

Thursday 18 May 2023  
Lullingstone Country Park

**Annual joint meeting of the KNP Board  
and the Management Working Group**

**“Blended finance & nature-based  
solutions at the landscape scale:  
Darent Valley”**

**KNP Chair: Matthew Balfour**



**Credit: Thomas Alexander**

## MORNING SESSION:

09.55: Introduction from Matthew Balfour, Chair of the KNP.

### 10.00: Darent Valley presentations:

Nick Johannsen, Director, Kent Downs AONB Unit - presentation on Darent Valley Landscape Partnership Scheme - 20 minutes.

William Alexander owner of Castle Farm (Farmer Cluster Lead), on Farmer Cluster approach in Darent Valley – 10 minutes.

Marc Crouch, Darent Valley Landscape Recovery Project Manager, KWT on Darent Valley Landscape Recovery pilot (as part of Environmental Land Management Scheme – ELM) - 20 minutes.

Dr Chris Gardner, Head of Science and Partnerships, The South East Rivers Trust (SERT) on **river restoration preparatory work** (strategies for implementation) as part of the Darent Landscape Recovery project – 10 minutes.

11.00: Questions from the floor to presenters.

11.15: **Short car trip to nearby meadow restoration at Preston Farm**, as this relates to the identified opportunity that led to the Landscape Recovery pilot application.





# Darent Valley

## Landscape Partnership Scheme

- Linked to AONB Management Plan principles...
- To conserve, enhance and celebrate the natural beauty of the landscape and to protect it for future generations.
- From 2017 to 2024
- The Darent Valley is located just 15 miles from London, making it very vulnerable to urban pressures.
- National Lottery Heritage Fund, Interreg, AONB, local councils, CiL, Kent Wildlife Trust, Defra...and more around £4m total...





# Our aims

More than 40 integrated projects across the 5 themes of...

- Art and culture
- Heritage
- Access, visitor management and sustainable tourism
- Landscape and biodiversity
- Education





# Art and Culture



Samuel Palmer trail...  
inspiring views and  
Palmer's life  
App, leaflet, wayfinding



Samuel Palmer  
exhibition, V&A,  
Ashmolean.



Art led events; walks,  
talks, festivals, airstream  
caravan/ VR film; source  
to sea/ dawn to dusk.

# Heritage



Restoration of  
Queen Anne Bath  
house (early 18<sup>th</sup>  
century)/ ice house



Restoration of  
Archbishops Palace  
(Tudor)  
  
Roman Villa schools  
resources



4 archaeological  
digs involving  
community



# Access and sustainable tourism



750m of new and resurfaced footpaths (with much more planned for next year – river path extension.

Changing places, access enhancement, inclusion.



17 Rail Trails...visitor management



10 Community Trails



# Landscape and Biodiversity



Introduction of herd of feral goats to graze scrub



Enhancement of over 200 Ha chalk grasslands



Natural flood management strategy and measures...

- Test and Trial
- Chevening
- Preston



# Education and Events



Festivals of the landscape (2022 and 2023)

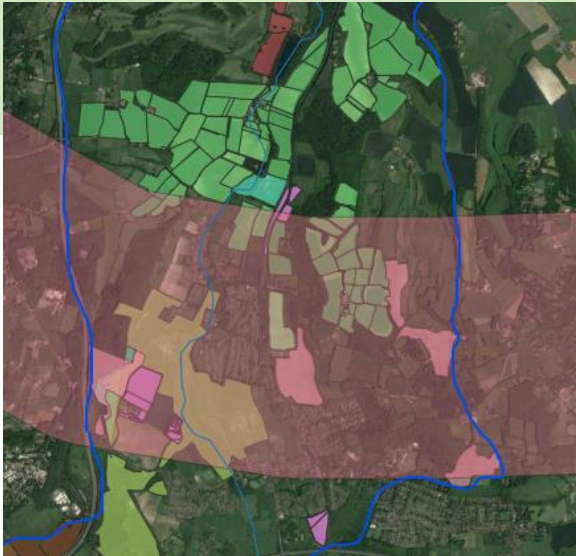


Winter Fair



Over 50 workshops, walks, talks and family events

# Wider impact:



DV Cluster  
NR Pilot partner  
Nature based solutions



Community engagement, enjoyment and love for the landscape, health and well being.



Legacy planning..  
NR Pilot  
Blended finance  
New bids







“

You have enabled such great work, that will benefit the valley and people visiting it for so many years to come - long after many of the projects apparently finish. Well done.

*Jonathan Histed*



## Questions?

### For more info

- [www.darent-valley.org.uk](http://www.darent-valley.org.uk)
- [darent.valley@kentdowns.org.uk](mailto:darent.valley@kentdowns.org.uk)
- 01732 494505

DARENT  
VALLEY





# Darent Valley Landscape Recovery Pilot Project



This project is funded through Defra's  
Landscape Recovery Scheme, and  
supported by the Environment Agency



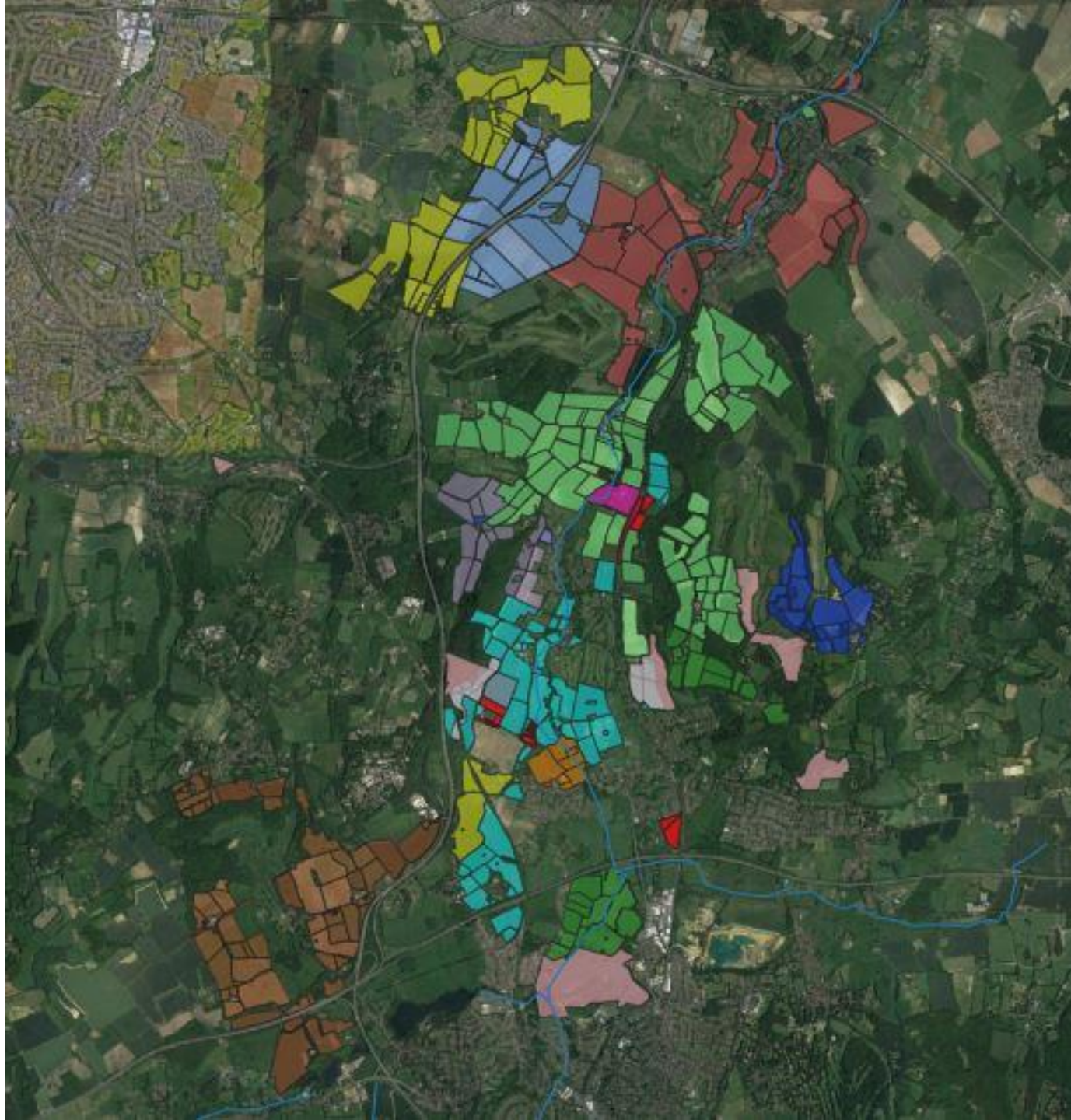
Department  
for Environment  
Food & Rural Affairs



Environment  
Agency



Darent Valley  
Farmer Cluster  
(DVFC)



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.



Department  
for Environment  
Food & Rural Affairs



## NbS Assessment Approach



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

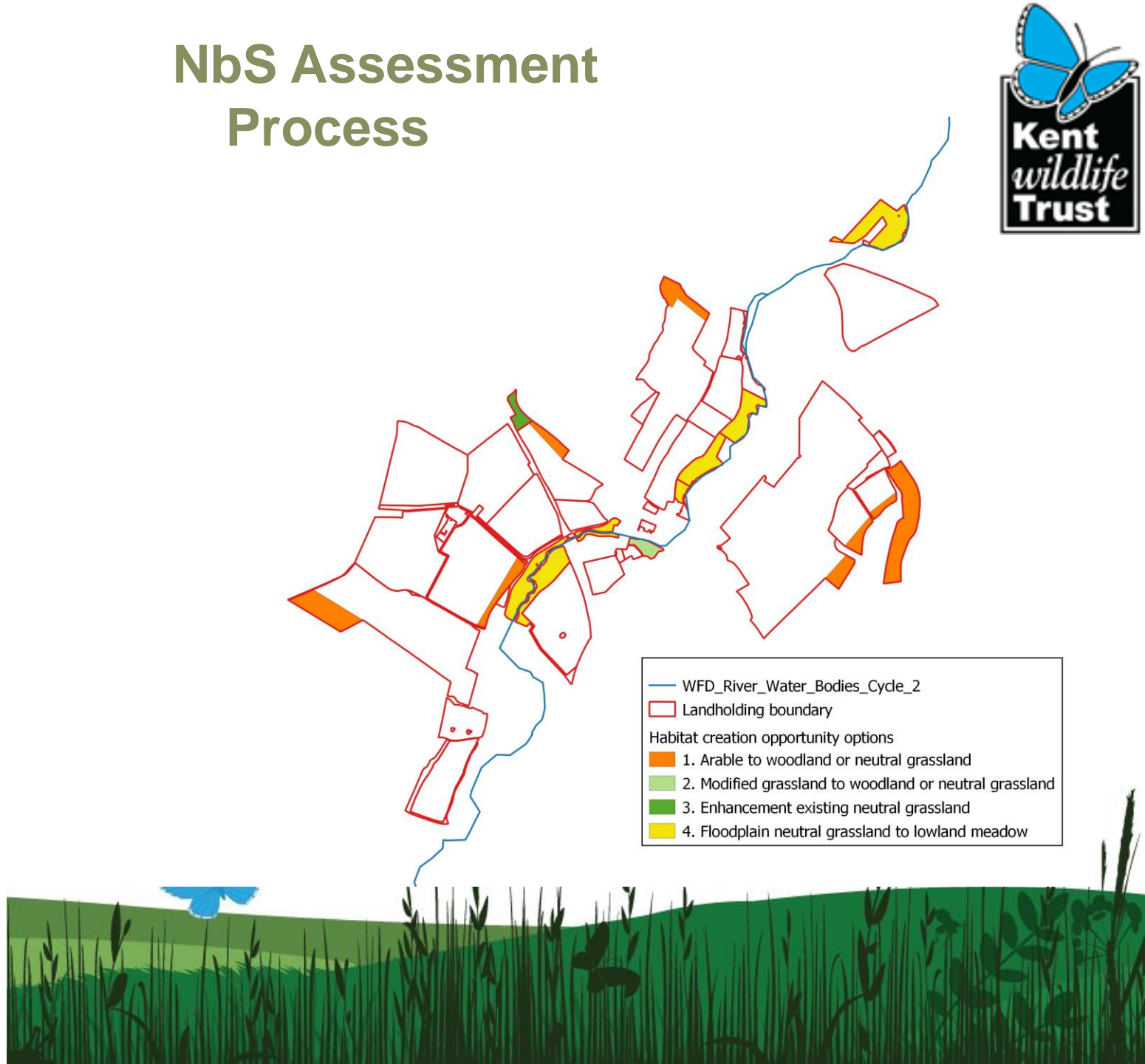
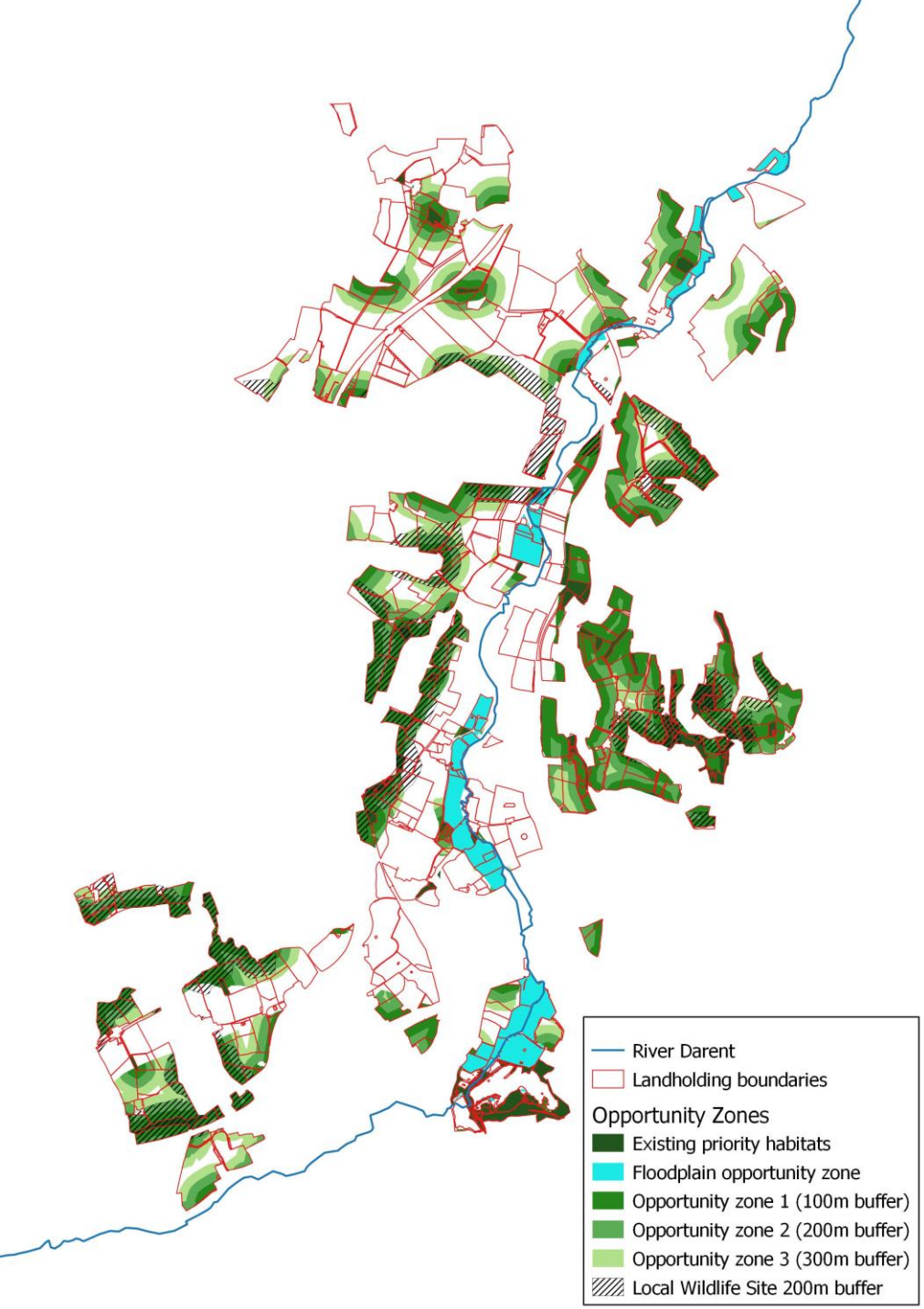
Experienced surveyor to 'ground truth' existing habitat condition and opportunities.



Post-survey, mapping is updated, and outputs are entered into the C+ Tool and Biodiversity Metric to quantify NC opportunities.



# NbS Assessment Process



# 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

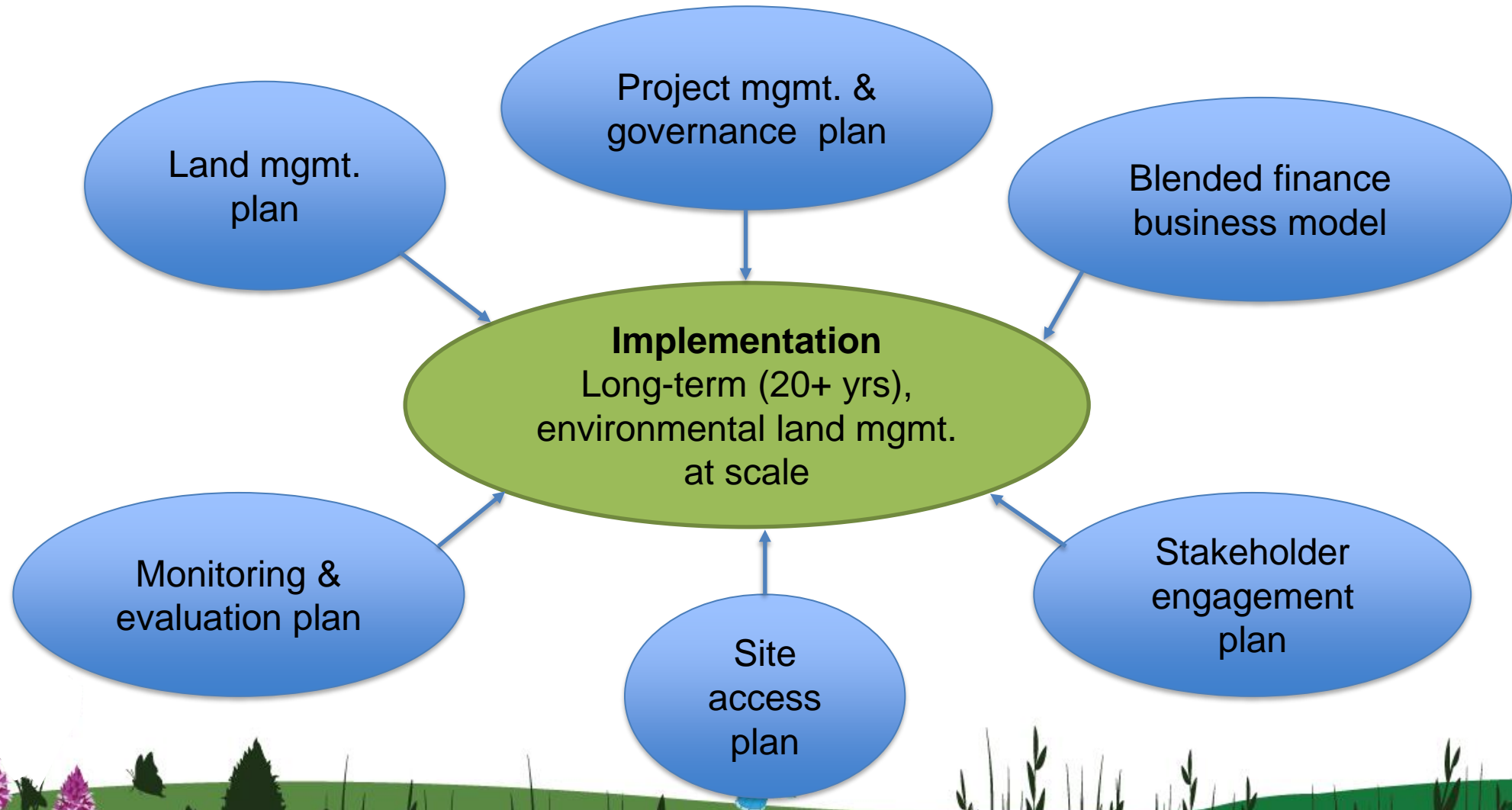
The 2-year Project Development Phase is to ready our project for Implementation.

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



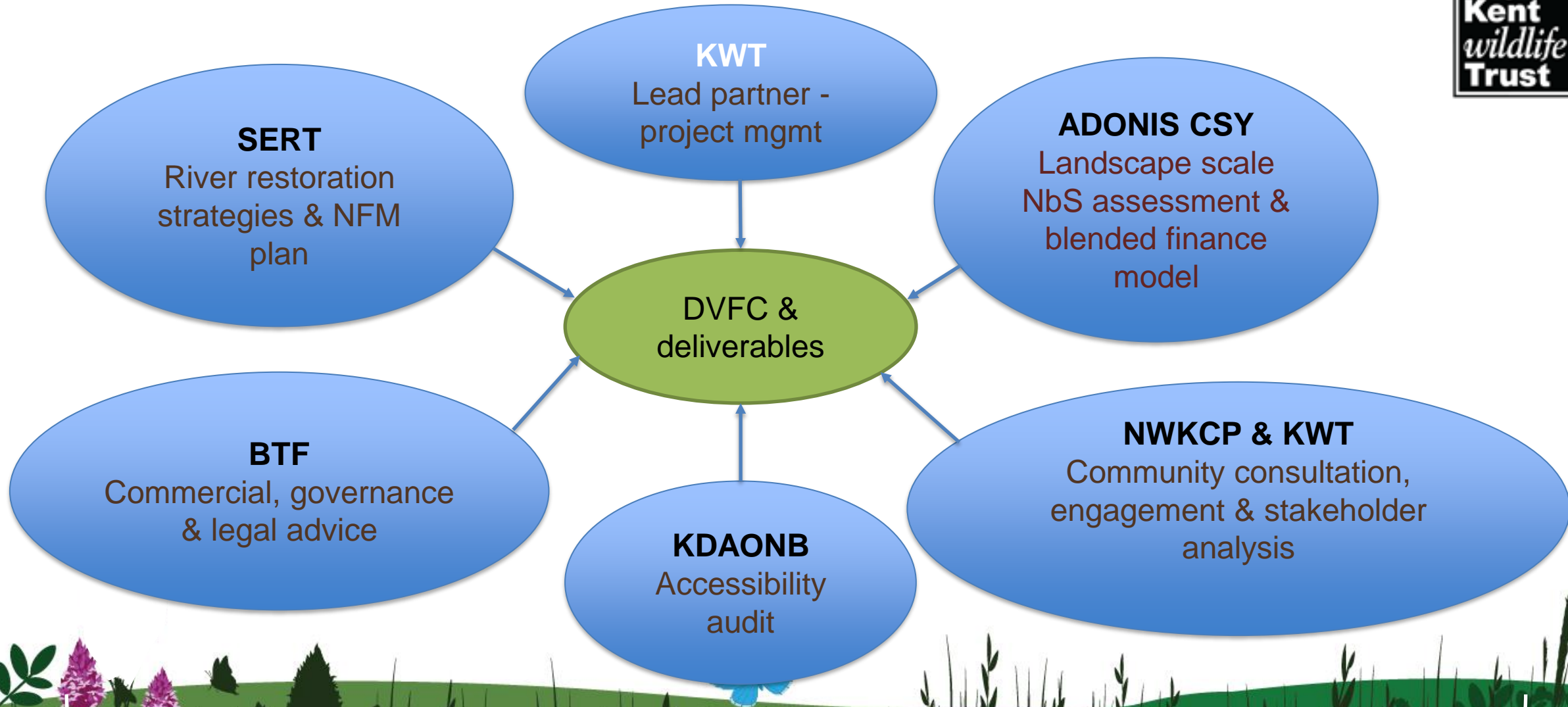


# Defra Landscape Recovery Deliverables



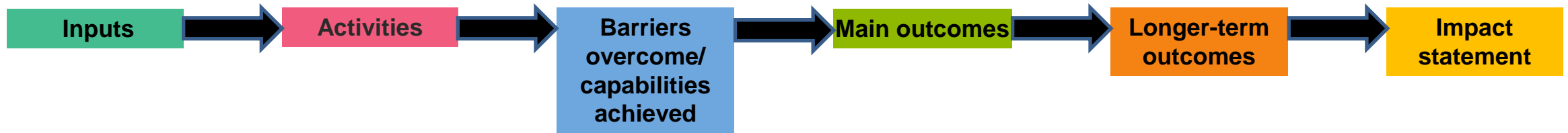


# Who & How





# DVLR Main Outcomes



## Enabling objectives

- Land management for nature recovery is proven as financially viable
- Increased access to and uptake of private / blended finance
- Increased landowner engagement with environmental activities
- Improved cooperation and cohesion between landscape stakeholders

## Environmental objectives

- Restoration, creation, and sustainable management of a mosaic of habitats
- Restoration of natural processes (e.g., sediment transportation and floodplain inundation) Restored in-channel ecological connectivity
- Alleviation of diffuse pollution, sediment and nutrient inputs
- Targeted recovery of priority species
- Increased carbon capture and long-term storage
- Flood risk reduction as a result of Natural Flood Management
- Promotion of increased aquifer recharge through land-use change and potential direct recharge

## Socio-economic objectives

- Increased sustainable access and engagement with the river and project area
- Increased understanding and knowledge of landscape recovery efforts and local nature and cultural heritage, including for harder-to-reach groups
- Sustainable farming businesses are established







# DVLR Blended Finance

Begin understand what services, benefits and co-benefits are provided by habitat transitions and who might benefit from these

What ,where and when are different sources of finance better suited to establishing and maintaining habitat transitions

Begin to understand who the 'investors'/'funders'/'long-term collaborators' are – who benefits, or depends on the services that you provide, who has invested in the catchment in the past e.g utilities, infrastructure, local industry?





How do we ensure the legal frameworks and investment mechanisms are in place to access funding for all of this?





# Thank you

[marc.crouch@kentwildlife.org.uk](mailto:marc.crouch@kentwildlife.org.uk)







# Darent Landscape Recovery

Dr Chris Gardner

[www.southeastriverstrust.org](http://www.southeastriverstrust.org)





# Darent Landscape Recovery



## South East Rivers Trust leading on:

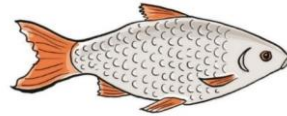
1. Ecological River Channel Connectivity Strategy;
  - Need: river channel is fragmented by numerous barriers from water-milling and flood defence operations;
  - Objective: to produce a prioritised plan for addressing in-channel habitat fragmentation and achieving fish passage source to sea;
2. Habitat Restoration Strategy;
  - Need: in-channel habitat is degraded due to physical modification;
  - Objective: to produce a prioritised plan for in-channel habitat restoration/enhancement;
3. Natural Flood Management (NFM) Strategy;
4. Natural based Solutions (NbS) Strategy for Aquifer Recharge.

# Darent Landscape Recovery

## Ecological River Channel Connectivity Strategy – why?

- **Barriers to fish migration / movement**

Artificial barriers (like weirs, watermills, sluices, hatches etc.) are recognised as one of the main threats to river ecosystems, resulting in habitat fragmentation and loss of connectivity.



- **Habitat fragmentation**

Is caused by human activities which disrupt the continuity of habitats used by wildlife, and is a terrestrial conservation issue as well as an aquatic one. Habitats which were once continuous become divided into separate fragments, restricting the movements of organisms (*e.g.* fish) and separating them from habitats / resources / other fish required for their survival / the completion of their life-cycle.

Fragmented habitats are also less resilient, preventing re-colonisation after pollution incidents, drought events and lowering genetic variability, due to the restricted effective population size, potentially placing populations at an evolutionary disadvantage.

- Different fish have different abilities – so assessment needs to be for each guild.

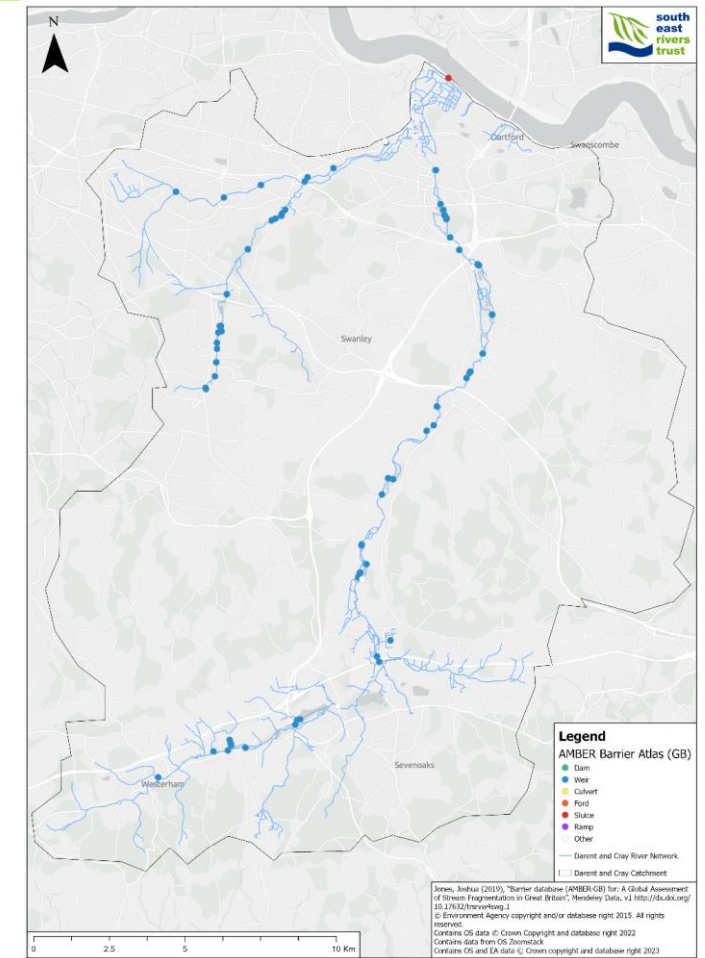




# Darent Landscape Recovery

## Ecological River Channel Connectivity Strategy – desk study

- The River Darent from ‘Source to Sea’ has a total of 51 known barriers to fish migration;
- However, these datasets are often incomplete; a comprehensive assessment of the distribution of artificial barriers in Great Britain, based on existing barrier datasets ground-trothed by field-based walkover surveys, indicated that existing barrier databases underestimate barrier density by 68%, particularly in the case of low-head structures (<1 m) which are often missing from current records (Jones *et al.*, 2019).
- Therefore, we estimate that there will be approx. 85 barriers in total.



# Darent Landscape Recovery



## Ecological River Channel Connectivity Strategy - method

- SNIFFER (2012) Methodology - An assessment is made based on structure type (e.g. vertical step weir, sloping weir etc.), based on: dimensions, turbulence, water depths and velocities.

Species thresholds												
Species thresholds	Water depth (cm) [passability score]				Water velocity (m s <sup>-1</sup> ) [passability score]				Vertical hydraulic head (m) [passability score]			
	No Barrier [1]	Partial barrier (low impact) [0.6]	Partial barrier (high impact) [0.3]	Complete barrier [0]	No Barrier [1]	Partial barrier (low impact) [0.6]	Partial barrier (high impact) [0.3]	Complete barrier [0]	No Barrier [1]	Partial barrier (low impact) [0.6]	Partial barrier (high impact) [0.3]	Complete barrier [0]
	Salmon	>15	14 to 11	10 to 8	<7	<2	2.1 to 2.5	2.6 to 2.9	>3	<0.6	0.6 to 1.0	1.01 to 1.39
Adult Trout	>10	9 to 7.5	7.4 to 6	<5	<2	2.1 to 2.5	2.6 to 2.9	>3	<0.4	0.41 to 0.6	0.61 to 0.99	>1.0
Adult Grayling	>10	9 to 7.5	7.4 to 6	<5	<1.5	1.6 to 1.9	2 to 2.8	>2.9	<0.2	0.21 to 0.25	0.26 to 0.29	>0.3
Coarse fish	>10	9 to 7.5	7.4 to 6	<5	<1	1.1 to 1.5	1.6 to 1.9	>2	<0.1	0.11 to 0.15	0.16 to 0.24	>0.25
Adult Lamprey	>8	7.9 to 6	5.9 to 3.1	<3	<0.5	0.6 to 0.99	1 to 1.4	>1.5	<0.15	0.16 to 0.25	0.26 to 0.29	>0.3
Juvenile Eel	>5	4.9 to 3	3 to 2.1	<2	<0.3	0.31 to 0.49	0.5 to 0.79	>0.8				
Juvenile salmonids	>8	7.9 to 6	5.9 to 3.1	<3	<1.5	1.51 to 1.9	2 to 2.8	>2.9	<0.1	0.1 to 0.24	0.25 to 0.34	>0.35
Juvenile Lamprey	>2	1.9 to 1.1	1 to 0.6	<0.5								
Adult eel	>8	7.9 to 6	5.9 to 3.1	<3								

Species thresholds								
Species thresholds	Turbulence [passability score]				Effective Length of Structure / Fish Pass (m)			
	No Barrier [1]	Partial barrier (low impact) [0.6]	Partial barrier (high impact) [0.3]	Complete barrier [0]	No Barrier [1]	Partial barrier (low impact) [0.6]	Partial barrier (high impact) [0.3]	Complete barrier [0]
	Salmon	Low	Moderate	High	-	<10	11 to 30	31 to 99
Adult Trout	Low	Moderate	High	-	<10	11 to 30	31 to 99	>100
Adult Grayling	Low	-	Moderate	High	<5	6 to 15	16 to 99	>100
Coarse fish	Low	-	Moderate	High	<1	2 to 6	7 to 19	>20
Adult Lamprey	Low	-	Moderate	High	<3	4 to 9	10 to 49	>50
Juvenile Eel	Low	-	Moderate	High	<3	4 to 6	7 to 29	>30
Juvenile salmonids	Low	-	Moderate	High	<3	4 to 9	10 to 49	>50
Juvenile Lamprey								
Adult eel								

WFD111 (2a) Coarse resolution rapid-assessment methodology to assess obstacles to fish migration

Field manual  
level A assessment

4. PHYSICAL ATTRIBUTES FOR AN INDIVIDUAL TRANSVERSE SECTION (TS) **Site ref no:**

4.1 FOR BARRIERS PRESENTING A VERTICAL DROP: WEIRS, CULVERTS, FORD OR BRIDGE FOOTING OUTLETS, OVERSHOT SLUICES, ETC.

Vertical hydraulic head (m)	Eff. pool depth (m)	Effective weir height (m)	Up (Y/N)	Standing water (Y/N)	Level of turbulence (L, M, H)	Debris binding structure? (Y/N)	Structure is rigid? (Y/N)
TS1							
TS2							
TS3							
TS4							
TS5							
TS6							
TS7							
TS8							
TS9							
TS10							

4.2 FOR BARRIERS PRESENTING A SLOPE: WEIRS, CULVERTS, FORDS, BRIDGE FOOTINGS, RAPIDS, CHUTES AND DIVERSION CHANNELS

Total hydraulic head (m)	Effective length (m)	% slope	Eff. pool depth (m)	Effective weir height (m)	Up (Y/N)	Standing water (Y/N)	Level of turbulence (L, M, H)	Debris binding structure? (Y/N)
TS1								
TS2								
TS3								
TS4								
TS5								
TS6								
TS7								
TS8								
TS9								
TS10								

4.3 FOR BARRIERS PRESENTING STEPS, STEPPED WEIRS, BOX-TRAP/SIDE TYPE FISHWAYS OR COMPLEX WATERFALLS

Total hydraulic head (m)	Effective length (m)	Eff. pool depth (m)	Step height (m)	Height of step (m)	Number of steps	Effective weir height (m)	Up (Y/N)	Standing water (Y/N)	Level of turbulence (L, M, H)
TS1									
TS2									
TS3									
TS4									
TS5									
TS6									
TS7									
TS8									
TS9									
TS10									

Note: only complete tables in sections 4 and 5 for juvenile eels (JE) if NO climbing substrate is present

5. VELOCITY

Velocity (m/s)	1.0	0.8	0.5	0.3
TS1				
TS2				
TS3				
TS4				
TS5				
TS6				
TS7				
TS8				
TS9				
TS10				



# Darent Landscape Recovery

## Ecological River Channel Connectivity Strategy - method

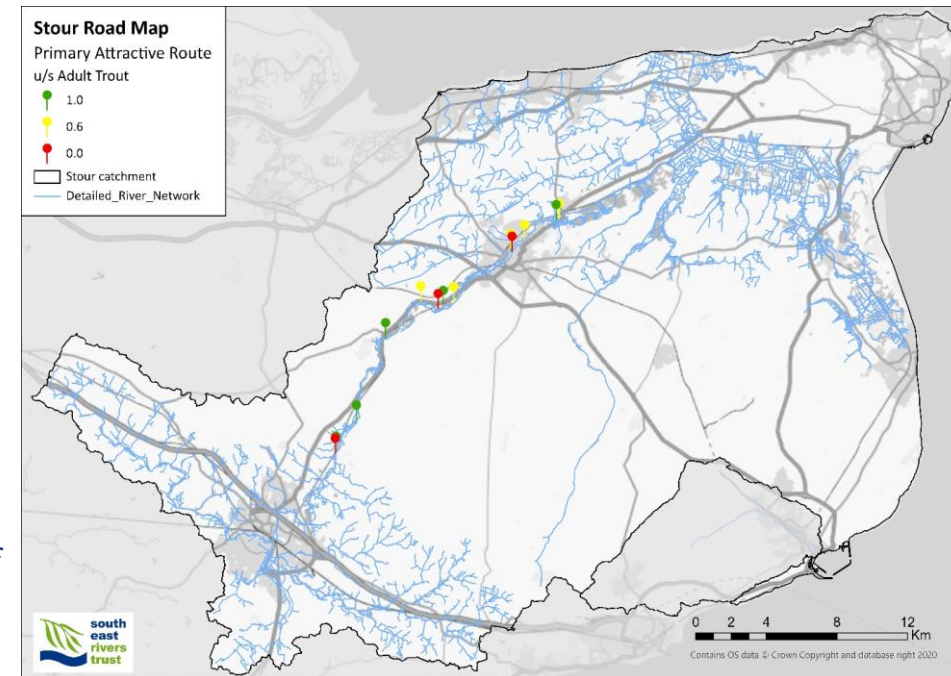
- SNIFFER (2012) Methodology

**No barrier [1]:** *No obstacle, passable if that the obstacle does not represent a significant impediment to the target species/life-stage, or species guild, and the majority of the population should be able to pass during the majority of the period of migration (movement). This does not mean that the obstacle poses no costs in terms of delay, e.g. increased energetics, or that all fish will be able to pass;*

**Partial barrier (low impact) [0.6]:** *A partial low impact obstacle is assigned if that the obstacle represents a significant impediment to the target species/life-stage, or species guild, but most of the population (e.g. > two thirds) will pass eventually; or the obstacle is impassable for a significant proportion of the time (e.g. < one-third). Culverts represent good examples of partial obstacles if they impede fish during periods of high or low flow;*

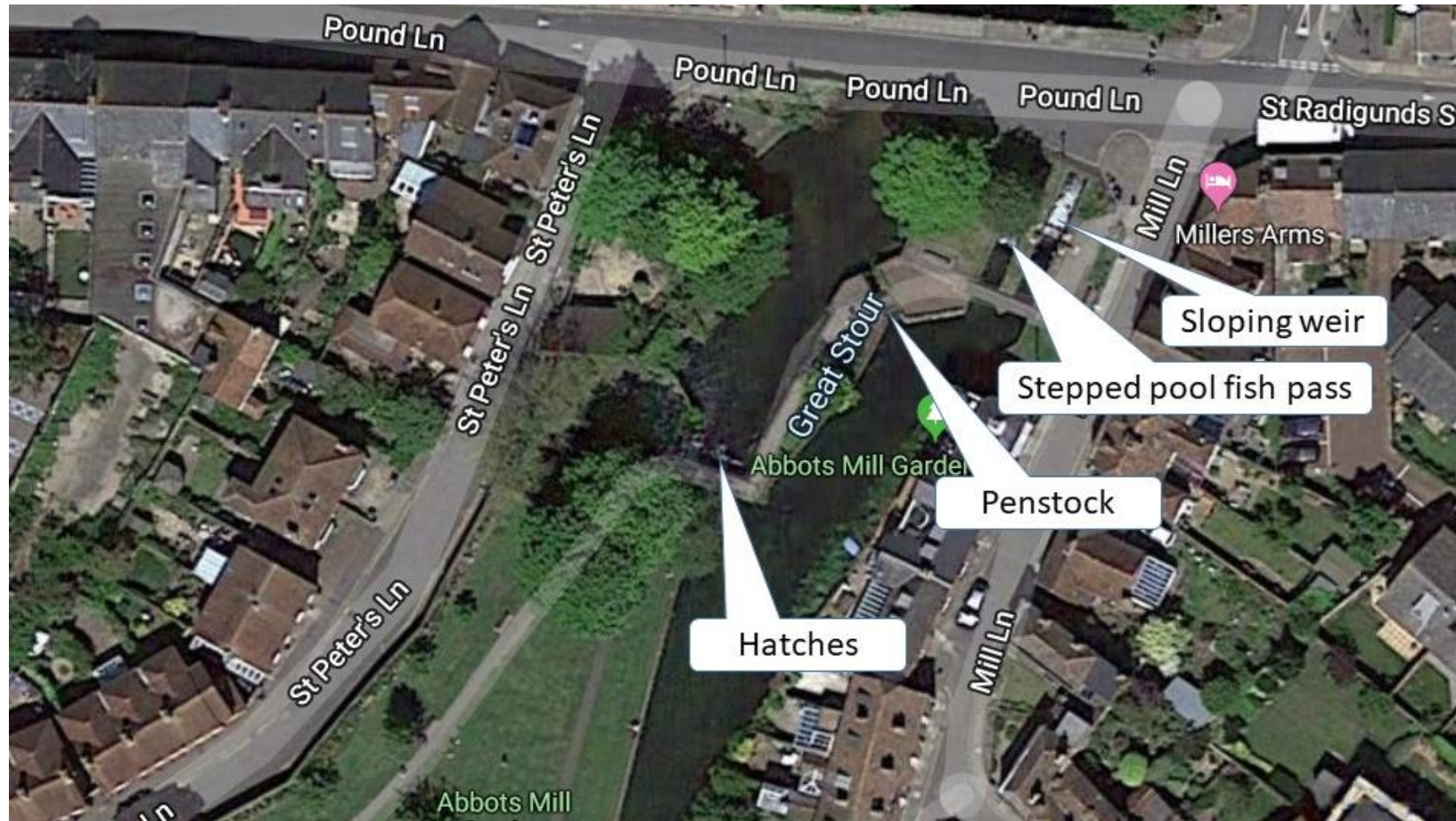
**Partial barrier (high impact) [0.3]:** *A partial high impact obstacle is assigned if the obstacle represents a significant impediment to the target species/life-stage, or species guild, but some of the population (e.g. < one third) will pass eventually; or the obstacle is impassable for a significant proportion of the time (e.g. > two-thirds); and*

**Complete barrier [0]:** *Impassable, complete obstacle to fish movement if that the target species/life-stage, or species guild cannot pass the obstacle.*



# Darent Landscape Recovery

Barrier case study: River Stour, Abbots Mills, Canterbury.





# Darent Landscape Recovery

Barrier case study: River Stour, Abbots Mills, Canterbury.



# Darent Landscape Recovery



## Barrier case study: River Stour, Abbots Mills, Canterbury.

### Hatches (Primary Attractive Route):

	Upstream migration [passability score]				Downstream migration [passability score]			
	No barrier [1]	Partial barrier (low impact) [0.6]	Partial barrier (high impact) [0.3]	Complete barrier [0]	No barrier [1]	Partial barrier (low impact) [0.6]	Partial barrier (high impact) [0.3]	Complete barrier [0]
Adult salmon			✓		✓			
Adult Trout				✓	✓			
Adult Grayling				✓	✓			
Cyprinids (coarse fish)				✓	✓			
Adult Lamprey				✓				
Juvenile Eel				✓				
Juvenile Salmonids				✓	✓			
Juvenile Lamprey					✓			
Adult Eel					✓			

### Stepped Pool Fish Pass (Unattractive, but most passable):

	Upstream migration [passability score]				Downstream migration [passability score]			
	No barrier [1]	Partial barrier (low impact) [0.6]	Partial barrier (high impact) [0.3]	Complete barrier [0]	No barrier [1]	Partial barrier (low impact) [0.6]	Partial barrier (high impact) [0.3]	Complete barrier [0]
Adult salmon	✓				✓			
Adult Trout		✓			✓			
Adult Grayling				✓	✓			
Cyprinids (coarse fish)				✓	✓			
Adult Lamprey				✓				
Juvenile Eel				✓				
Juvenile Salmonids				✓	✓			
Juvenile Lamprey					✓			
Adult Eel					✓			



# Darent Landscape Recovery

## Ecological River Channel Connectivity Strategy - approach

- Map 'Fish Passage' by species across the catchment;
- Discuss potential options for addressing fish passage at each site/barrier;
- Estimate costs and assess benefits:
  - Approx. costs for options;
  - Fish Passage benefits:
    - Distance to barriers upstream/downstream, to calculate the length of continuous habitat that would be opened up via removal or easement.
    - Prioritisation based on migratory species (sea trout & eel);
  - Other benefits that could be delivered e.g. length of river unimpounded by removal, other habitat benefits inc. flood plain reconnection etc.
- Weighted scoring system to prioritise on cost vs benefit;
- Strategy based on prioritisation and assessment of total costs for achieving fish passage source to sea;
- Shouldn't discourage taking up opportunities to address barriers if they come up.





# Darent Landscape Recovery

## Habitat Restoration Strategy – why?

- **Physical modification of habitats**

Rivers are considered to be amongst the most human degraded ecosystems worldwide. River modification has led to flow regulation, channelization and habitat degradation which has impacted fish populations.

- **River Darent – Chalk stream**

- Extensive legacy of water milling – 29 mills:
  - Barriers;
  - Channel straightening, modification and realignment;
- Land Drainage for agriculture:
  - Straightening;
  - Ditching of streams;
- Flood Defence:
  - Barriers;
  - Channel modification and realignment;
  - Straightening;
- Ornamental / quarrying online lake creation.

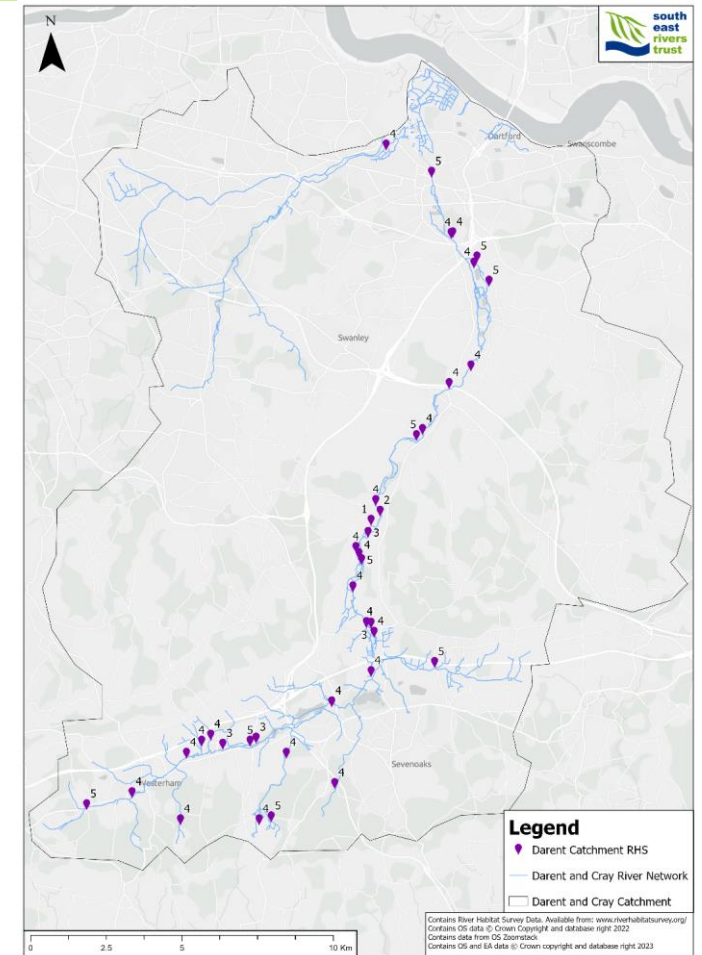




# Darent Landscape Recovery

## Habitat Restoration Strategy – historic data

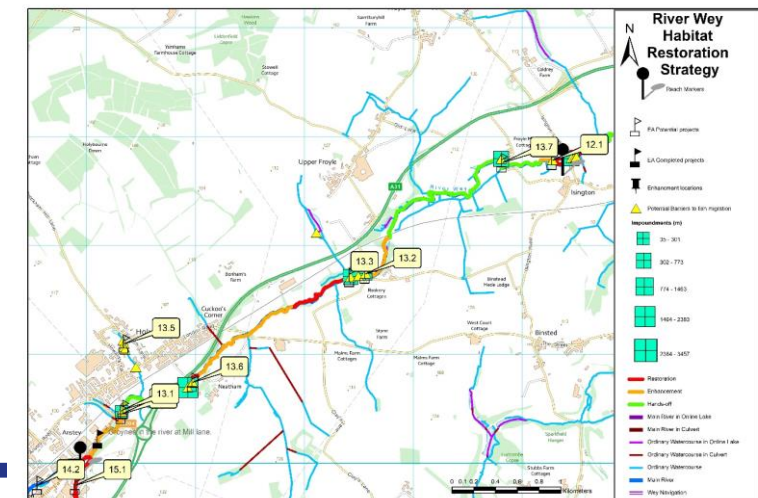
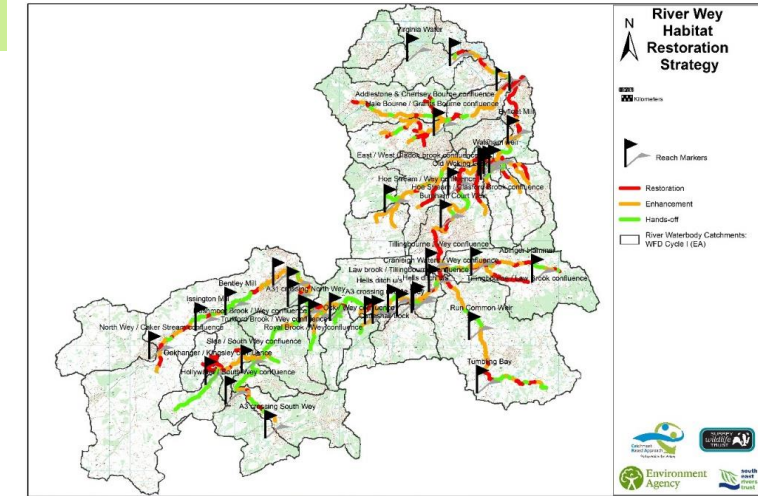
- There are data available for 38 RHSs carried out between 1994 and 2009. These data can be used to derive two indices of river corridor status, the Habitat Quality Assessment (HQA) and the Habitat Modification (HM) scores.
- The HQA is a measure of the structural diversity of the river corridor and the score increases with improved habitat quality. By contrast, the MS is a measure of the extent to which the natural character of the river has been modified; a score of zero indicates no significant modification and represents natural (good) conditions. HM scores are used to assign a Habitat Modification Class; 1 (Pristine/semi-natural) - 5 (Severely modified).
- RHS in the Darent shows that modification class is usually high, showing a high level of modification and therefore the need for restoration. However, there are also some low classes present, and levels of modification are likely to be localised associated with how the river has been changed to facilitate water milling and water meadows.



# Darent Landscape Recovery

## Habitat Restoration Strategy - approach

- Reach delineation;
- Walkover assessments and surveys (targeted MoRPh);
- Classification – Restore, enhance, protect;
- Discuss potential options for improving habitat in each reach;
- Assess costs and benefits:
  - Approx. costs for options;
  - Habitat benefits: Increase in diversity, provision of key habitats types for key species e.g. Brown Trout: clean loose spawning gravels ( mobile riffles), fry habitats (marginal vegetation), juvenile habitats (cobbled runs/glides) and adult holding areas (pools);
  - Other benefits that could be delivered e.g. floodplain reconnection etc.
  - Link to Ecological Connectivity work – removal of impoundments (big wins).
- Scoring system to prioritise on cost & benefit;
- Strategy would allow prioritisation and assess costs for improving habitat quality and quantity of specialised habitats e.g. spawning gravels, but shouldn't discourage taking up opportunities if/when they come up.







*“Rivers are our lifeblood. They shape our landscape, provide freshwater and support wildlife. When rivers thrive, so do we.”*

**Any Questions?**



**AFTERNOON SESSION:**

**12.00: Gather in Orchid Room for brief update on health and nature activities**

**12.15: Networking lunch**

**13.00: Afternoon presentations and discussion:**

**Nature based solutions opportunities within Kent & Medway LNRS - Liz Milne. 10 mins.**

**New round of Farming in a Protected Landscape funding – Nick Johannsen. 15 mins.**

**Overview of blended finance and Nature based solutions - Paul Hadaway. 25 mins.**

**Oxbury, The Agricultural Bank - Timothy Coates – co-founder – 15 minutes**

**14.05: Questions from the floor to presenters.**

**Chaired discussion on blended finance and nature-based solutions.**

**Next steps.**

**14.45 - 15.00: meeting close, depart  
Board members remain for 10 minutes please.**





# Policy and strategy drivers for financing nature based solutions in Kent

# Local Nature Recovery Strategies

- Local nature recovery strategies are a system of **spatial strategies for nature and environmental improvement** required by law under the Act.
- The strategies will:
  - agree **priorities** for nature's recovery.
  - **map** the most valuable **existing** areas for nature.
  - **map** specific **proposals for creating or improving** habitat for nature and wider environmental goals.
- Will include actions for both **nature recovery** and **nature-based solutions**, to join up work and enable multiple benefits to be derived from land management.





# Biodiversity Net Gain

- From November, **mandatory requirement** for all new development to secure a minimum of **10% gain in biodiversity value**. The value is calculated by the BNG metric.
- LNRS will identify spatially where delivery of **biodiversity net gain** will provide the greatest returns and incentivise this through the BNG metric.
- In absence of LNRS, an **interim guide on strategic significance** for Kent is being developed.
- LNRS and interim guide will provide an indication of where BNG may provide **financing for habitat enhancement**.



# Environment Land Management Schemes

- Intended to support the **rural economy** while achieving the goals of the **25 Year Environment Plan** and a commitment to **net zero** emissions by 2050.
- Through these schemes, farmers and other land managers may enter into agreements to be paid for delivering the following:
  - clean and plentiful water
  - clean air
  - **thriving plants and wildlife**
  - protection from environmental hazards
  - reduction of and adaptation to climate change
  - beauty, heritage and engagement with the environment
- Previously suggested that ELM funds will be spatially targeted to where they will deliver the most benefits and that the LNRS would have a **role in influencing** this in terms of **nature recovery benefits**.
- **More detail to come from Defra** on how the LNRS aligns with ELM.





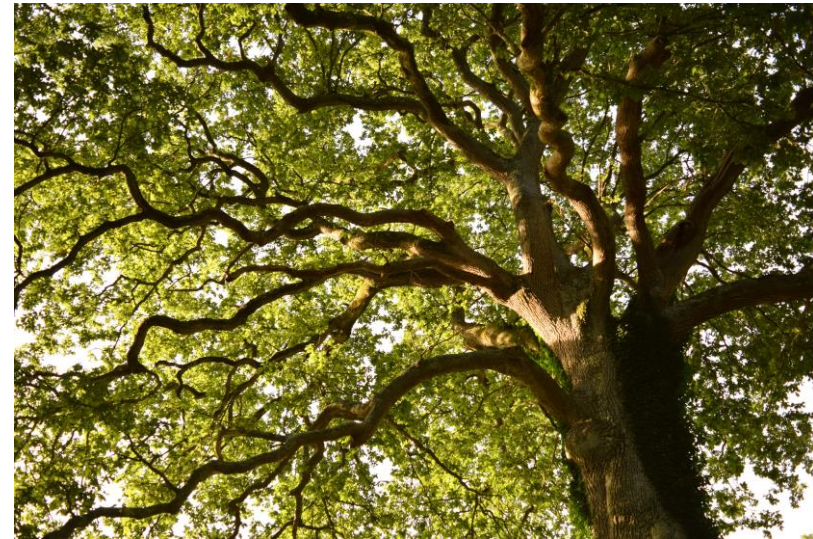
# Land Use Framework

- An approach to **managing land use decisions** that **mediates competing pressures** and encourages **multifunctionality**, enabling land to provide multiple benefits for public value.
- Defra Land Use Framework is intended to **manage the increasing demands** on our land, from food production, nature recovery, and renewable energy in order to:
  - ensure **net zero and biodiversity targets** are met and
  - help **farmers adapt to a changing climate**, whilst continuing to produce high quality, affordable **produce** that supports a healthier diet.
- LUF will **inform incentives for agri-environment schemes** and be a valuable resource for responsible authorities as they prepare their Local Nature Recovery Strategies.
- Expected late 2023.



# Kent Plan Tree

- Extend tree cover by **1.5 million new trees** and increase the county's average canopy cover to 19%.
- **Nature-based solutions** to be delivered:
  - Contribution to county's net zero targets
  - Support nature recovery
  - Improve soil and air quality.
  - Reduce surface water flooding.
  - Provide urban cooling
  - Provide enhanced and improved recreation and amenity
- Mapping **opportunities** and **priority areas**
  - targets for tree establishment works/natural regeneration and where government tree funding will be directed.





# Farming in Protected Landscapes

- Background to FiPL
- Timeline
- Priorities
- The Panel
- Uplift and extension
- Constraints



## Farming in Protected Landscapes

### Background

- Announced in ATP
- New funding closely linked to AONB Management Plans
- Grants for projects and programmes, not agri-environment scheme.
- People; Place; Climate; Nature.

### Timeline

- Started in 2021 – in year
- 2 years of delivery...very successful; near full out turn each year, all Yr3 already allocated by Dec Yr 2.
- Uplift and extension...unexpected...23/24 additional £2-300K project grant spend
- 24/25 £1.03m project grant spend





## Farming in Protected Landscapes

### Priorities

- **People** – providing a natural health service that will improve the nation's public health and wellbeing through increased access to nature across all parts of society, as part of our green recovery;
- **Place** – creating centres of excellence and green innovation that are flourishing places to live and work, each with a strong identity and cultural heritage, and high recognition as attractive visitor destinations
- **Climate** – delivering net zero with nature and nature-based solutions to help communities adapt to the unavoidable effects of climate change;
- **Nature** – playing a leading role in the delivery of the Nature Recovery Network and achieving the PMs commitment to protect 30% of land by 2030;



## Farming in Protected Landscapes

### People

- There are more opportunities for people to explore, enjoy and understand the landscape
- There are increased opportunities for more diverse audiences to explore, enjoy and understand the landscape
- There is greater public engagement in land management, for example through volunteering
- Difference between experiencing and learning about the landscape





## Farming in Protected Landscapes

### Place

- The quality and character of the landscape is reinforced or enhanced
- Historic structures and features are conserved, enhanced or interpreted more effectively
- There is an increase in the resilience of nature friendly sustainable farm businesses, which in turn contributes to a more thriving local economy



## Farming in Protected Landscapes

### Climate

- Focusing on nature-based solutions
- More carbon is stored and/or sequestered
- Flood risk has been reduced
- Better understanding among farmers, land managers and the public as to what different habitats and land uses can deliver for carbon storage and reduced carbon emissions
- The landscape is more resilient to climate change





## Farming in Protected Landscapes

### Nature

- There is a greater area of wildlife rich habitat
- There is greater connectivity between habitats
- Existing habitat is better managed for biodiversity
- There is an increase in biodiversity



## Farming in Protected Landscapes

### An (excellent) Independent Panel

- Defra expectations document
- Scoring applications
- Overview of pipeline – improving and enhancing Eols
- Networking
- Beginning to lead development of bids





## Constraints

- **National Framework and the 'F' in FiPL**
- Accessed by farmers and land managers who develop their own project ideas within the guidance and with support.
- Other land managers, community groups, charities and individuals are eligible too.
- Current '**stock take**' of the projects we have funded
- Links to the forthcoming Defra targets and outcomes framework
- All of the expected grant additional grant monies this year are limited.
- Next year (because its an unexpected extension) there are currently no allocations and over £1m of additional funding to spend, in year.
- There is an opportunity to think strategically about what's missing and how we might make the best of this unexpected opportunity...





- **Stuff...year 1 Projects (2021/22)**

- 950m New Hedgerows Created

- 4140 Parkland Trees Planted

- 1ha Existing Scrub Managed

- **Year 2 Projects (2022/2023)**

- 4620m New Hedgerows Created

- 490m Existing Hedgerows Managed

- 1085 Parkland Trees Planted

- 141.61ha Land managed for Invasive Species

- 2ha Scrub Created

- 139.62ha Existing Scrub Managed

- 4.32ha Wildflower Meadows created

- 0.218ha Woodland created

- 3 New Permissive Paths Created

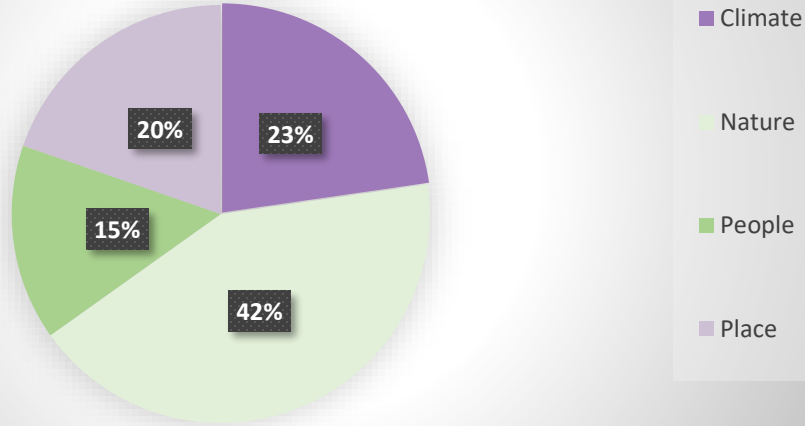
- 9450m Existing Paths Improved

- 1 New Pond Created

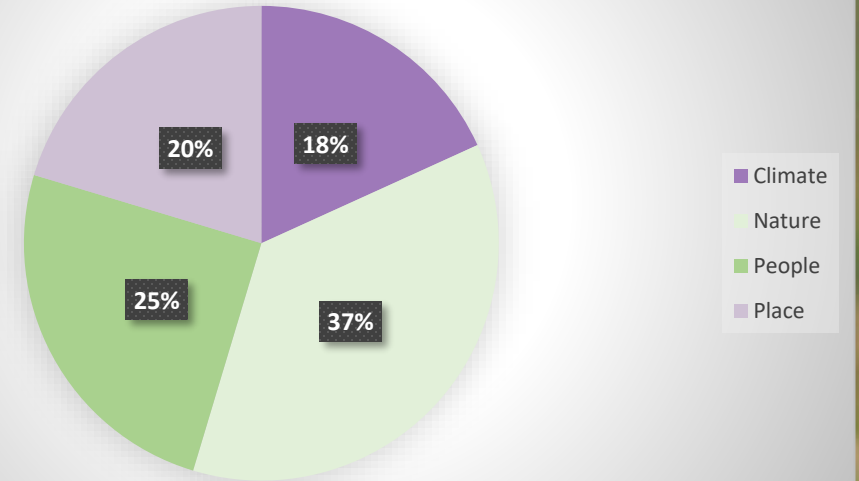




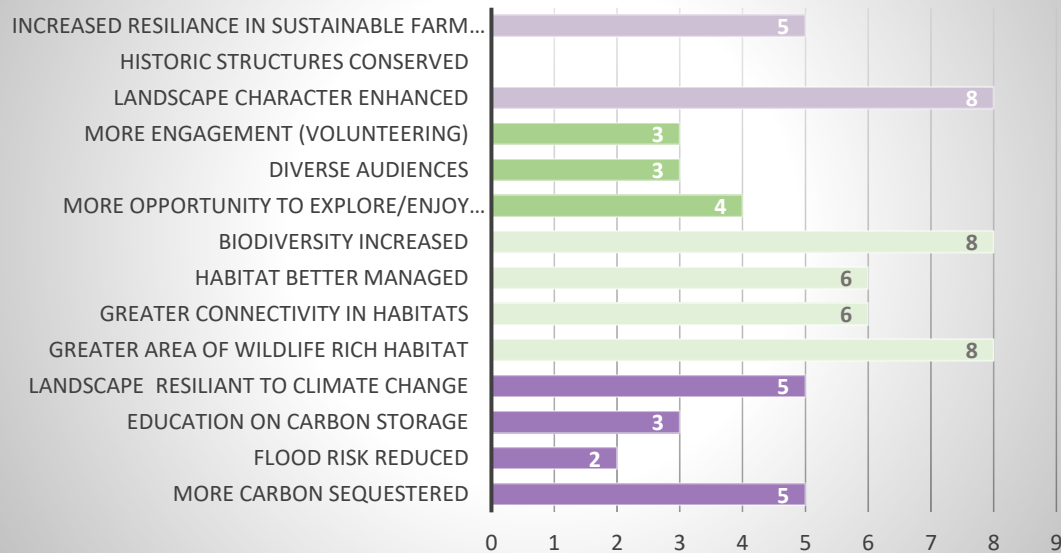
## Projects fulfilling Priorities 21/22



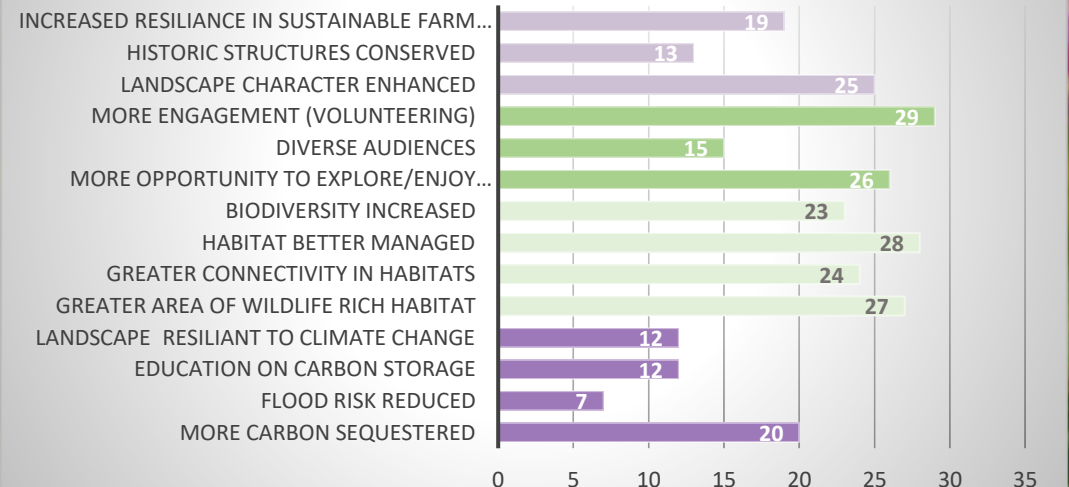
## Priorities Fulfilled 22/23



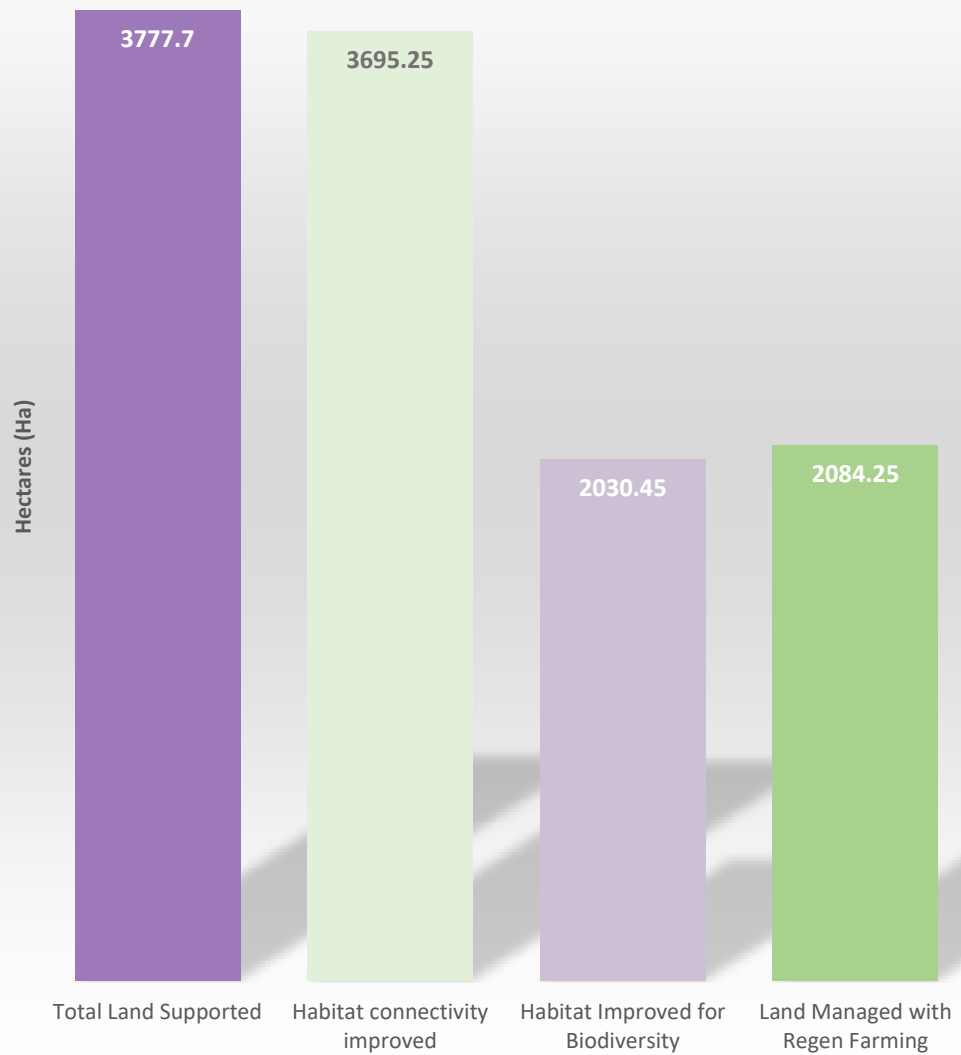
## Kent Downs AONB Priorities Fulfilled 21/22



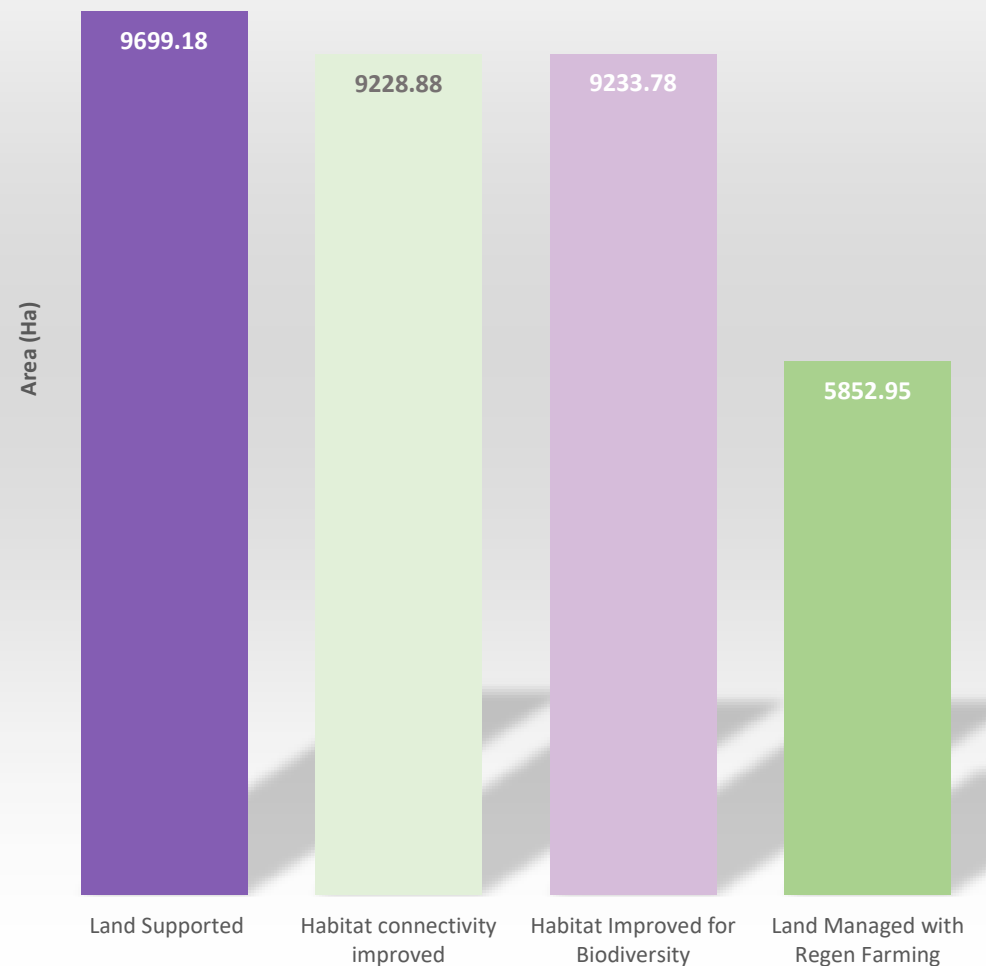
## Kent Downs AONB Priorities Fulfilled 22/23



## Land Improvements 21/22

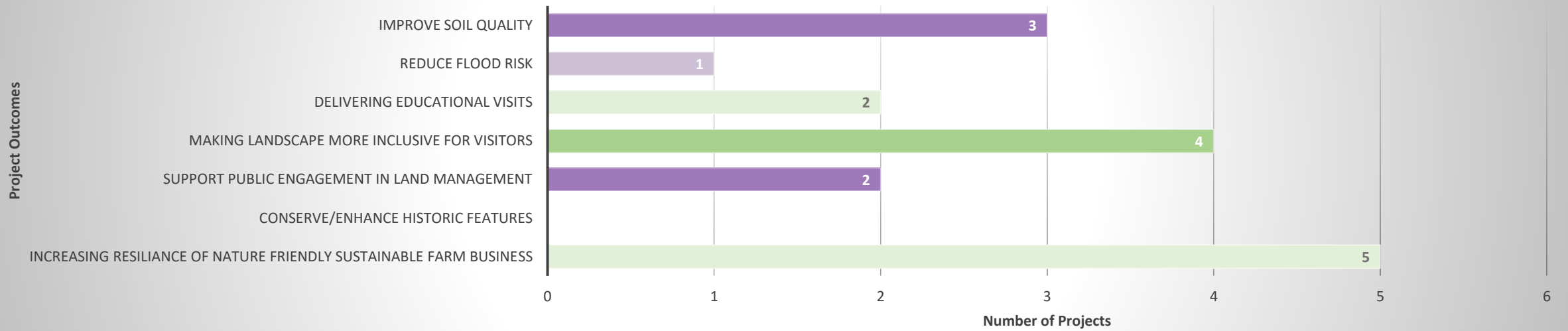


## Land Improvements 22/23

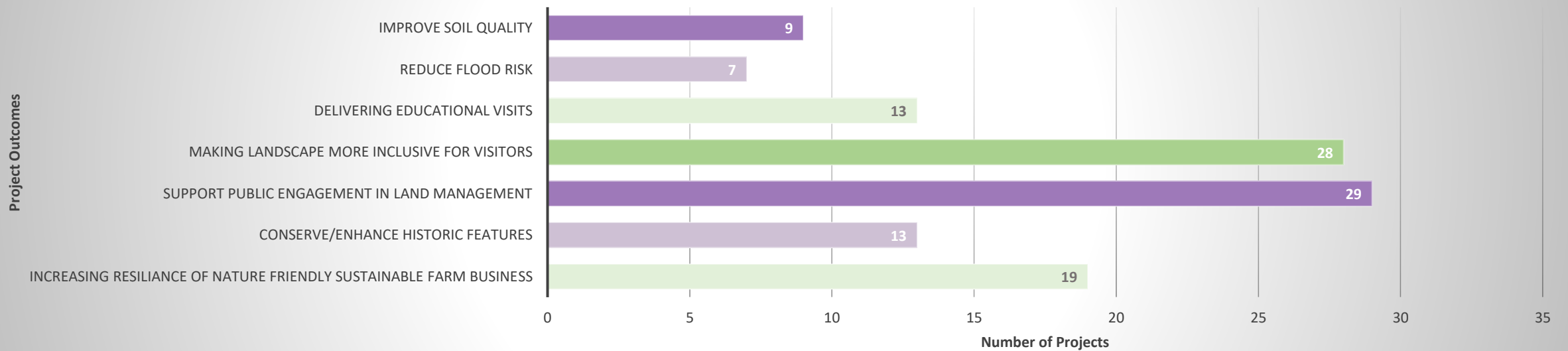




## Project Delivery 21/22



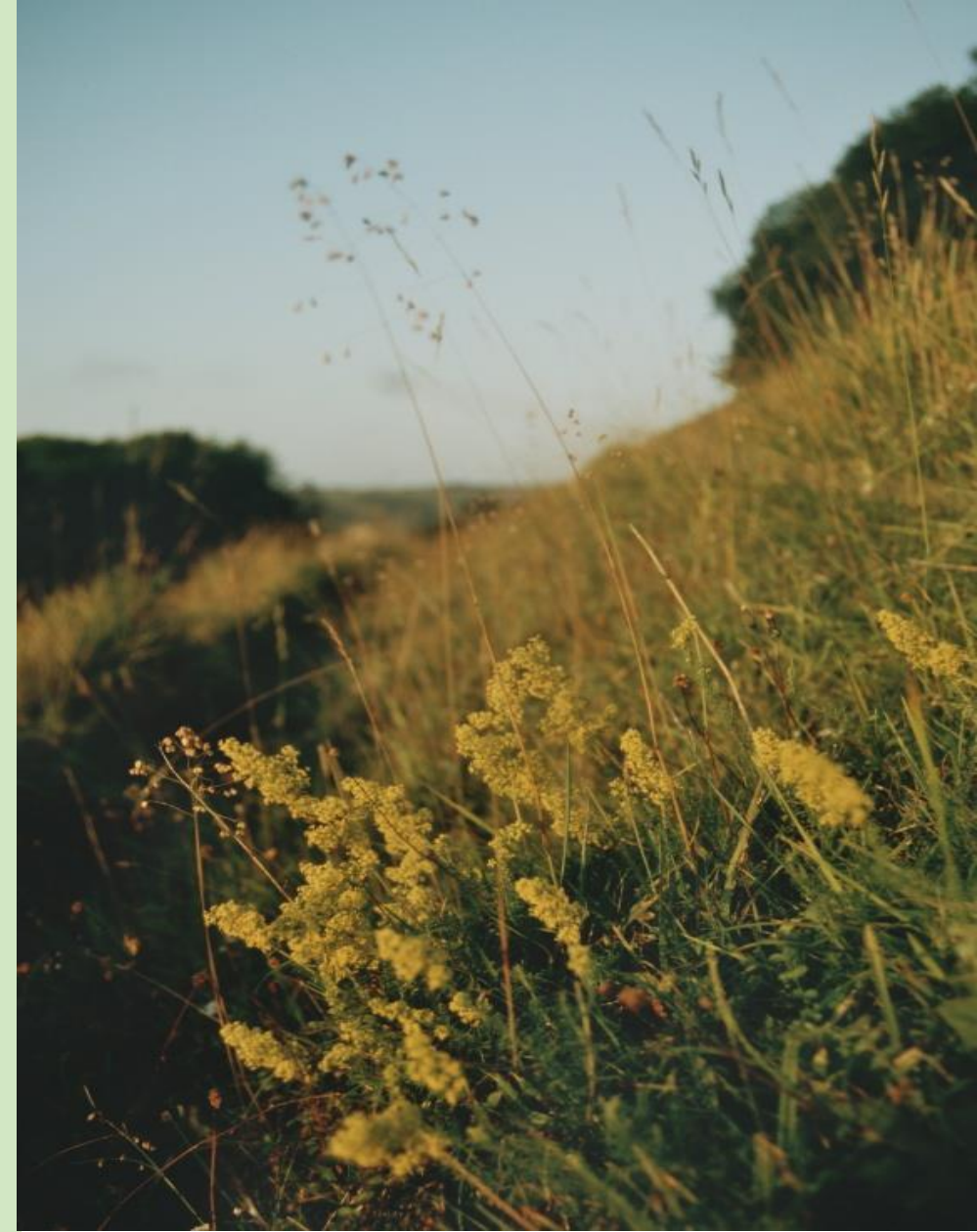
## Project Delivery 22/23



## Farming in Protected Landscapes

### Timeline.

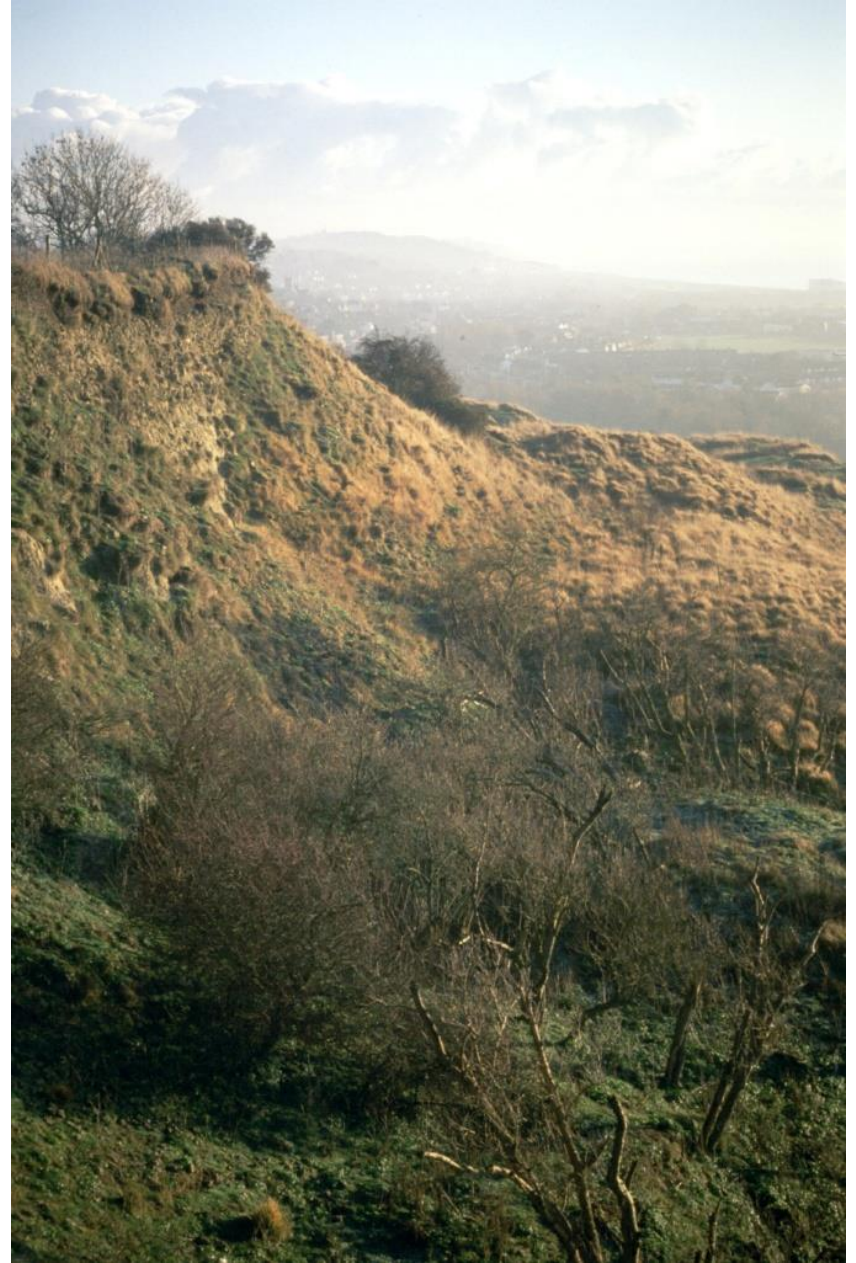
- Next Panel...next week...stock take
- Applications re-opening but long list of enquiries already
- Team here to help...we're trying to expand capacity but bear with us.
- Monthly Panel meetings
- Starting to make case for FiPL to continue...we have a success on our hands.





Farming in Protected Landscapes

# Questions?





# Darent Valley & Blended Finance

Action and Innovation for Nature and The Climate Crisis

[kentwildlifetrust.org.uk](http://kentwildlifetrust.org.uk)



## Content

- 01 Strategic Interest in Natural Capital
- 02 Achieving KNP Objectives
- 03 Evaluation / Governance
- 04 Sustainable investment approach
- 05 Long-term management of land including climate change impacts

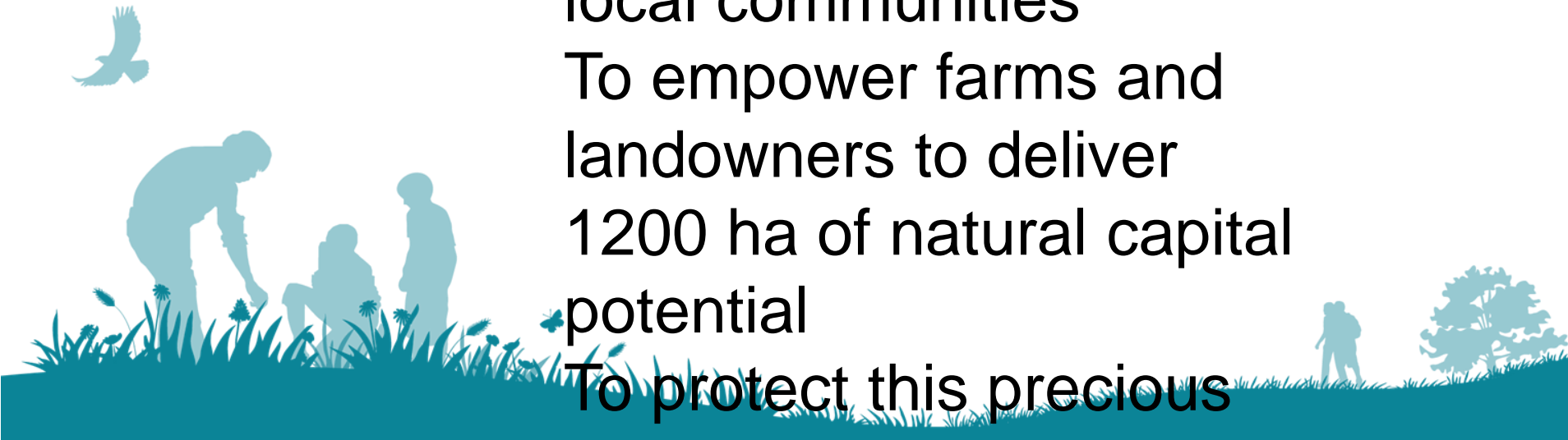
# 01: Strategic Interest in Natural

Capital: Aims **To protect and restore  
the River Darent**

To provide benefits to  
local communities

To empower farms and  
landowners to deliver  
1200 ha of natural capital  
potential

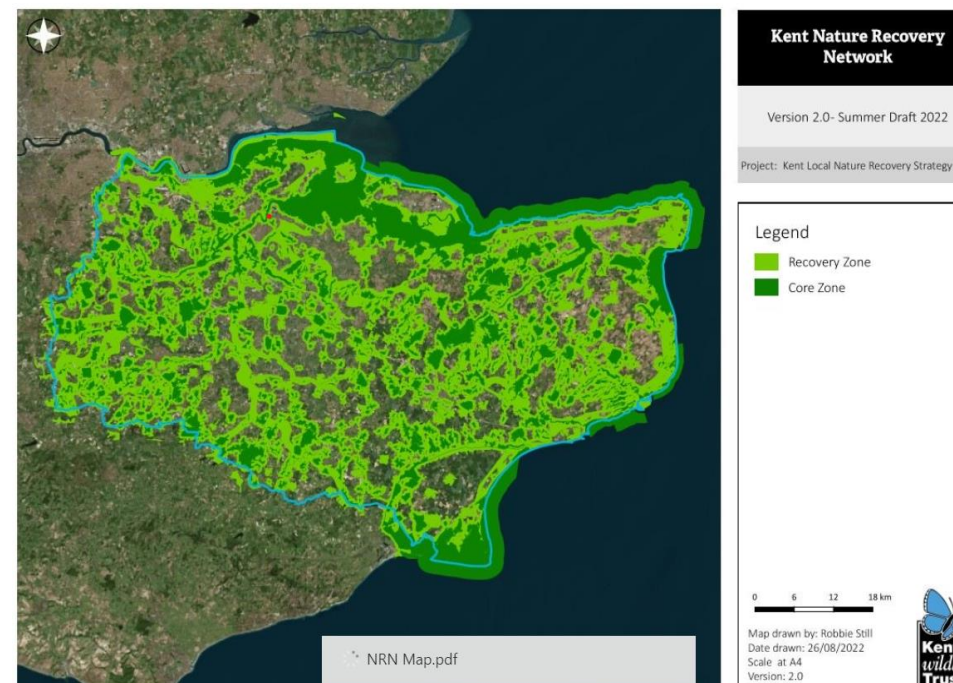
To protect this precious  
natural resource and the  
surrounding landscape





# 01: Strategic Interest in Natural Capital: Objectives

Strategically planned habitat restoration  
Habitat for rare and endangered species  
Storing Carbon  
Increasing Biodiversity  
Reducing flood risk  
More quality spaces for people to enjoy  
recreation & connect with nature  
Protect in-perpetuity under agreements to  
assure investors & LPAs of long lasting  
commitment and benefits



# 02: Achieving KNP Biodiversity Objectives

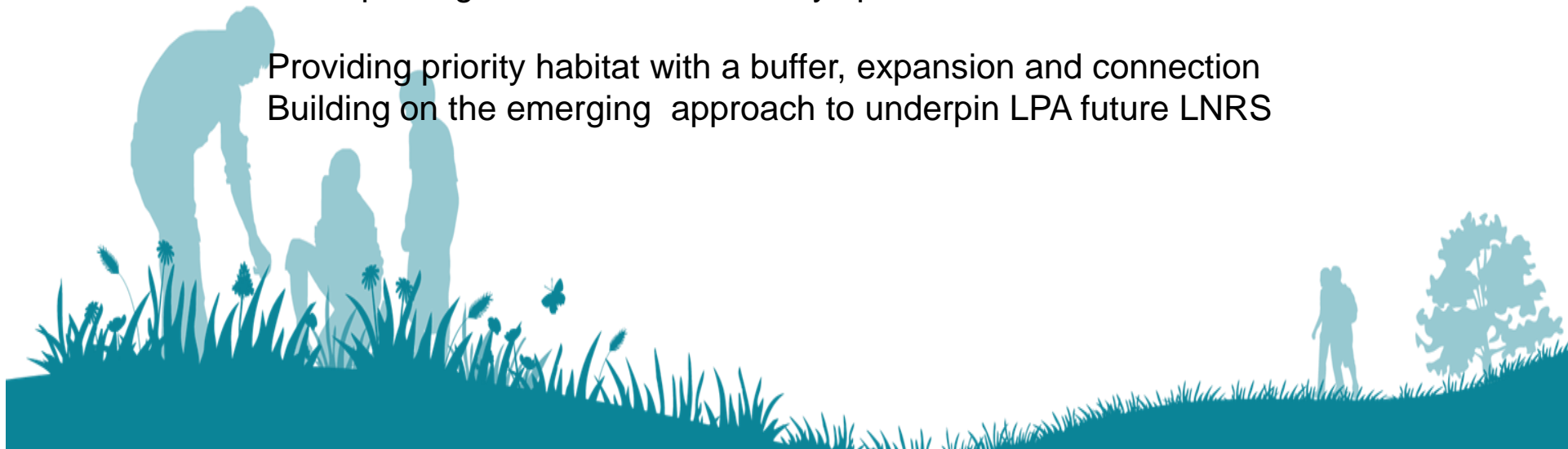
Strategic BNG investment approach that follows high integrity KNP net gain principles



Strategic Carbon investment approach of Wilder Carbon Standards

Underpinning all work habitat for key species

Providing priority habitat with a buffer, expansion and connection  
Building on the emerging approach to underpin LPA future LNRS





## 03: Evaluation and Governance

The DVFC is in the process of setting up a legal entity to support evaluation and governance of investment opportunities:

- Membership
- Steering Group
- Project lead
- Business aggregator
- Local technical expertise
- Legal advice
- Monitoring, reporting and verification
- Payment mechanism



# 04: Sustainable Investment Approach

Undertook evaluation of DVFC opportunity area using emerging LNRS approach

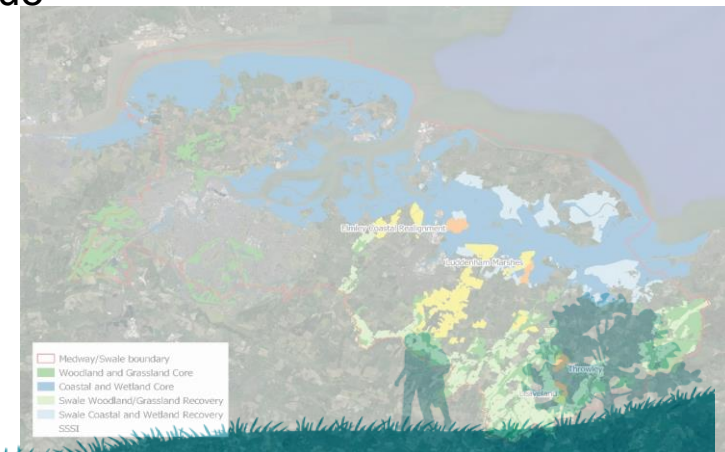
Intensive consultation with landowners and farmers

Natural Capital Assessment of all natural assets and value

Detailed BNG and Carbon assessments

Cash flow analysis for landowner decision-making

Phased approach to project investment





# 05: Long-term Management of Land including climate resilience

MbS investment approach with long-term 30 to 50 year agreements

Philanthropic and ESG financing to support project readiness

Long term monitoring including dynamic assessment and reporting against climate change data

Landscape scale approach led by landowners and farmers







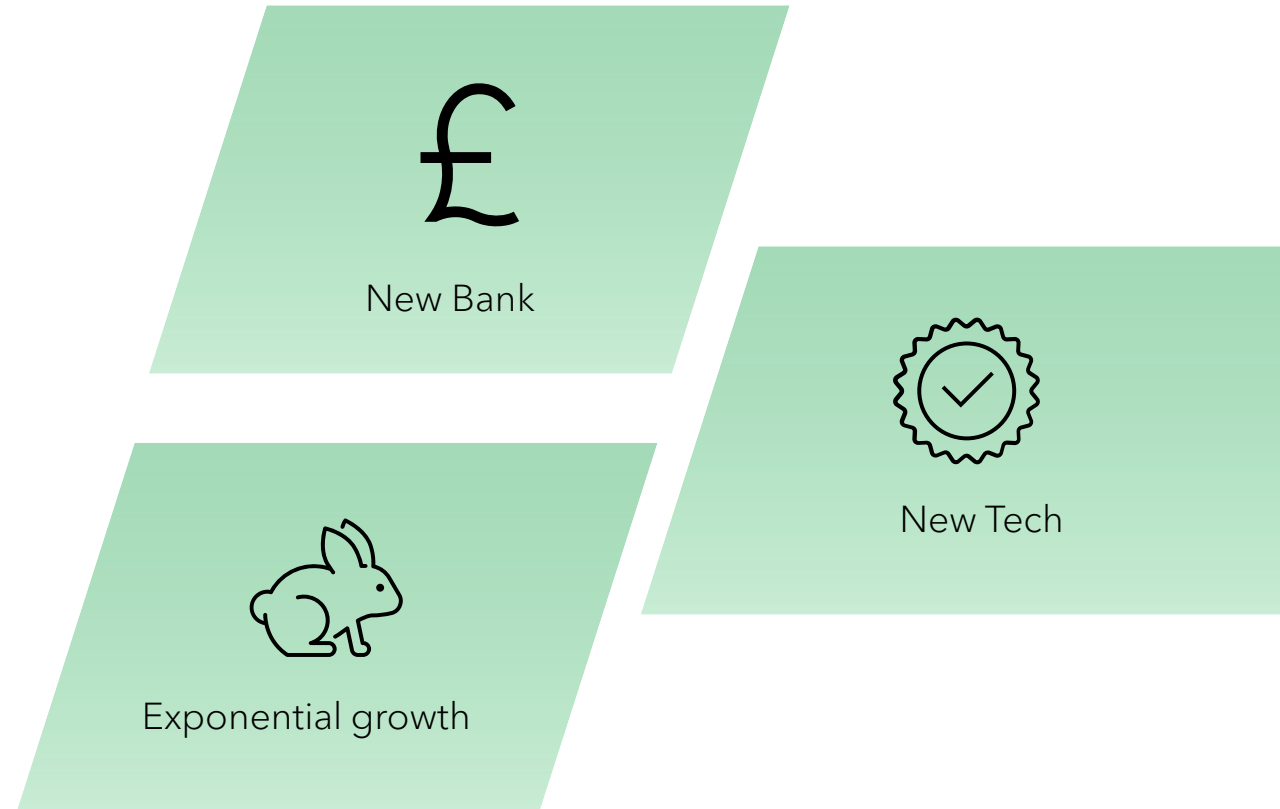
**Oxbury**///

Presentation to Kent Nature Partnership &  
Darent Valley Farmer Cluster

May 2023



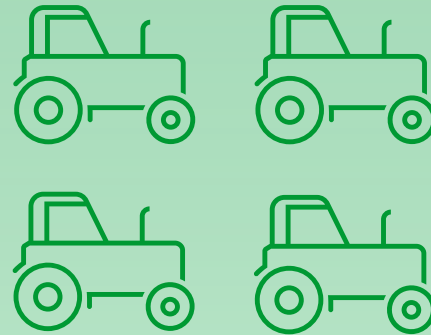
We are a **new bank**. Fully authorized and regulated since February 2021 built on our **own Tech**



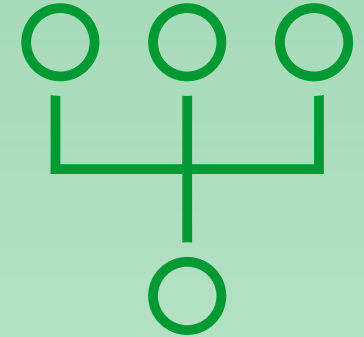
## 3 global trends:



**Climate &  
Sustainable Food  
Production**



**Farm Consolidation**



**Supply Chain Changes**



# Lending - Product set

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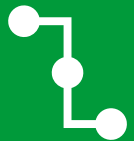
## Oxbury **Revolving Credit**

Oxbury Farm Credit  
Oxbury Flexi Credit



## Oxbury **Farm Loans**

Diversification, Productivity, Land, Consolidation Climate & Succession  
New Gen / Small Holder Mortgage



## **Food Chain Finance**

Including wholesale finance schemes



## **Asset Finance**

Fund (HP) the purchase of assets

## Background

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The Bank has been carbon neutral in terms of its Scope 1 & 2 emissions since inception. Its focus has now **extended to financed emissions (Scope 3)**. **Oxbury's role therefore is to ensure that there is:**



A reduction of greenhouse gases from agricultural production



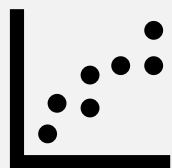
An increase in the carbon sequestration by farmland



An increase in the biodiversity of the farmed environment



## The rationale for the Bank doing this is in three categories:



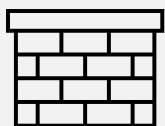
### Reporting

To ensure that Oxbury is able to report against the current and future regulatory requirements for natural capital - based on credible, objective and farm recorded data



### Mitigating Risks

To mitigate the credit risk to the bank of customers becoming less financially and operationally resilient through not meeting regulatory or supply-chain natural capital requirements, changing consumer preferences or failure to manage or adapt to physical climate and nature risk



### Resilience

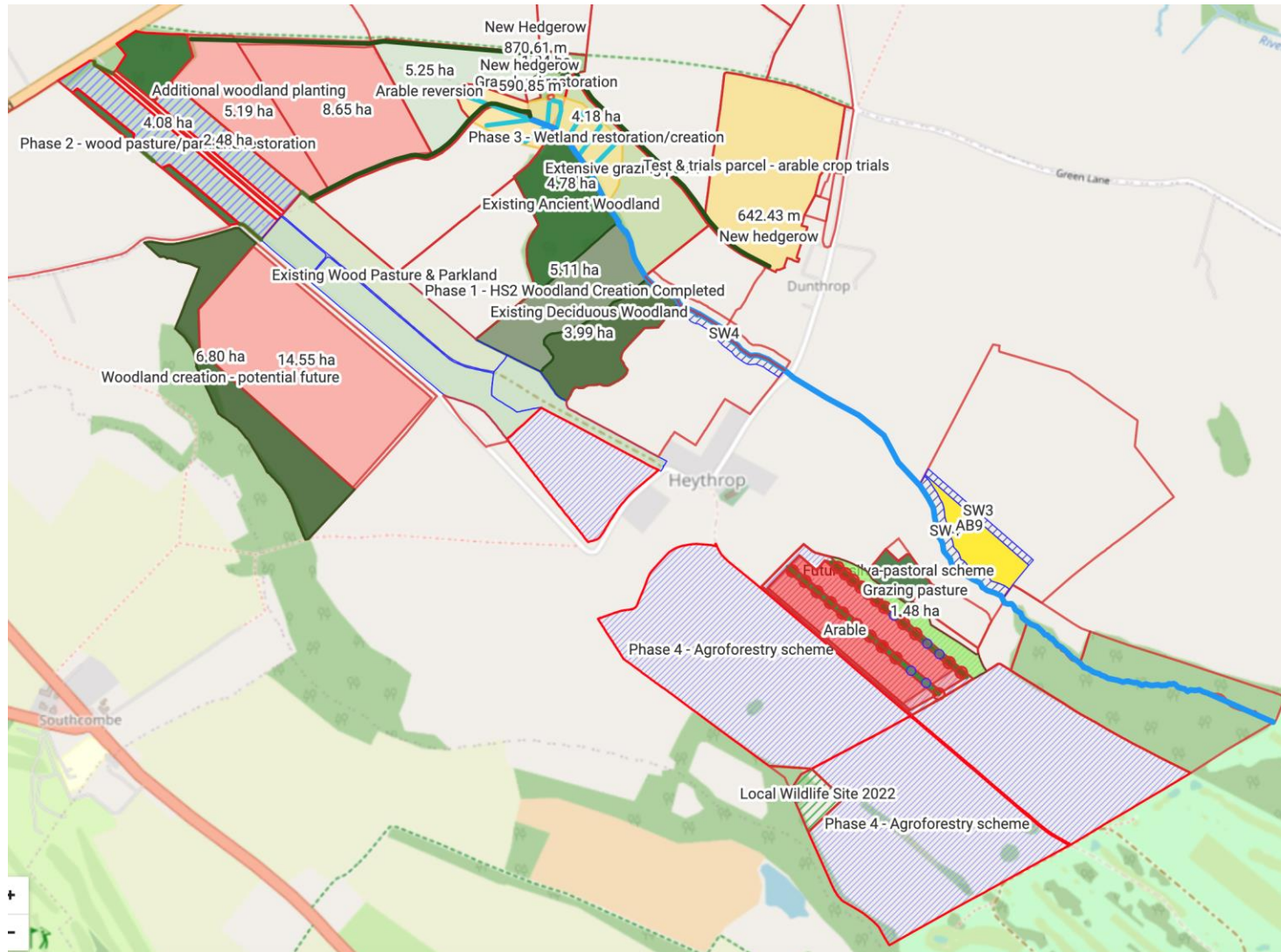
Our belief that adhering to the climate and nature aligned principles will allow our customers and the Bank to be more resilient to economic and environmental shocks

$$R_t = S_t + k_t + C_t + ECL_{t+n}$$

- **Expected Credit Loss (ECL) is a function of:**
  - The probability someone will be unable to repay (Probability of Default (PD));  
and
  - The loss that would occur if there was a default (Loss Given Default (LGD)).
- **Historically no real consideration of natural phenomena on the above. But climate and nature risk now needs to be priced:**
  - Probability of physical risks causing acute issues increasing - implications for PD
  - Likelihood of unproductive land values is increasing - implications for LGD



# Personal Position into the future



# What does it mean to be a farmer

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- For several millennia, farmers have deployed their human capital with natural capital to provide a myriad of ecosystems services to support human and other life
- In English: farmers have used the land to grow and raise food
- But... they have done so much more than that...
- And now... the markets are starting to recognise new opportunities:
  - Carbon
  - Biodiversity
  - Water
  - Community
- Bundling (Blending) and Stacking

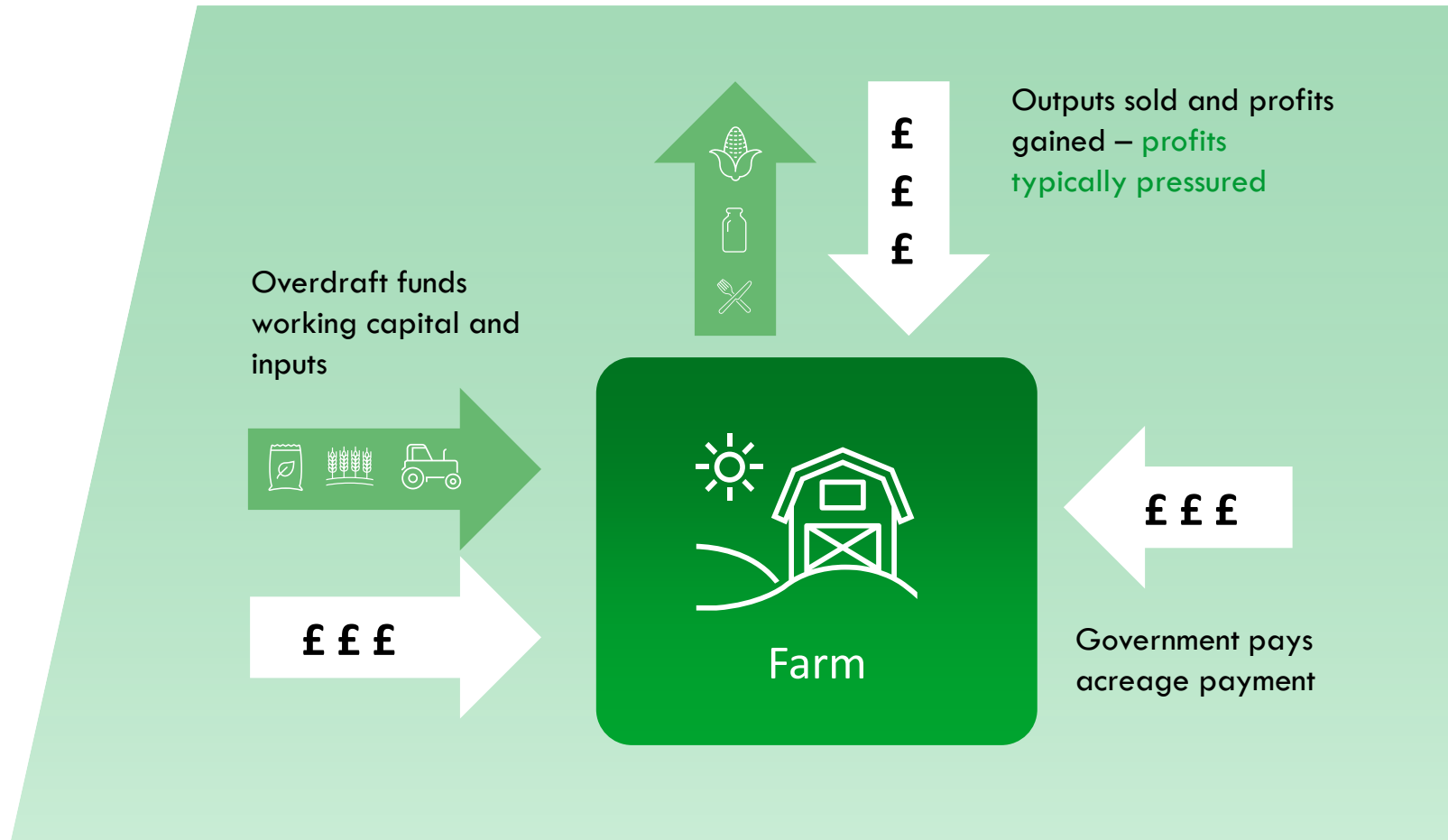


# A new “blended” financial model for farms...

An example of blended finance

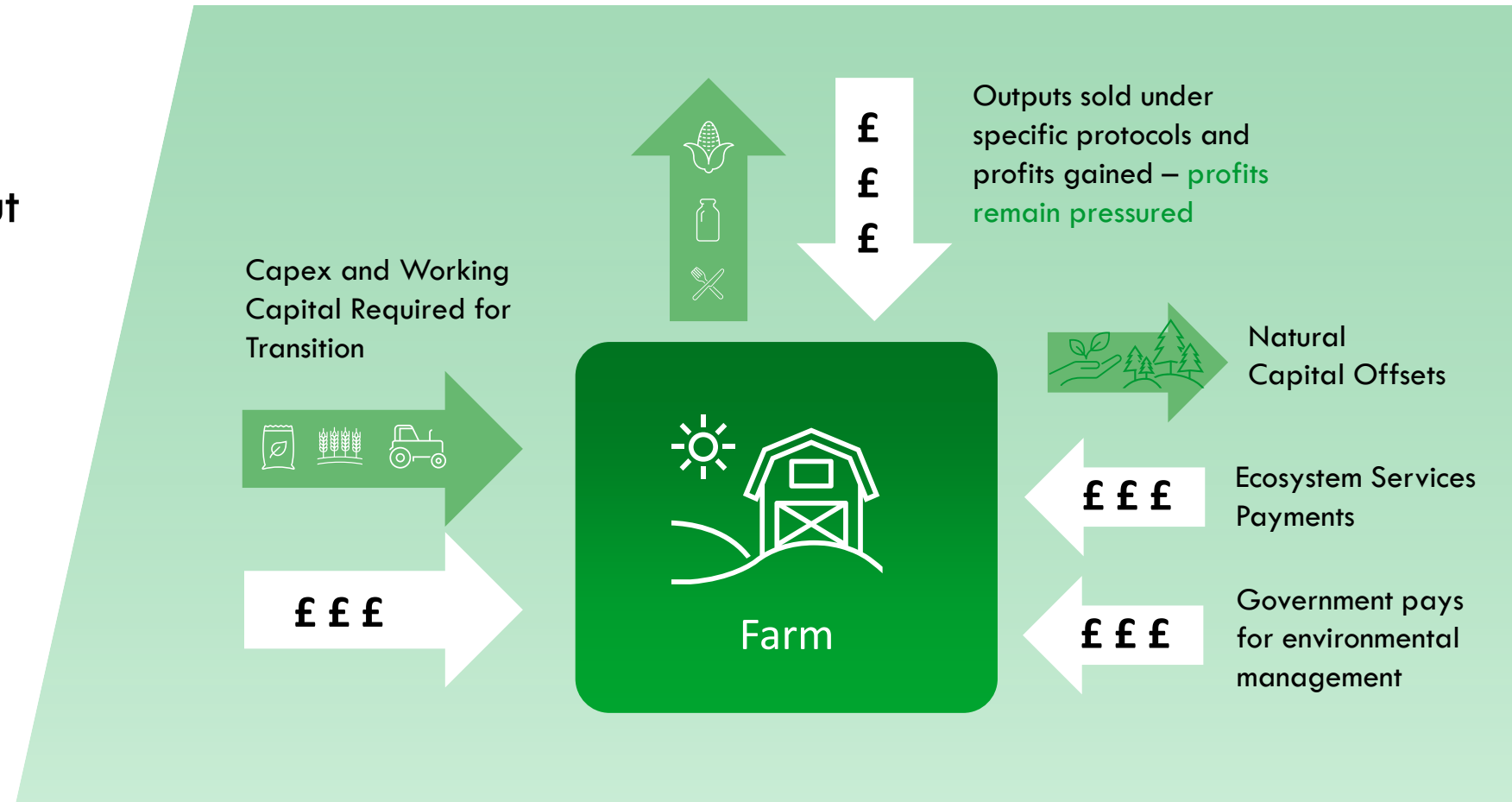
Blended finance at its simplest means two or more different financial sources committing money to projects while seeking **differential returns**

Two big factors in our example – supply chain and government schemes



Government and Supply Chain still major factors but with a new focus

Natural Capital Markets now in play







- Loan products that allow for semi-speculation natural capital project development - buyer-of-services agnostic but clear route to broker and market
- The importance of baselining
- The importance of aggregation
- 10 individual on farm projects approved for financing
- Current negotiations on £1m+ soil carbon cluster-level project

## Transition Financing

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- **Importance of Stacking and Bundling and Collaboration**
- **Data - permissioning and value**
- **Financing the Regenerative Transition**
  - **Temporary increased input costs but a lower future steady-state**
  - **Expanded markets**
  - **Capital cost and diversification**
- **Transition has to be “just” and based on counterparty trust.**





Oxbury 

End





Credit: Thomas Alexander

# Questions & Discussion



- ▶ Questions from the floor to presenters.
- ▶ Chaired discussion on blended finance and nature-based solutions.
- ▶ Next steps.
- ▶ 14.45 - 15.00: meeting close, depart
- ▶ Board members remain for 10 minutes please.