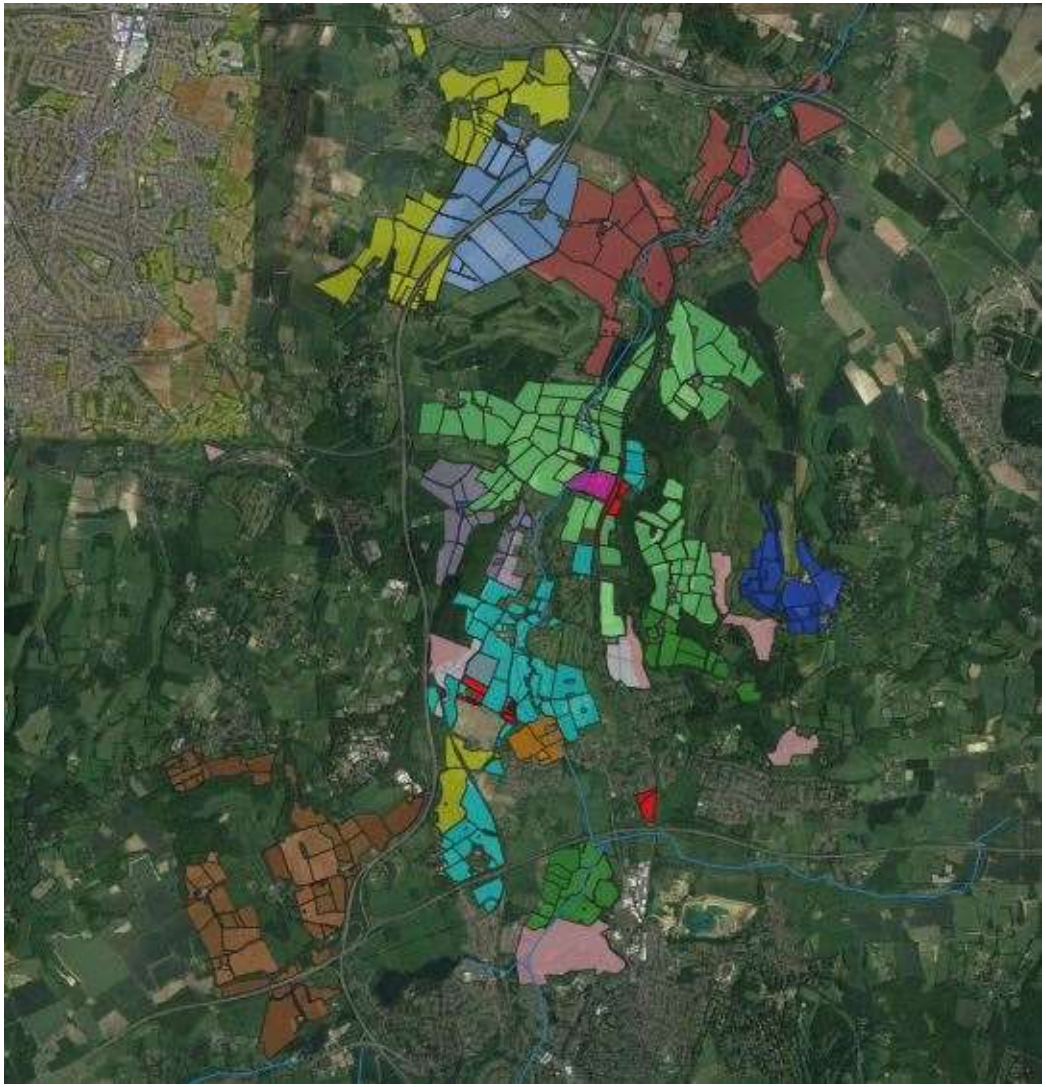
Our vision is to restore grasslands across the Beult.

Lou Carpenter, Manor Farm

Devil's Bit Scabious
Dyers Greenweed
Cluster farmers Lou Carpenter & Peter Hall collecting Yellow Rattle from cluster member Peter Payne's meadow.

Photos: Anne Tipples, Lou Carpenter, Darren Nicholls

Darent Valley Farmer Cluster



14 members
2,455 ha

Darent Valley Natural Capital Assessment with a Nature Based Solutions Approach

The project will assess the habitat, land use and natural capital value of the mid Darent Valley Catchment area. It will make recommendations on opportunities for the Darent Valley Farmer Cluster (DVFC), partners, and other landowners to deliver habitat and biodiversity improvements, and other public benefits, through future environmental projects for local nature and landscape recovery.

Kent Downs
Area of Outstanding Natural Beauty

Department for Environment Food & Rural Affairs

Why an NbS Assessment for Darent Valley Farmer Cluster?

1. Feedback from the farmers:
   - Collaborative working, inc. approach to environmental actions
   - Establish baselines (habitat, species)
   - Better understanding of Natural Capital

2. Increased access to funding for collaborative or landscape scale conservation projects:
   - ELMs local nature recovery and landscape recovery
   - Transitional funding through FiPL
   - Blended funding (public and private)

3. Wider environmental aims:
   - Supporting local Nature Recovery Network strategy and government's 30 by 30 promise.
   - Identify opportunities to deliver public benefits, through ecosystem services – natural flood management, clean water, biodiversity, carbon sequestration, landscape.

NbS Assessment Approach

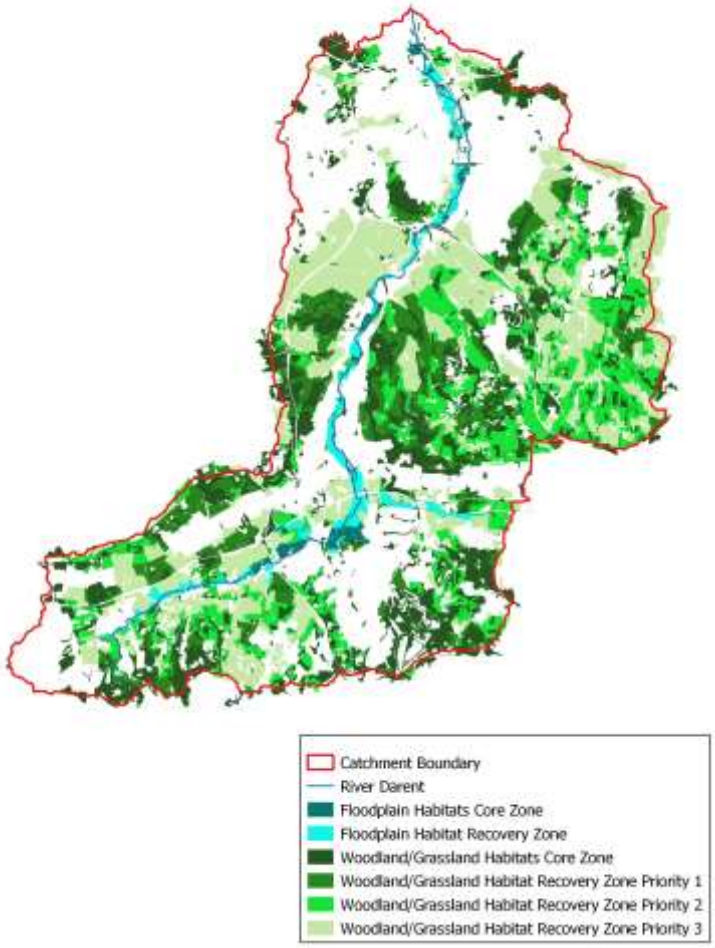
Identify priority habitats, GIS mapping of existing habitat and enhancement opportunities

Experienced surveyor to ‘ground truth’ existing habitat condition and opportunities.

Post-survey, mapping is updated, and survey outputs are entered into the C+ Tool and Biodiversity Metric

Photos: Alexa Murray Mujtaba

Darent Valley Whole Catchment Habitat Recovery Prioritisation



NbS Assessment Process

The assessment stages are delivered in consultation with the project partner(s), for example:

- Stage 1

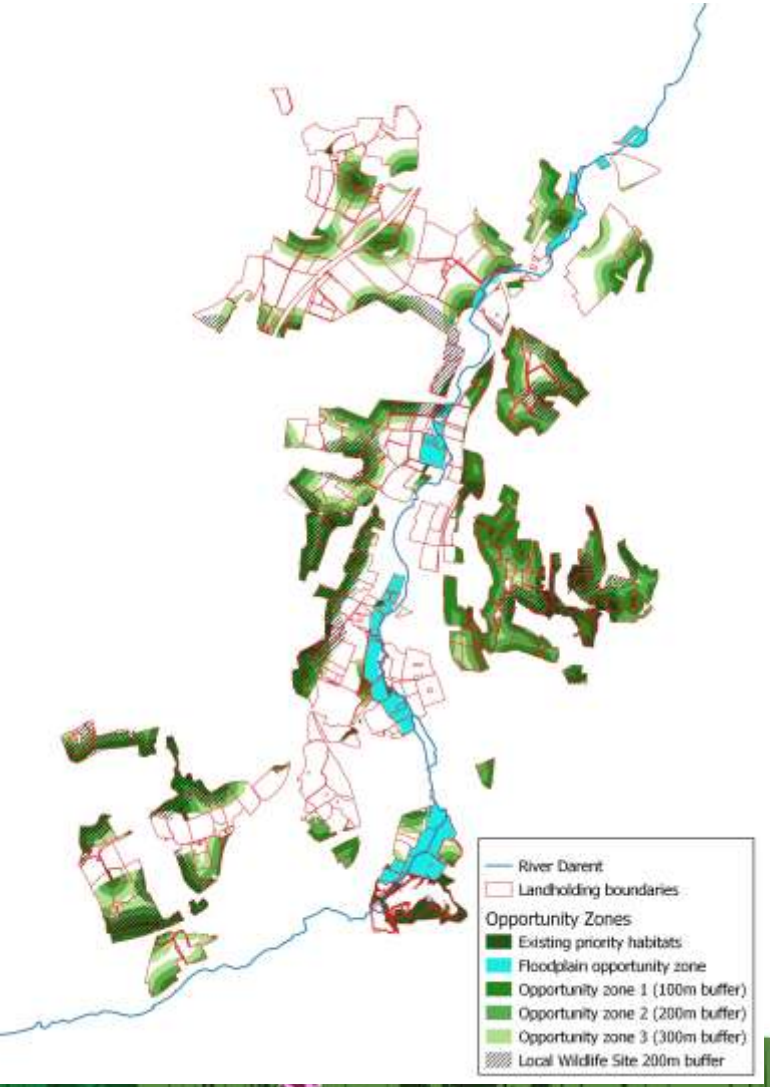
- ➢ Set outline strategic objectives and milestones.
- ➢ Undertake desktop analysis and input all available mapping data.
- ➢ Use of Nature Recovery Network methodology to map out the whole catchment.
- ➢ Identify high level habitat network opportunities - Significant, Potential, Low potential

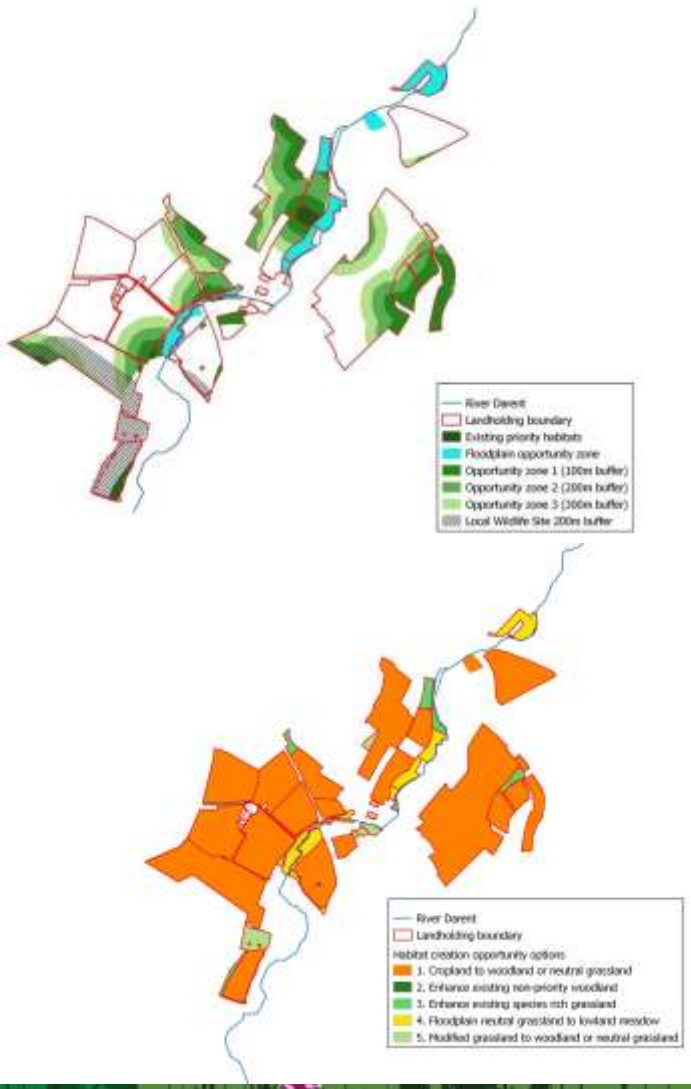
NbS Assessment Process

- Stage 2

- Walkover surveys to condition assess areas, ground truth desktop mapping and opportunities
- Quantification of natural capital opportunities
- Identification and mapping of priority habitat creation, enhancement and restoration opportunities and networks

This map illustrates all the landholdings in the DVFC mapped against opportunity zones that prioritise areas according to suitability for habitat creation on the basis of potential contribution to wider habitat networks e.g., woodland or grassland.





Potential Habitat Creation Options

Priority habitat creation zones

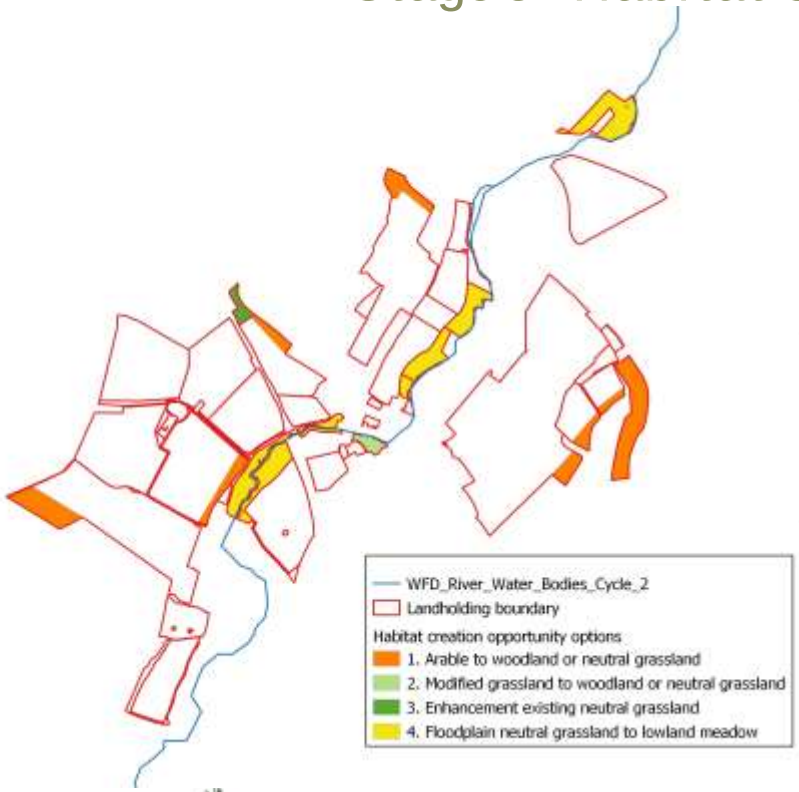
This map shows the priority opportunities described above for all landholdings within DVFC, mapped to a single landholding.

Potential habitat creation options

For this case study:

- all arable and modified grasslands (options 1 and 2) are considered as suitable for either woodland or species rich grassland habitat creation.
- Existing woodland or species rich grassland habitat is considered suitable for enhancement but remaining the same baseline habitat.
- All grasslands in the floodplain opportunity zone are considered most suitable for restoration to lowland meadow priority habitat.

Stage 3 - Habitat Options at a Field Level



- The maps of priority habitat creation zones and potential habitat creation options can be used to identify specific opportunities for the landholding that might be most suitable for habitat creation or restoration at a field level.
- The opportunities highlighted use the habitat creation zones as a guide, but also consider which areas may be most compromised for agricultural production, for instance due to flooding or irregular/small field size.
- Consultation with the land manager, regarding opportunities and constraints of the individual landholding is fundamental to decision making at this stage.

Darent Valley Landscape Recovery Pilot

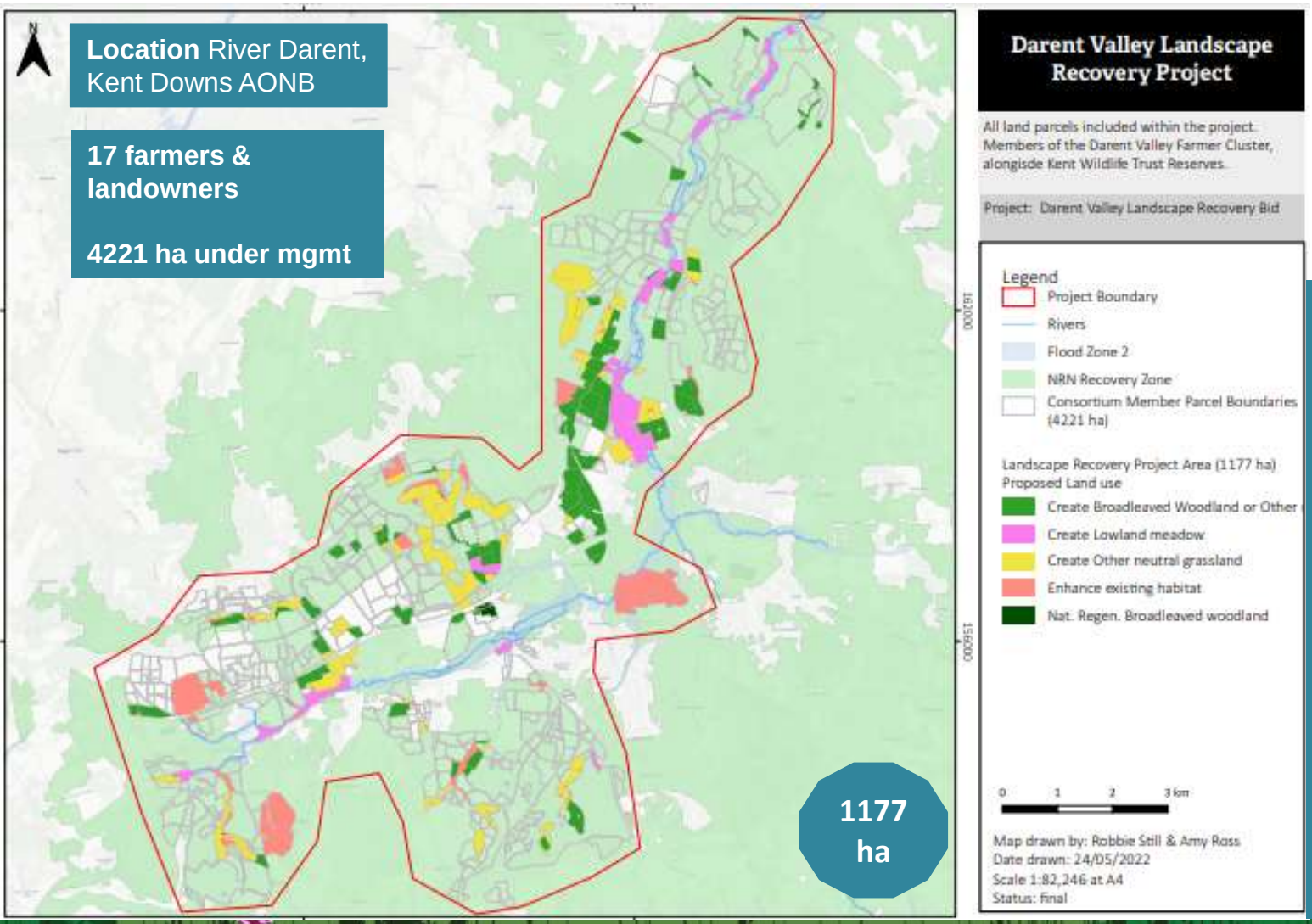
Darent Valley Farmer Cluster (DVFC)
Lead Partner - Kent Wildlife Trust (KWT)
SERT, KDAONB Unit, NWKCP & BTF

Together, we aim to:

- Increase area and connectivity of habitat creation and restoration
- Increase biodiversity and bioabundance
- Improve flood mitigation and drought resilience
- Improve social benefits through greater access to nature
- Enhance engagement between the local community and farmers/landowners
- Continue to sustainably grow food for the nation and drive a thriving rural economy

The 2-year Project Development Phase is to ready our project for Implementation.

'biodiversity once again thriving, with the river functioning as a true corridor for wildlife, connected with the landscape by its tributaries & a restored mosaic of habitats, which includes sustainable farming businesses & prospering rural communities'



Approach: restoring the river channel, its ecological connectivity, valley habitat & biodiversity - restoration of floodplain, restoration & creation of valley habitat mosaic, addressing barriers to fish movement; natural regeneration on land, conservation grazing.

Landscape Recovery Pilot Development Phase Approach

- River restoration, including:
  - An ecological connectivity strategy
  - A river habitat restoration strategy
  - A Nature-based Solutions (NbS) for aquifer recharge plan
- A landscape scale NbS assessment and blended finance model to develop private investment deliverables
- A Natural flood management (NFM) plan
- Stakeholder and community consultation & engagement
- Accessibility consultation and audit
- Land agent and legal, commercial, governance advice

Thank you

marc.crouch@kentwildlife.org.uk

KENT'S PLAN BEE

LAND MANAGEMENT AND POLLINATORS
OPPORTUNITIES AND CHALLENGES

MICHAEL BAX D.L. FRICS FAAV

BTF PARTNERSHIP

NOVEMBER 2022

View from Private Landownership Sector

- **BTF Partnership**
- **G H Dean**
- **Moat Farm**
- **Agriculture**
- **Farm Tenanted Sector**
- **Forestry**

- **Bees - vital indicator**
- **No life without Bees**
- **Myriad Pressures**
  - **Human Beings**
  - **Development**
  - **Food Production**
  - **Predation**
- **Starting Point**
  - **Human Occupation of Land**
  - **Residential/Commercial/Industrial**
  - **Agriculture**

THE CHALLENGES

- **Mindset**
- **Advice**
- **Rules of Good Husbandry**
- **Subsidy Eligibility**
- **Stewardship Prescriptions**
- **Prescriptions under NBS**

THE OPPORTUNITIES

- Targeted Schemes
- Habitat
- Connectivity
- Collaboration
- Bigger, Better, More joined up

Farming with Pollinators

Roland & Katrina Brown

Kent's Plan Bee 22-Nov 2022

Growing High Quality Produce in a Wildlife-Friendly Way

Minimise Inputs

Maximise Forage

Cherish pollinators as aim, ecosystem service & profit centre

- What we do
- What we don't do
- Associated challenges

Maximise Forage

Wildflower Meadows

Core Meadow Management

- Wildflower meadows as a crop
  - Maximise diversity, not just hay yield
  - Pollinators benefit and contribute
- Late summer cut, no inputs
- Active spreading
  - Field sequence tactics & targeted spreading runs
  - Targeted manual seeding

Maximise Forage

Wildflower Meadows

Around the Meadows

- Late flowering strips
  - *Very* late cut, if at all.
  - Winter grazing, diversity
- Wide boundaries
  - Wider habitat diversity
  - Zones for target flowers including select pollinator food-plants

Maximise Forage

Hedges

Keep them big

- 3-yearly rotational pattern – hedge and verge flora
- Sides cut only for access
  - *Flail maintenance complexity*

Pollinator-friendly…

- Species choice, where planted
  - *Not always best structurally*
- Standards choice

Maximise Forage

Trees and more

Long, continuous and rich forage season

- Cherish sallow, especially earliest males
- Mistletoe crop
- Ivy

Minimise Inputs

Orchard and Animals

- **Orchard**
  - Insecticide free
  - Low fungicide
    - Avoid flowering
    - *Less chemical, more cultural control*
  - *Towards regenerative*

- **Livestock**
  - Wormers
  - Insecticides (strike)
  - On demand rather than prophylactic *(care)*

Cherish Pollinators

Apiaries and Other

Beekeeping

- Threat to wild pollinators?
  - Not at these forage levels

- Pond
- Bare ground, bee scrapes
- Dead wood

Growing High Quality Produce in a Wildlife-Friendly Way