Working with Natural Processes to reduce flood risk

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Taking action to reduce flood risk by protecting, restoring and emulating the natural function of catchments, rivers, floodplain and coasts

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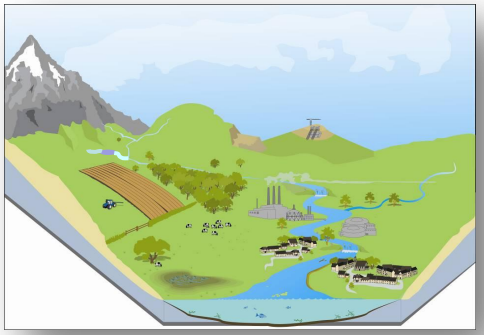
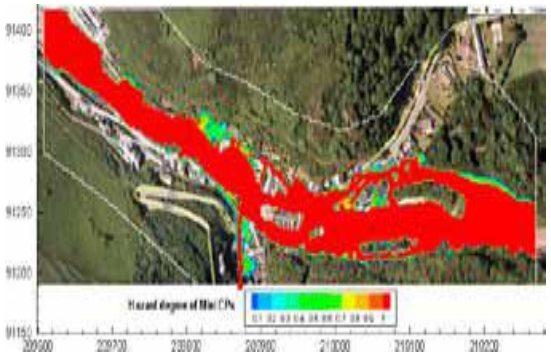
WWNP

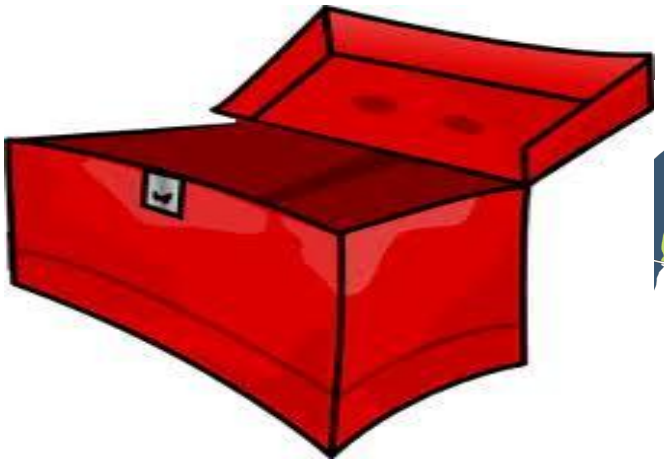


Emergency Response

Modelling, Mapping & Data



Property level protection



Planning

Incident Management

Maintenance

Hard defences

Belford - Northumberland

- Cost £300K
- 10000m^3 storage
- 30 runoff attenuation measures

Pickering – Yorkshire

- FSA - 120,000 cubic metres of flood water
- 100 woody dams
- 25% chance of flooding in any year, reduced to a 4% chance or less.

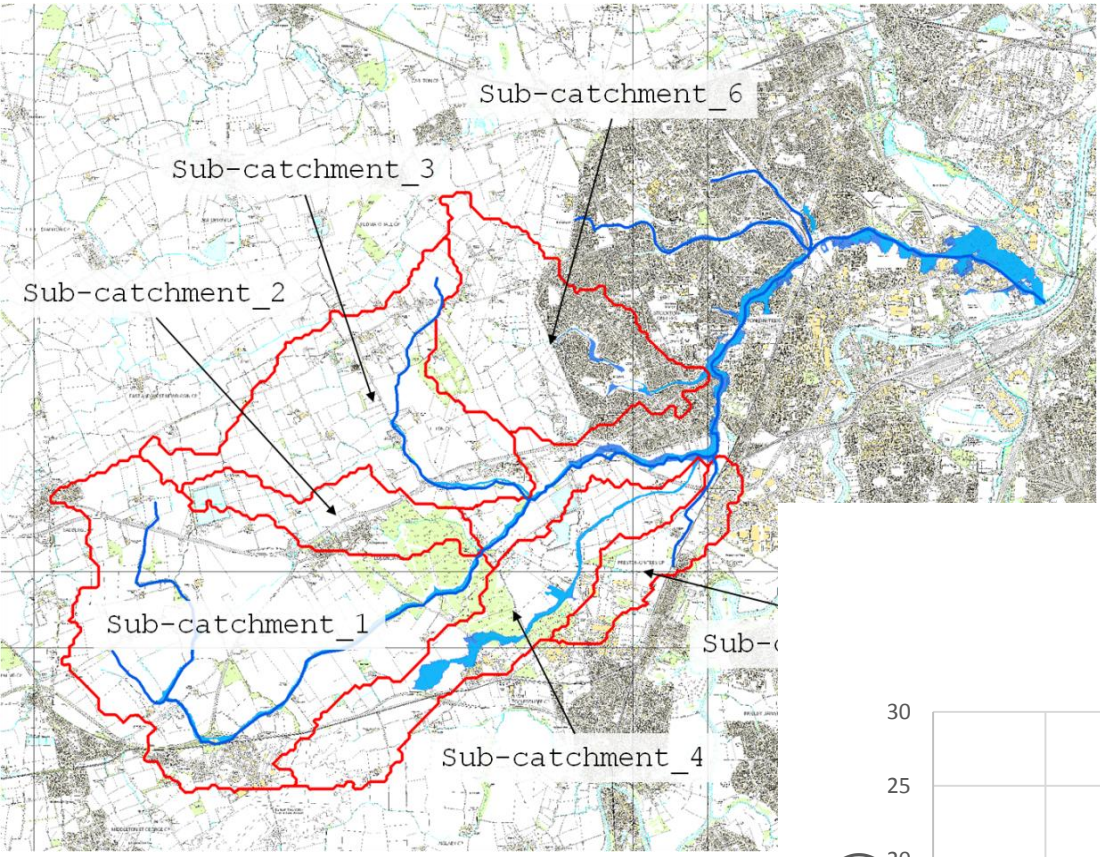
Holnicote Estate – North Devon

- Cost £135K
- WWNP measures estimated to reduced flood peak by 12%

Evenlode – Honeydale Farm

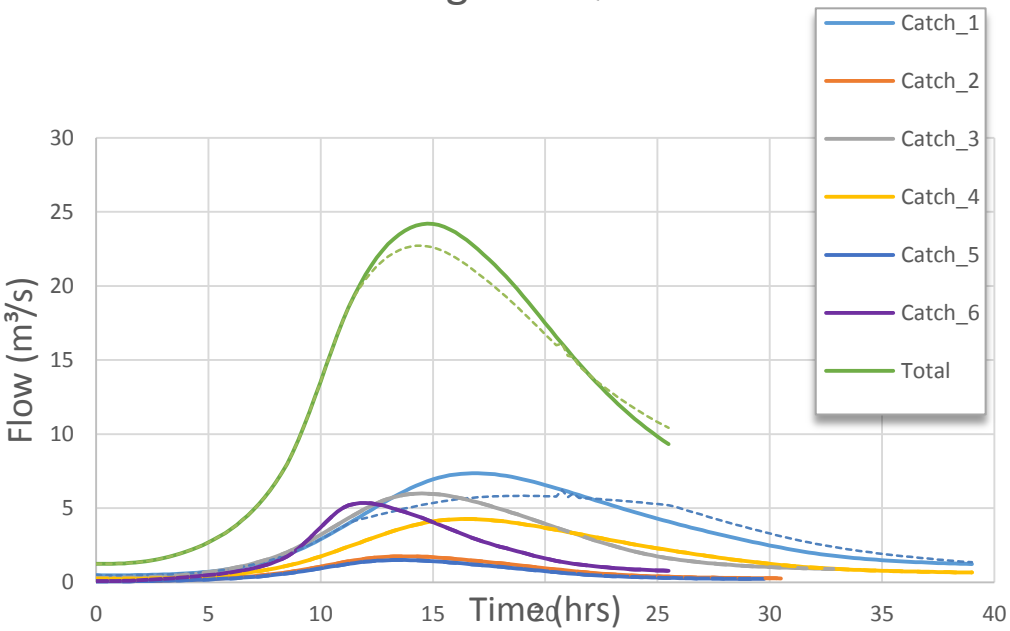
- Partnership project - Cotswold Seeds & Rivers Trust
- Capture the flow upstream to reduce flooding further downstream
- Used small leaky dams known to store and slowly release water

Lustrum Beck – Stockton on Tees



Introduce 40,000m^3 storage (40 ponds) storage into sub-catchment

Mitigated Q



Project cost £3m

£2.2m – Phase 1 – Traditional scheme

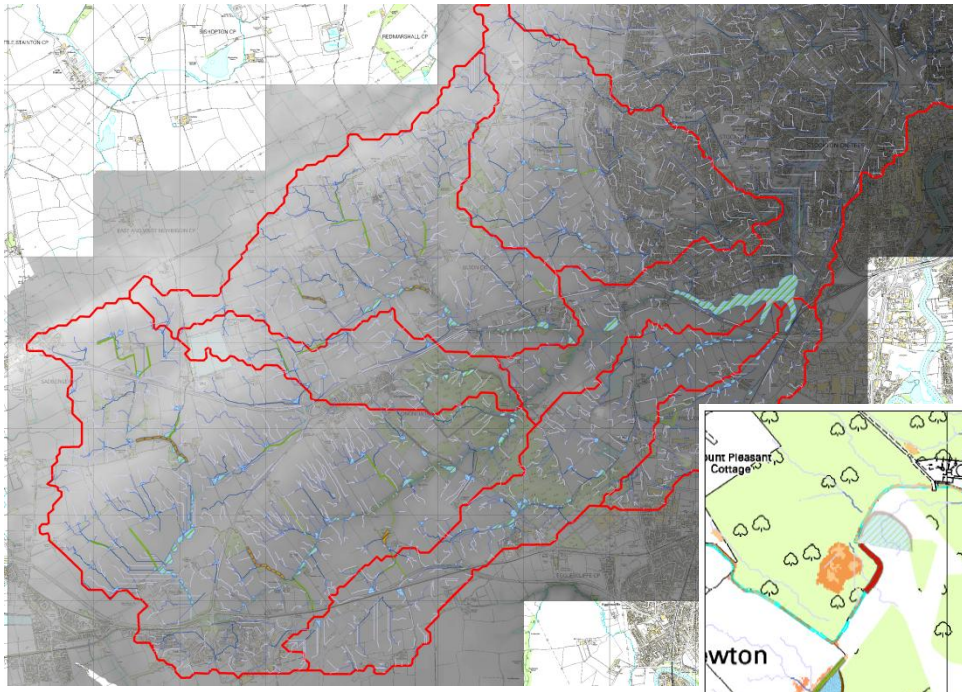
£800k – Phase 2 - WWNP

Funding:

£1.8m FDGiA, £800K Local Levy

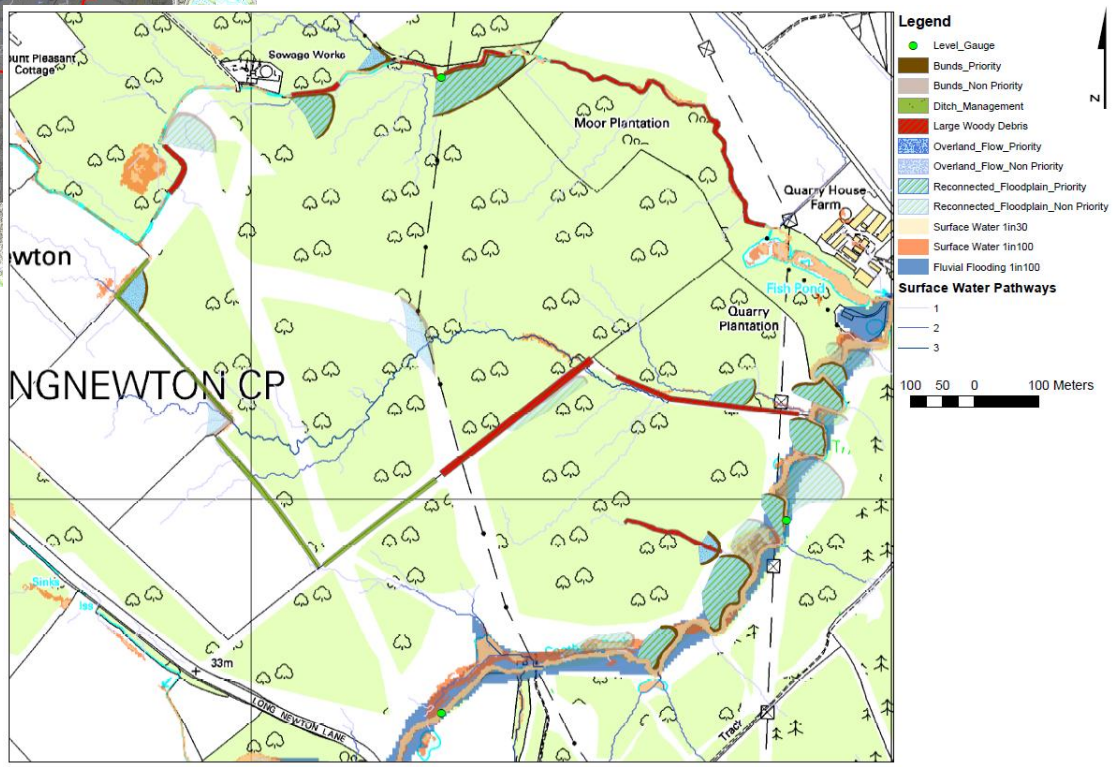
£400k Local Authority Contribution

Lustrum Beck – Stockton on Tees

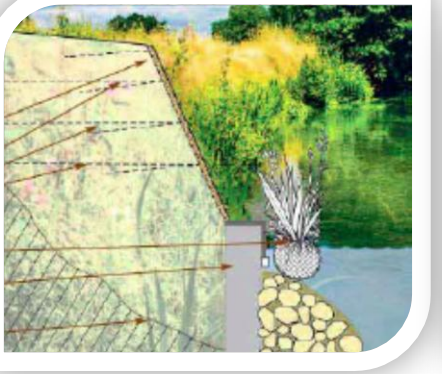


- Identify flow pathways (maps & and aerial imagery)
- Identify suitable locations for WWN
- Raise SoP for scheme

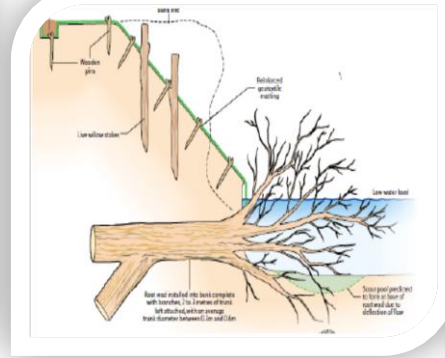
Map locations for potential WWNP



Past & Current R&D

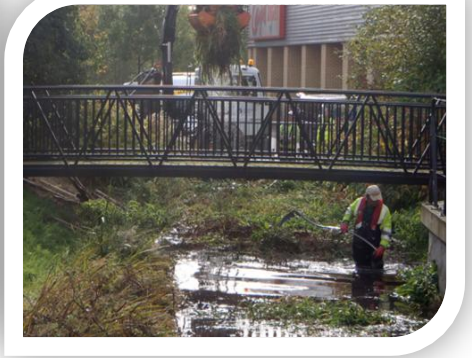


Healthy Catchments



River Restoration

Aquatic Plants



Channel Management

Practical Guidance

Decision Support

Woodlands 4 Water

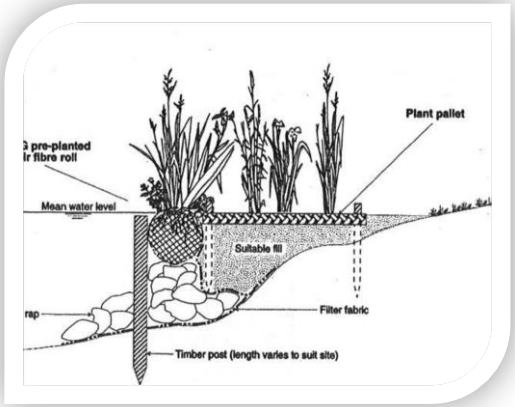
Catchment Processes

Poole Beach recharge

Maps & Models

Testing new approaches

Next Year's R&D

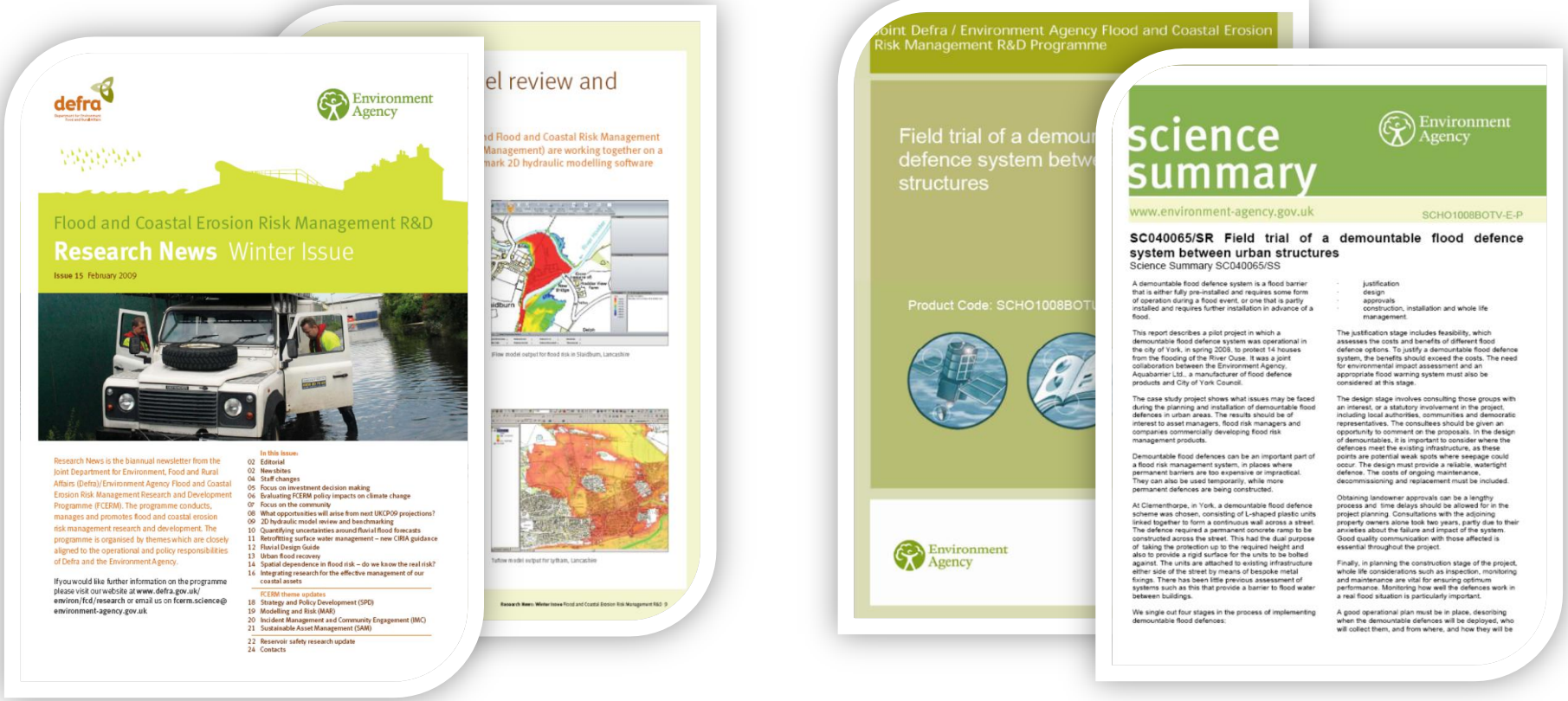


1. Catchment Laboratories

- Collate existing case studies
- Technical design guide
- GIS-based opportunity maps
- Future opportunities

2. Green Engineering

- Engineering guidance
- Information on whole life costs
- Decision-support tool



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