

CVF Annual Lecture: Can the Cam Flourish Again?



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Can we transform our water infrastructure and farming so we become part of a healthy aquatic ecosystem?

“Through the centuries we have been reaching ever further upstream for fresh water and dumping our waste as close to our doorstep as we can get away with.”

Comparing how we obtain energy and how we obtain water



Fire and Life

- Fire comes from life
- Fire only exists on earth
- Fire arises from the disequilibrium living things create between an oxygen atmosphere and reduced carbon earth
- Fossil fuels and the gas balance in our atmosphere are a treasure left to us by past life
- Our ecological limit is the capacity of the atmosphere for greenhouse gasses
- In a few decades we have consumed more than a hundred million of years worth of what other beings created for us



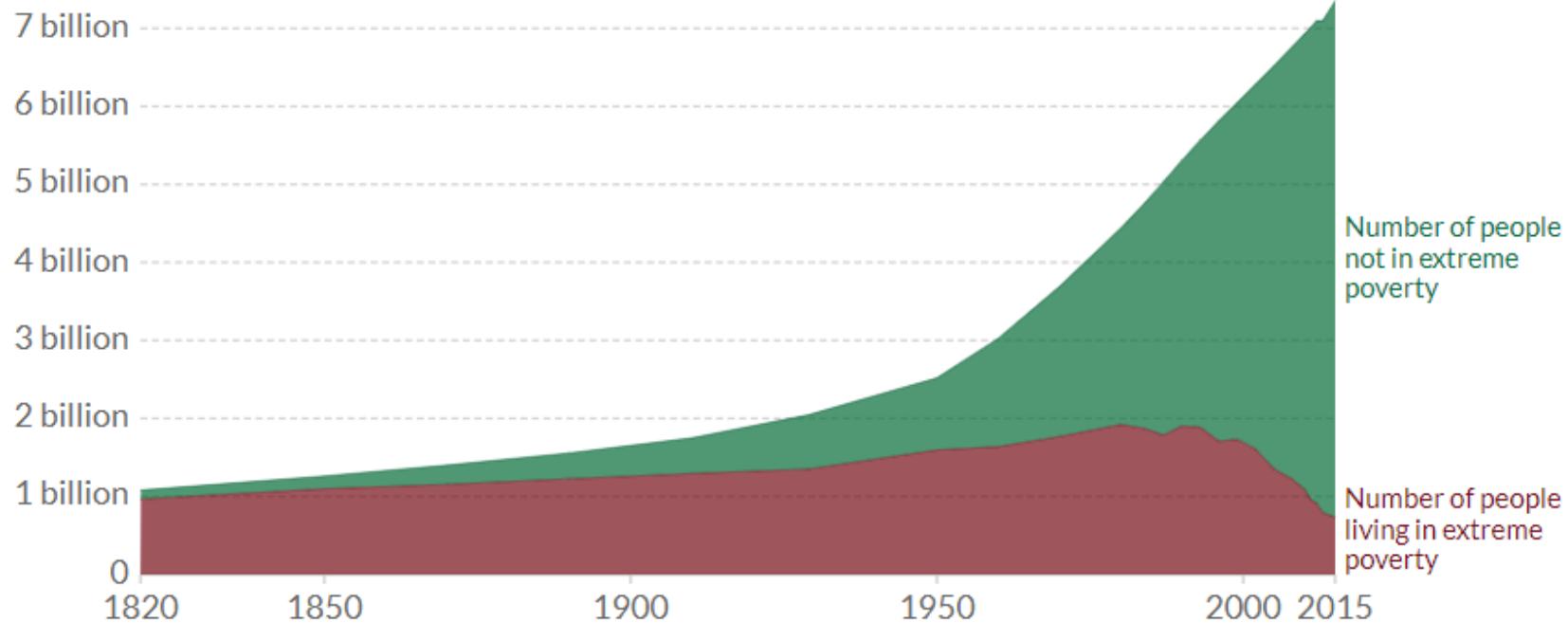
Didn't they do well!

World population living in extreme poverty, 1820-2015

Extreme poverty is defined as living on less than 1.90 international-\$ per day. International-\$ are adjusted for price differences between countries and for price changes over time (inflation).



☐ Relative



Source: Ravallion (2016) updated with World Bank (2019)

Note: See OurWorldInData.org/extreme-history-methods for the strengths and limitations of this data and how historians arrive at these estimates.

OurWorldInData.org/extreme-poverty/ • CC BY

The Way Forward

- We need to **stop consuming the Biosphere**
- Getting services by **enhancing the Biosphere is better than consuming**
- We need to **learn to Embrace the Biosphere** in order to thrive sustainably
- To do this we have to **Bypass the biosphere** to get our energy

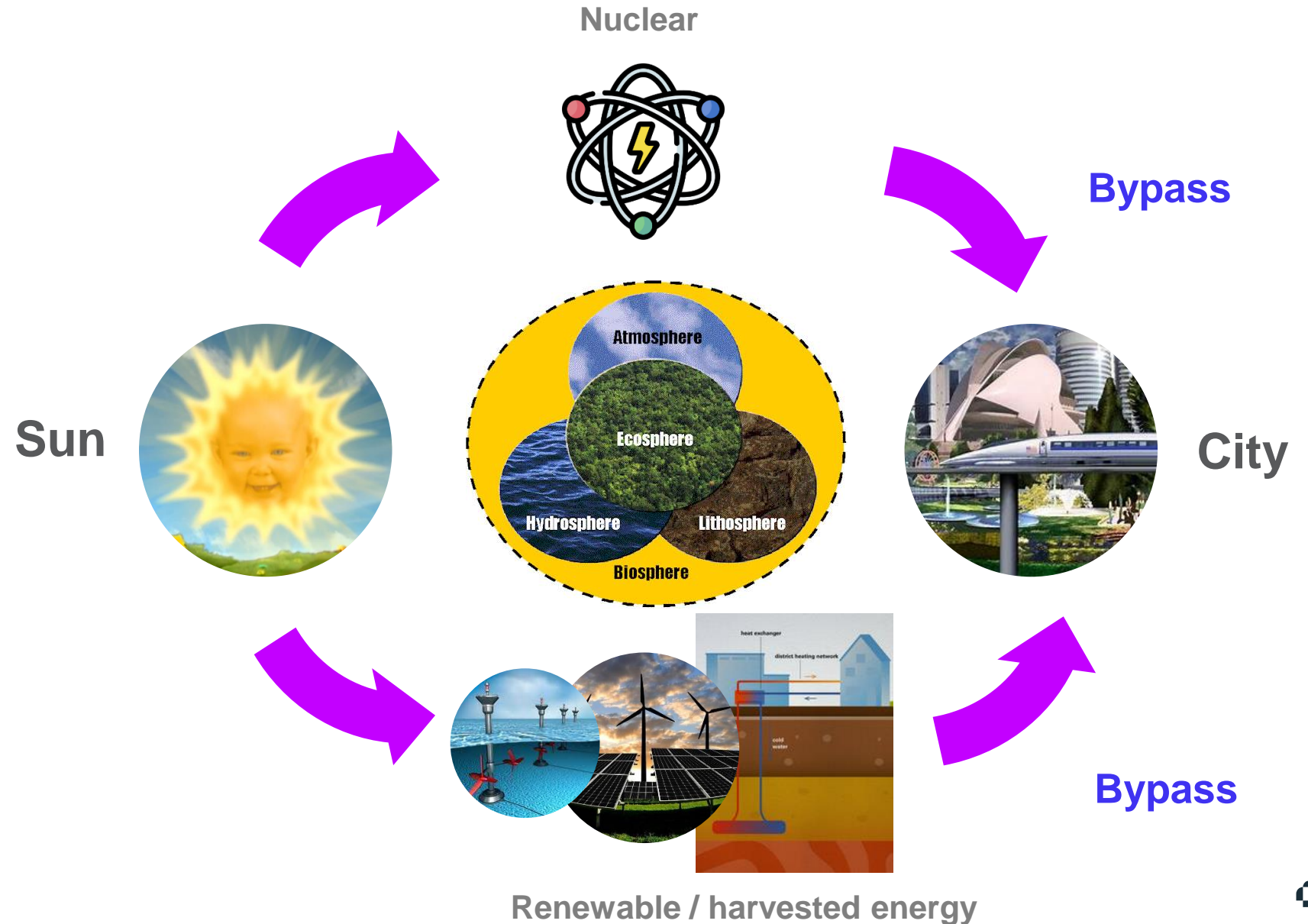
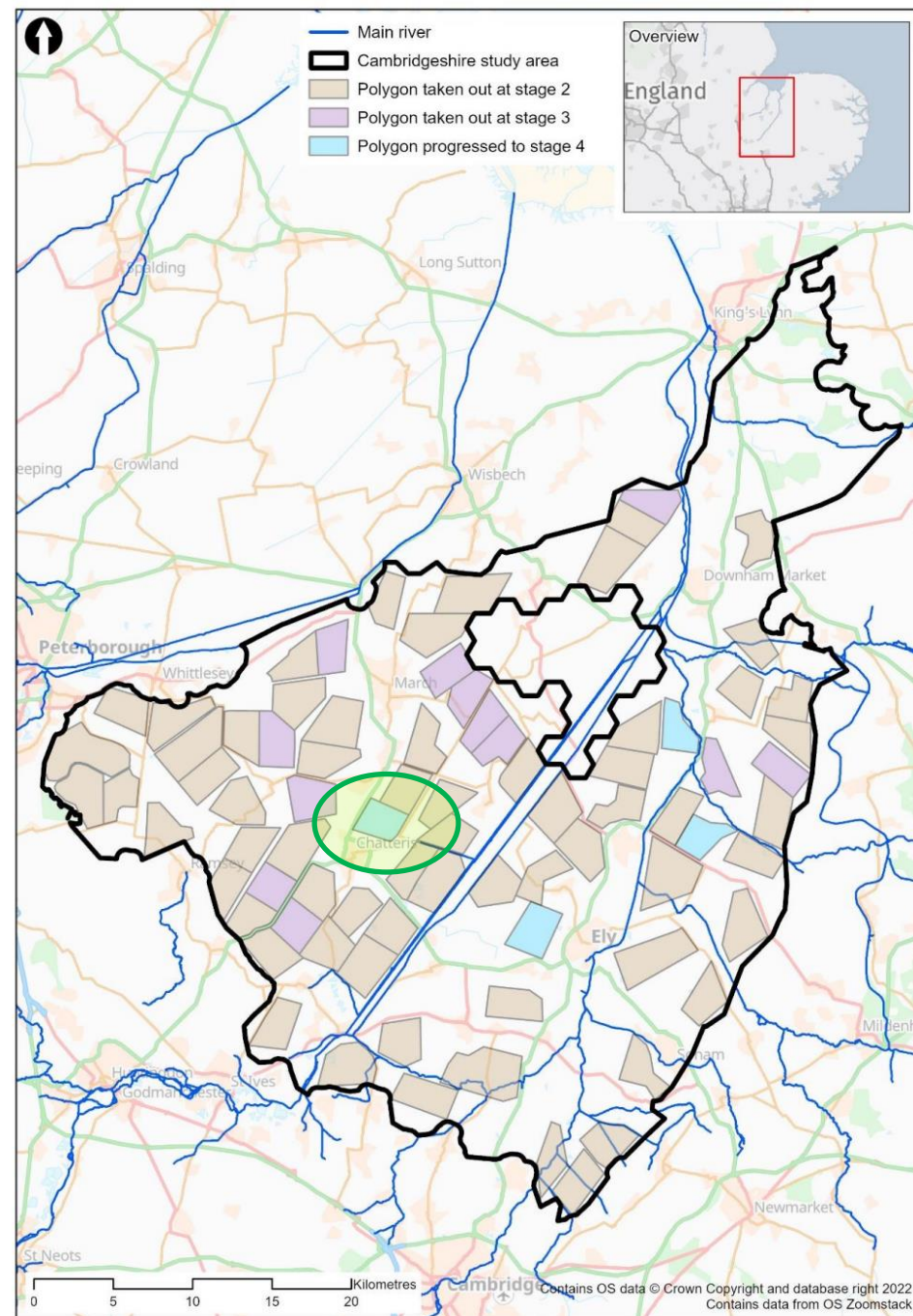


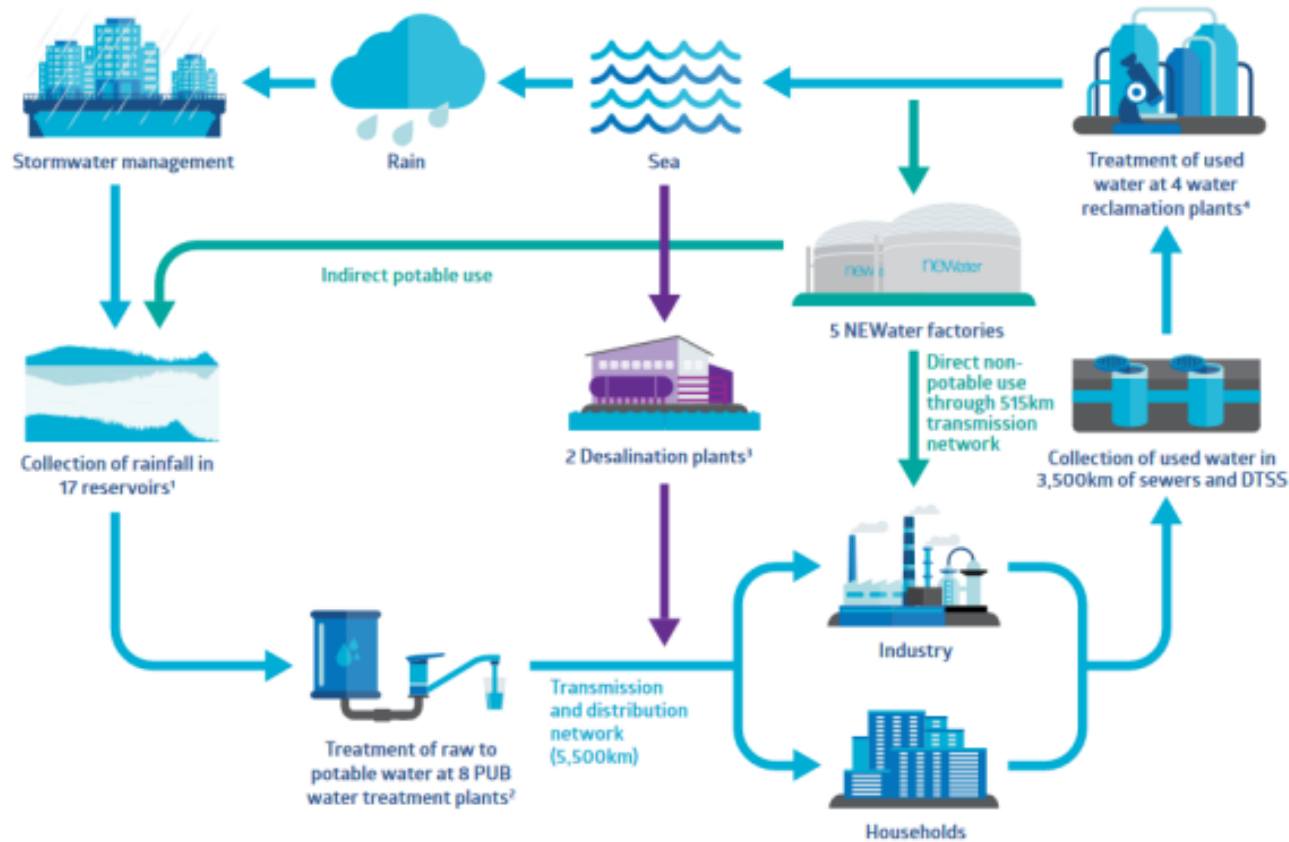


Figure 3: Map depicting the location of the polygons screened in the site selection process

Extract from the site assessments for a Fenland Reservoir with currently favoured locations



(THE WATER LOOP)



From Singapore
Public Utilities
Board

Natural Flood Management



1. LM01.1 – Vegetated buffer strips
2. LM01.2 – Cross-slope woodland & hedgerows
3. LM02.1 – Reducing soil compaction
4. LM02.2 – Mixed species herbal ley
5. LM02.3 – Cover crops
6. FR01.1 – Overland leaky barrier
7. FR01.2 – Flow pathway bund

8. FR02.1 – Offline storage pond
9. FR02.2 – Online storage pond
10. FR02.3 – Swales
11. WC01.1 – In-channel leaky barriers
12. WC01.2 – Headwater woody bundles
13. WC01.3 – Moorland grip and gully blocking

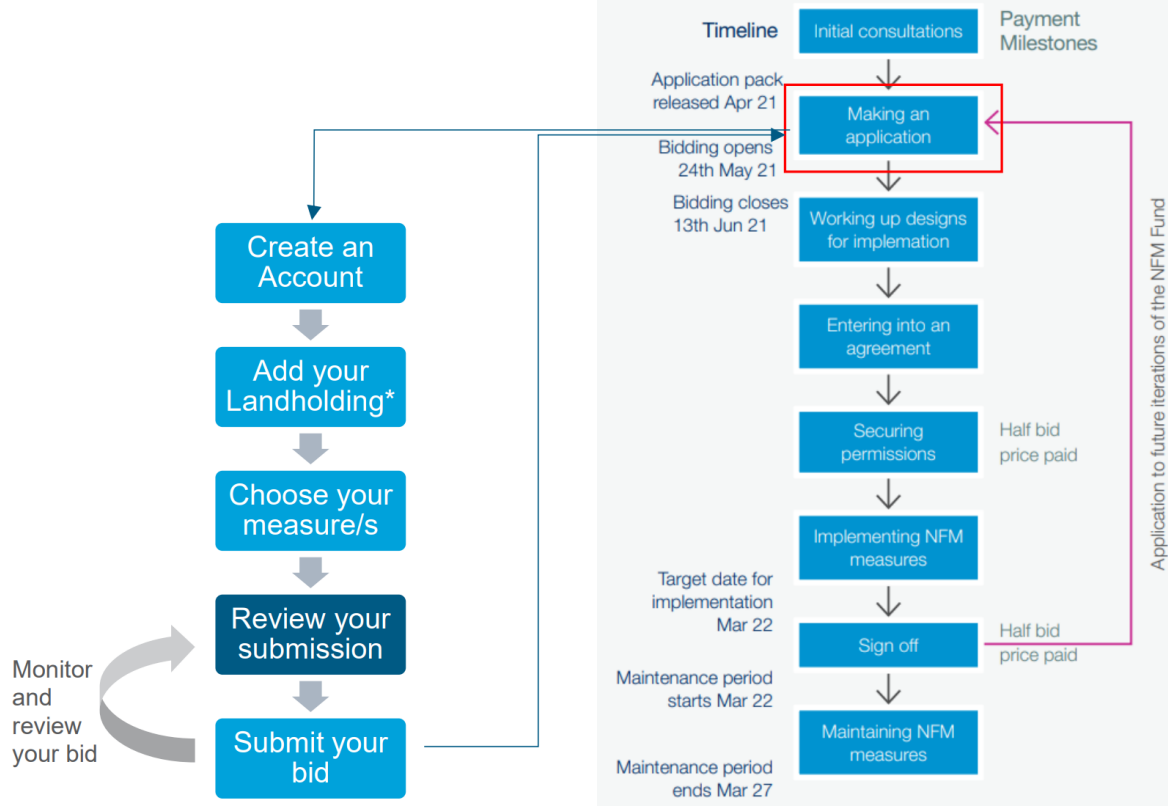
Highways England Natural Flood Management Fund

Organisation: **Highways England**

Link: [Visit Website](#)

Location: **England (North West & North East)**

Steps in using the Fund



NatureBid [log in](#) [register](#) [faq](#) [measures](#) [contact](#)

Working on behalf of **highways england**

NatureBid

Welcome to the Natural Flood Management (NFM) Fund bidding platform (NatureBid). This scheme has been set up to support farmers and landowners in the implementation of measures that work with natural processes to reduce flood risk to the major road network ("A" roads and motorways).

NFM is an emerging approach to addressing flood risk. NFM measures slow or store water in the landscape by emulating or enhancing natural processes. Every landowner is likely to be able to contribute to natural flood risk management, irrespective of location within the catchment, and therefore can play an important role in reducing flooding in downstream areas.

The Fund is hosted by the Rivers Trusts. Your first point of contact is a Rivers Trust local Catchment Advisor who is available to support you with all aspects of the Fund, from application to implementation and maintenance of measures.

The Fund is being financed by Highways England, as part of £936M of designated funding made available over the next five years to deliver lasting benefits to the environment and communities. It is a pilot to explore how Highways England can work with farmers and landowners to reduce flood risk on sections of the strategic road network known to be particularly vulnerable to flooding.

Should you decide to make an application to the NFM Fund, you can bid for as many or as few measures as you like on the bidding page. Bids are made for individual measures. The intervention types specifically being promoted by the Fund are:

- Land Use Management (LM)
- Overland Flow Route and Field Corner Measures (FR)
- Watercourse Measures (MT)

Key information for bidders:

- NFM Fund Handbook
- NFM Measures Booklet
- Design Specification Catalogue
- Step by step guide
- Terms and Conditions
- Highways England NFM Fund homepage

[terms & conditions](#) [privacy notice](#)

Environment Agency SYLVA FOUNDATION Atkins Mersey Rivers Trust

Made by Sylva Foundation using GGL, ProGIS, molly engineers, img, etc.

My Farm Name

Boundaries test auction

This auction is funded by **Highways England**

This auction has ended.

total bids £110251 current success £110251

Measure	Area	Value	Status	Actions
Flow Pathway bund	0.00ha	£110100	funded submitted	edit
Flow Pathway bund	0.00ha	£151	funded submitted	edit
Flow Pathway bund	0.00ha	£0		edit
In-channel Leaky Barriers	0.00ha	£0		edit
Flow Pathway bund	0.00ha	£0		edit

A summary of the measures you have so far inputted into the bidding platform.

Could land and property owners deliver multiple services and provide multiple benefits to multiple stakeholders

Tier 1 stakeholders - Those that want a system to help them to enable nature-based solutions for multiple reasons or demonstrate food production along with ecosystem service delivery – e.g. water company, highways, EA, LGAs, Housing developers, food industry etc

Tier 2 Those facilitating delivery - special purpose vehicle companies, rivers trusts, farmer co-operatives, civil societies / community organisations, Local government agencies

Tier 3 Those on whose land solutions are delivered – farmers, home owners, housing associations, developers, local councils, local communities.



