Practical action for flooding in rural parishes

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COMMUNITY FUND

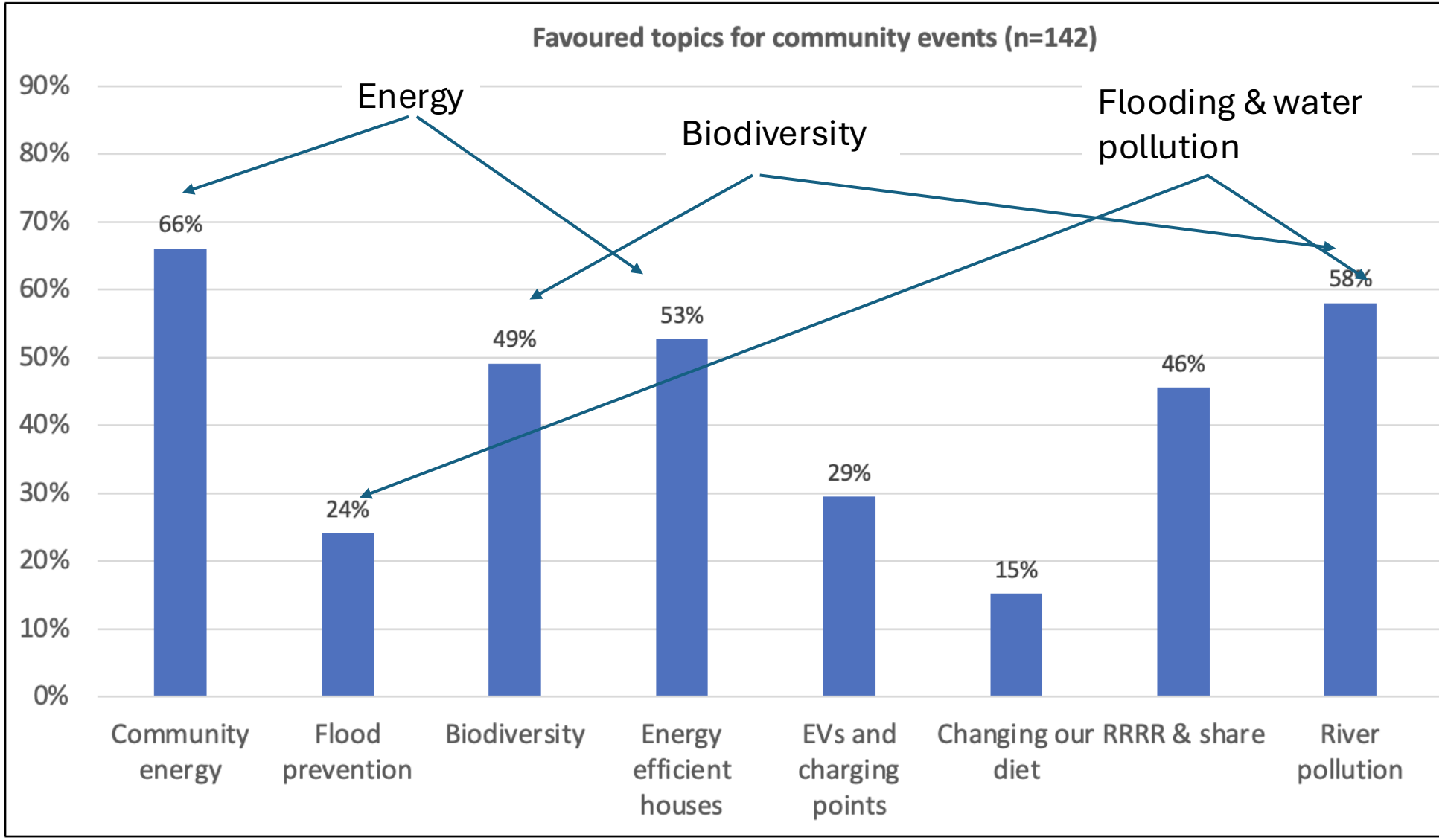
Pewsey Community Area Partnership

Summary

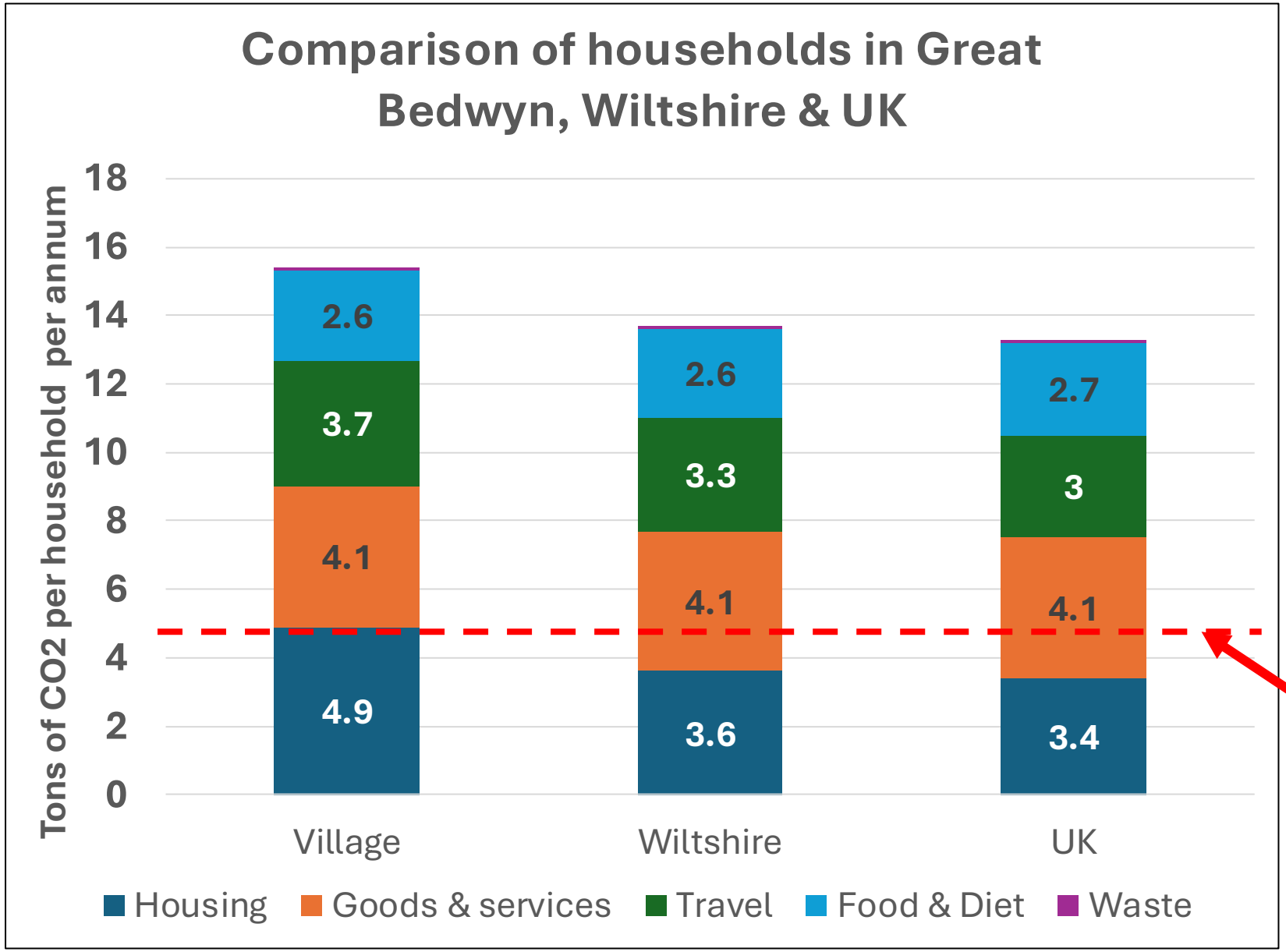
- Context: what is Great Green Bedwyn (GGB)?
  - Start up – survey & aims
  - Carbon footprint of Parishes
  - Logic diagram
  - Some learning
- Action for flooding & water quality around Bedwyn
  - The Great Wall of Bedwyn
  - Home-scale change
  - Landscape scale
- What next ? Green Vale

Survey results => community priorities

How the community survey defined our 3 main goals:



Strating GGB: Annual household CO2 emissions



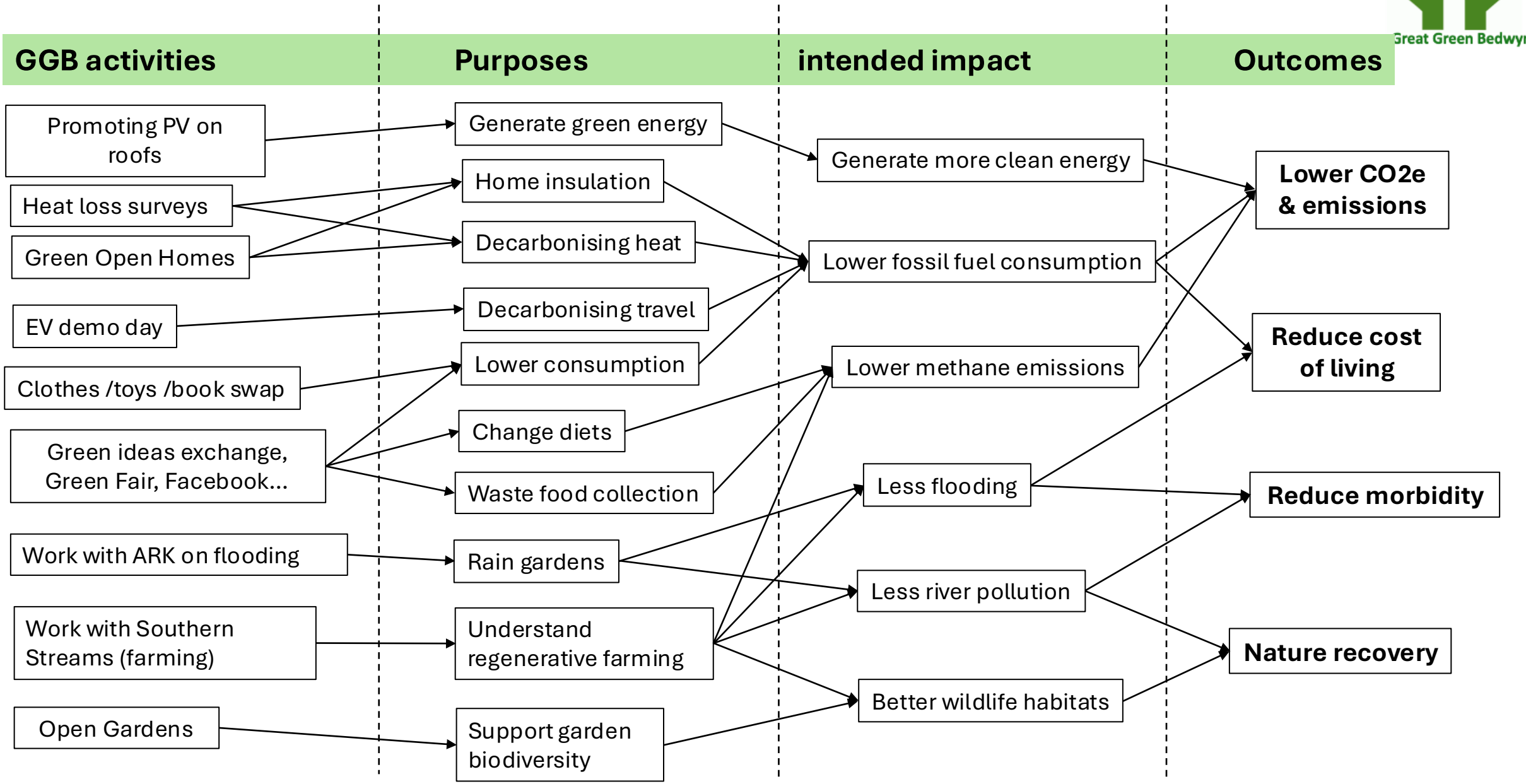
Comments:

- Housing is biggest cause of emissions – 44% higher than UK average – oil + old houses
- Travel is 23% higher than UK average: rural location, poor public transport
- 0.1 for waste is 1/50th of housing – so **not** a priority

Household target to maintain Paris target of 1.5C rise by 2050 - 4.8 !

Source: Carbon Footprint Report: Great Bedwyn Civil parish. https://www.cse.org.uk/impact-community-carbon-calculator/

Towards a logic model for Great Green Bedwyn (GGB)



Great Green Bedwyn 2021- 2026

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Funding:

- Big Lottery Fund £8k in 2021
- N Wessex Downs National Landscape
- Public Sector Decarbonisation - failed X 2

Local engagement:

- Survey & priority-setting mtgs
- Working with partners including school, HEAT, ARK, Southern Streams farmers…

Activities & resources:

- Green Open Homes
- 40+ IR camera surveys & reports (checklist)
- Rain gardens on 26 local sites
- 6 Farm walks, 4 farmer talks + “Six inches of Soil”
- 20+ articles for Parish News & website
- EV demo days, repair café, Share, Swap & Sell event
- Plans for 1MW solar farm – failed (£1.6M grid link)

Wider engagement:

- Environment leads for Pewsey Vale
- Carbon footprint workshop
- Working with Wiltshire wide

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Our learning

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Do:

- Allow community to set priorities
- Find partners with similar aims
- Make things free and simple
- Find right hooks to engage
- Work with schools and pupils
- Be independent, agile & adaptable
- Share openly and widely
- Publish regular interesting e-news

Don't:

- Work on things with low or slow impact
- Follow silo thinking/fixed ideas
- Duplicate effort – borrow ideas unashamedly
- Be too ambitious – to start with !

Flood prevention around Great Bedwyn

- The Great Wall of Bedwyn

- Home-scale change – rain gardens

- Landscape scale change – farming, waterways & ponds

Preventing flooding: The Great Wall of Bedwyn

Great Green Bedwyn

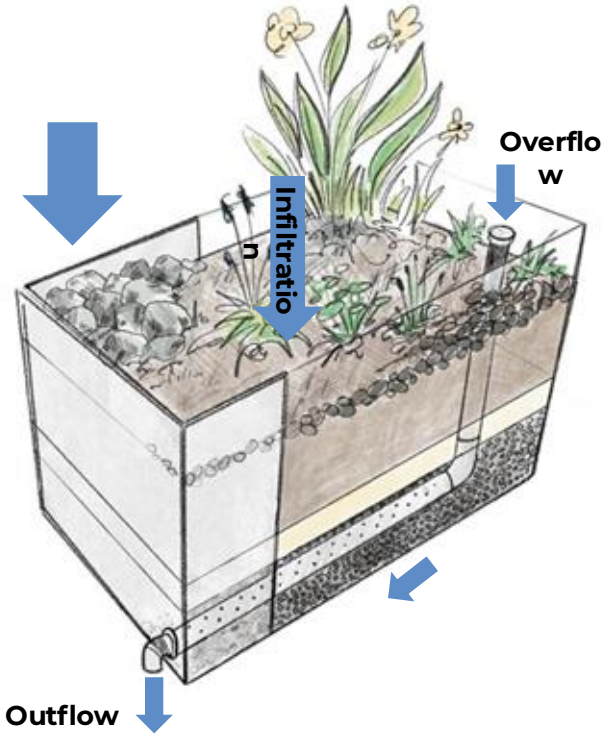
Rain Gardens project with ARK (Action for River Kennet)

Rain gardens

To slow up runoff

Rain planters

To slow up runoff



Rainwater harvesting

Overview of village participation – 26 sites

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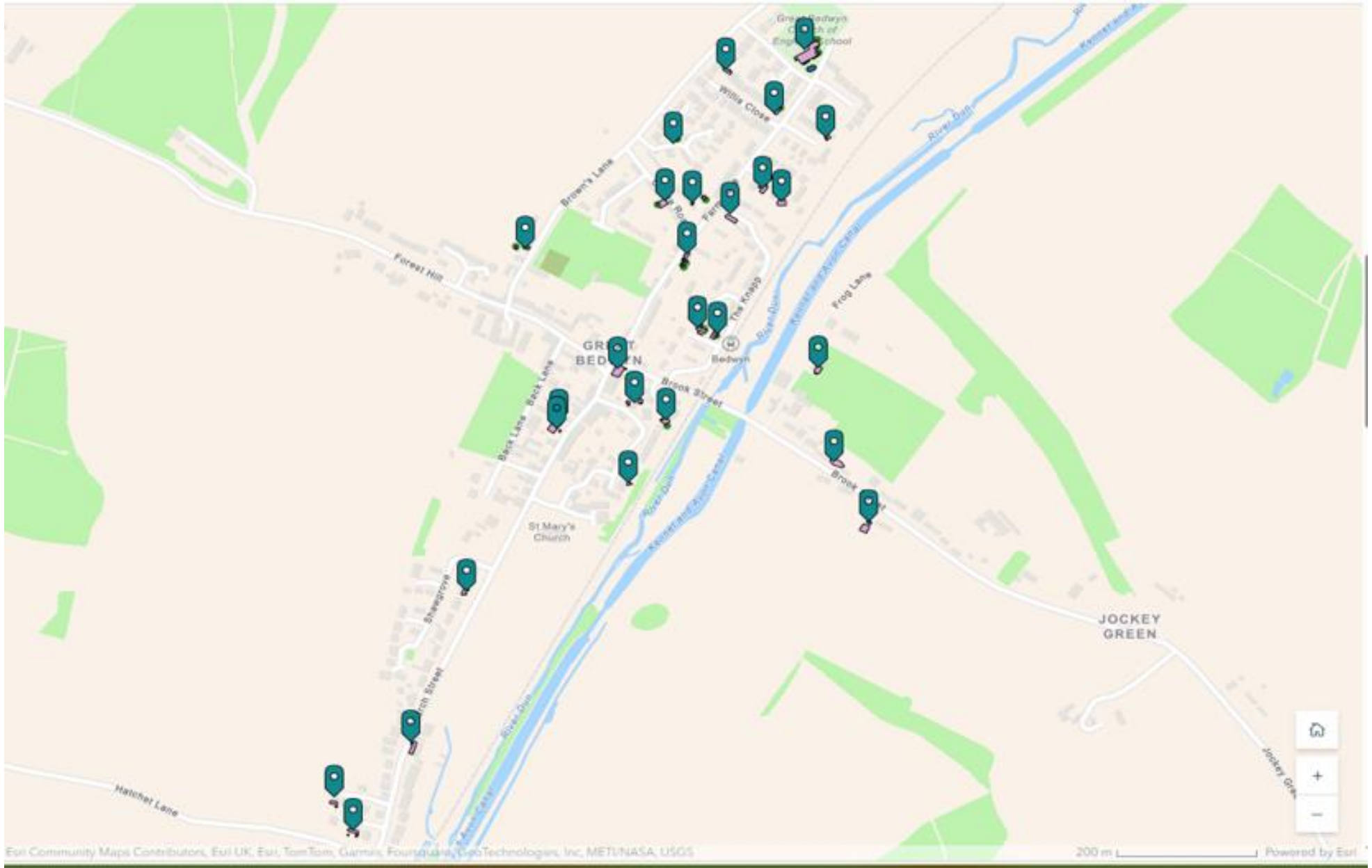
Action for the River Kennet



Rain garden in doctor's surgery

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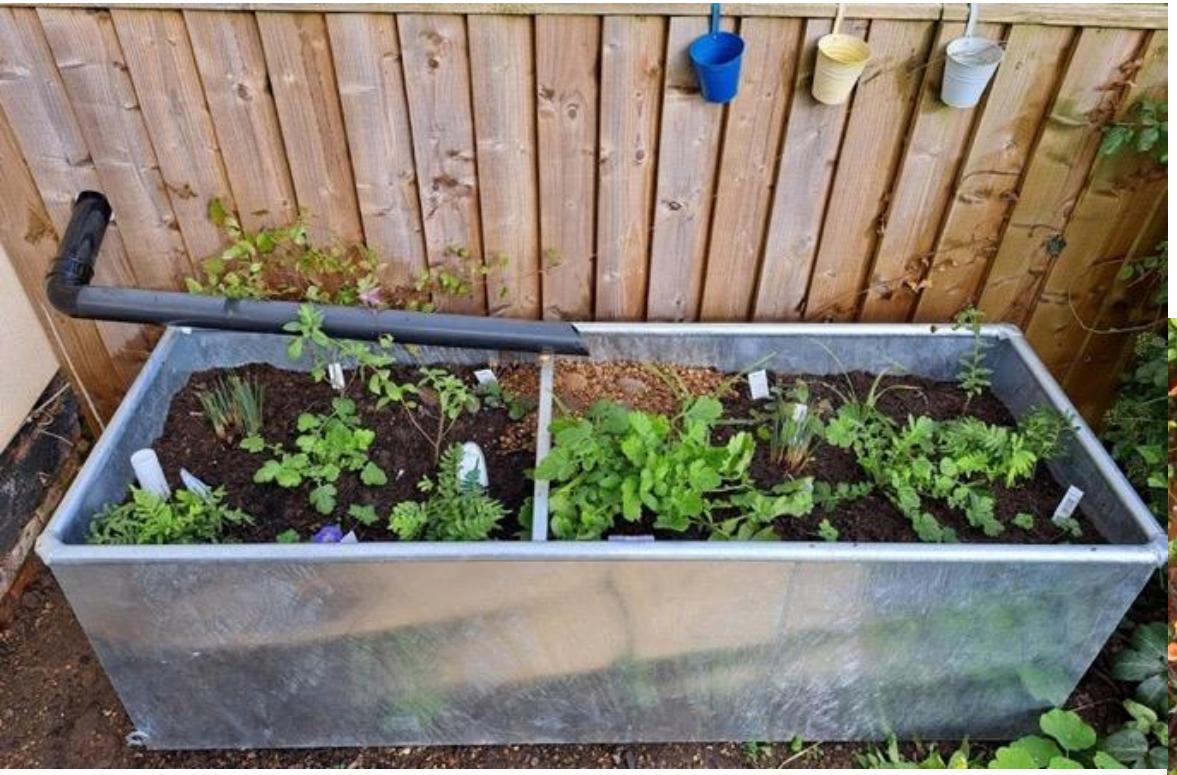
Ark
Action for the River Kennet

Rainwater planters

Great Green Bedwyn

Action for the River Kennet



Rain water harvesting

Action for the River Kennet

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Rain gardens & planters: “right plant, right place”

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A rain garden is NOT a pond or a bog garden, so aquatic plants are not recommended

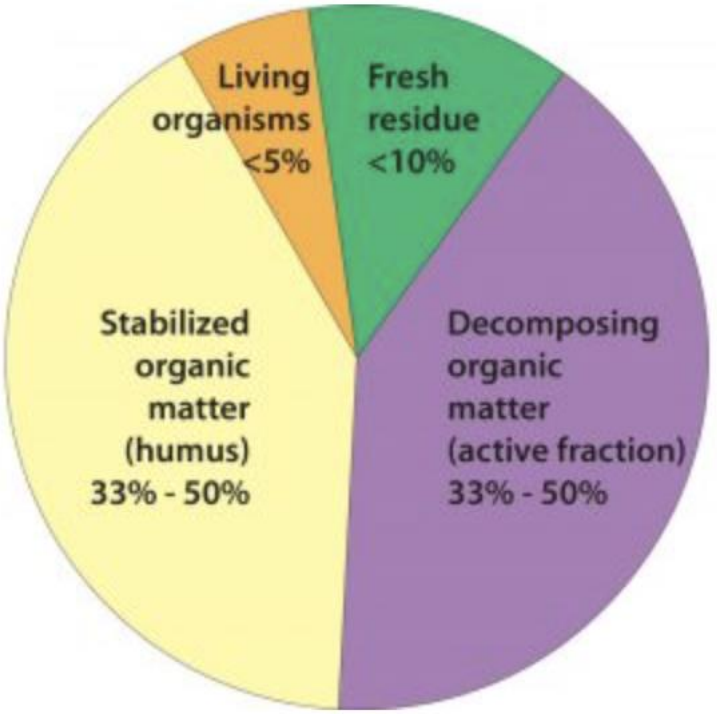
Rain gardens can be planted with ‘normal’ plants choosing the right plant for the right place.

The right plants depend on how well your soil drains and its aspect – sunny or shady.

- **Berm** – drought tolerant plants
- **Slopes** – drought tolerant plants that can withstand short periods of wet
- **Base** – plants that will cope with frequent waterlogging and short periods of drought

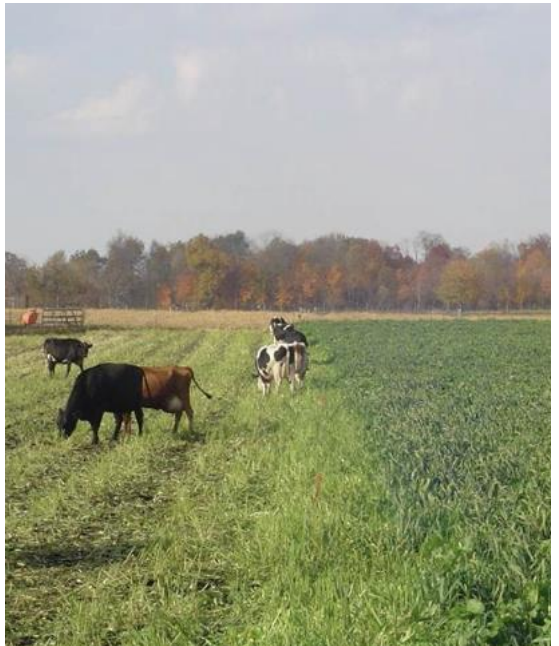
Landscape scale change
Cover crops & animal forage

Key part of regenerative farming to preserve soil structure and minimise use of chemical fertiliser & sprays



Cover crops / green manure:

- Stop soil erosion between the harvest and planting of main crops
- ‘Catch’ available soil nitrogen and prevent nutrient losses (via run-off and leaching)
- Provide winter forage & organic fertilisation of land
- Improve nutrition for next crop through capture and release of nutrients and addition of fresh biomass (organic matter)



Waterway restoration (WWT & ARK)

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Re-wiggling (Re-meandering): Reintroducing natural bends to rivers that were artificially straightened for agriculture or industry. This slows water flow and increases storage capacity during storms

Stage 0 restoration: allow water to flow freely across the landscape, creating a mosaic of wetlands rather than being confined to a single deep channel

Removing barriers: Dismantle obsolete dams, weirs, and culverts to reconnect river systems and allow fish like Atlantic salmon and eels to migrate freely

Establish riparian corridors: Planting native trees and vegetation along riverbanks to provide shade (cooling the water for fish), trap sediment and create wildlife corridors

Beaver reintroduction: Known as "ecosystem engineers," beavers build dams that filter pollutants like nitrogen, create new habitats, and significantly reduce downstream flood peaks.

Sedimentary ponds
Wilton Wetlands

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Southern Streams

Aims: to increase biodiversity, capture carbon and reduce flooding in Wilton village.

Site: poor quality 5-acre field with footpath on greensand, chalk and with a narrow clay band.

Permissions: from Wiltshire Council and archaeological assessment (next to Roman Road)

Funding & design: Funded by Amazon Cloud Services via ARK. RM Wetlands & Environment Ltd designed the site to have wet patches & areas that dry out. This maximises diversity in flora & fauna, but required Laser-level guided diggers to construct humps & hollows in right places without puncturing clay band. Volunteers planted 350+ mixed English trees

Possible actions around flooding & water quality

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Village-led changes

(Understanding and restoring historical flood defenses)

- Community-led rain gardens project (with ARK)
- Nature friendly gardening (Open Gardens)
- Regular water quality testing (with WI)
- Farm walks and visits

Farmer-led action (with Southern Stream Farmers group)

- Engaging with young people through schools
- Regenerative farming including cover crops,
- Dewponds and sedimentary pond eg. Wilton Wetlands
- Waterway restoration eg. Re-wiggling streams

What next?

- Green Vale project across Pewsey Vale (18,000 people in 26 Parishes) for two years from 1 March 2026
- Same aims as GGB (confirmed by second survey)
- Activities:
  - Awareness raising & sharing
  - R&D = Rob & Duplicate what works
  - Innovation exchange events
  - Visits to see good ideas

www.greenvale.org.uk