

Nature-based solutions to Nitrate pollution in the Solent – Little Duxmore a Wilder option



Presentation for Rural Practice Surveyors & Agricultural
Valuers.

John Durnell, Director of Estates, Hampshire & Isle of Wight Wildlife Trust

17th November 2021



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About us



Wilder
FUTURE

- Part of The Wildlife Trusts – 46 independent charities working towards a shared vision of a Wilder Future.
- Hampshire & Isle of Wight Wildlife Trust one of the largest, founded in 1960. We have 100 staff, 26,000 members, and over 50 nature reserves totalling 4,600 ha.
- Our headline goal is to put nature into recovery. Our role is to make a significant local contribution to the most pressing global issues of biodiversity decline, climate change, pollution and poor public health.
- Nature-based solutions can help us tackle these issues and more. Investing in nature provides a whole host of amazing benefits for local communities and it underpins the green economic recovery we need post-Covid19.

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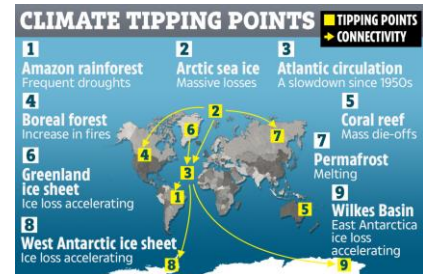
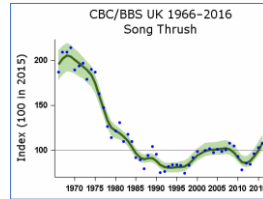
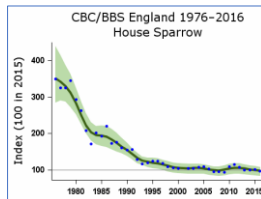
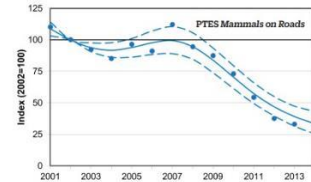
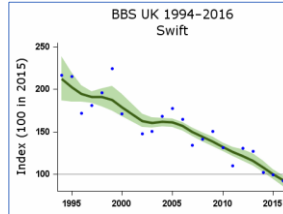
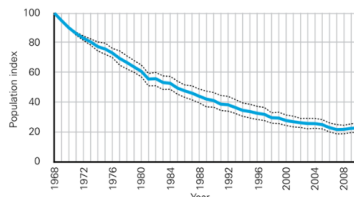
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Where did we start?

Negative tipping points and graphs going the wrong way



The Watchlist Indicator



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40% of
lowland
heathland
lost



50% of
ancient
broadleaved
woodland
lost



67% of
hedgerows
lost



75% of
actively
coppiced
woodland
lost



97% of
lowland
flower-rich
grassland
lost

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Solent catchment areas



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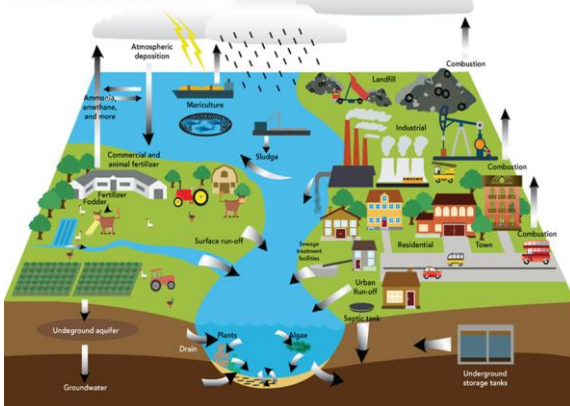
- Highly designated coastal and marine environments
- Densely populated area
- Large housing and economic growth targets

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Sources of Water Pollution



The problem of Solent nitrates

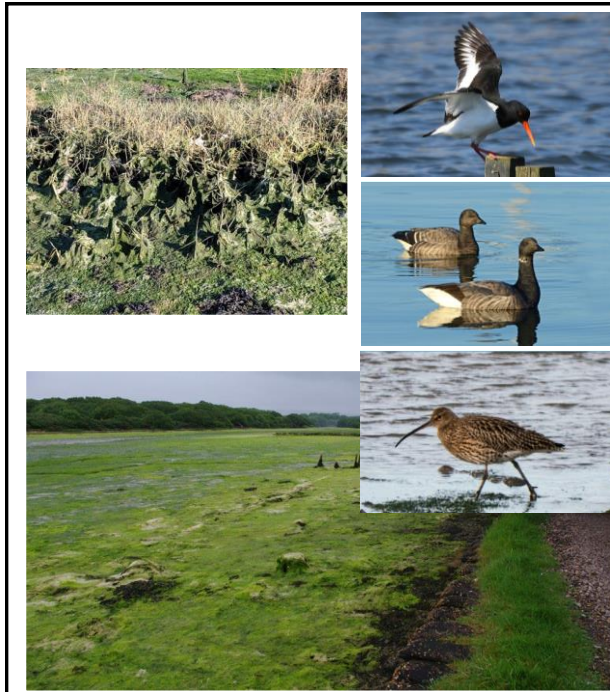
- Levels of nitrogen in the Solent have reached a point where the impacts have become a significant problem.
- Predominant source of nitrogen is from agriculture.
- Other sources include wastewater from residential homes.
- A large amount of nitrogen is ever-present in the Solent's water – often described as coastal background.
- This has built up from various sources over decades including: fertilisers seeping into groundwater, runoff, atmospheric deposition, storm discharges, sewer misconnections.
- Whatever the source, nitrogen pollution is now a serious issue.

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Impacts of pollution

- Nitrogen pollution causes eutrophication in the solent
- Nutrient overload creates vast mats of algae over the Solent's mudflats, stopping oxygen reaching the animals in the sediment and causing mass mortality, especially in hot weather.
- Algae also forms a barrier to many birds which rely on probing the mud or picking off tiny invertebrates from its surface.
- These mats can smother some of our most valuable and threatened habitats: seagrass beds, saltmarshes and mudflats. These habitats are v important carbon sinks
- The Solent's designated sites are therefore in unfavourable condition due to this problem.

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JUDGMENT OF THE COURT (Second Chamber)
7 November 2018 (*)

(Reference for a preliminary ruling — Directive 92/43/EEC — Conservation of natural habitats and of wild fauna and flora — Special areas of conservation — Article 6 — Appropriate assessment of the implications of a plan or project for a site — National programmatic approach to tackling nitrogen deposition — Concepts of 'project' and 'appropriate assessment' — Overall assessment prior to individual authorisations for farms which cause nitrogen deposition)

In Joined Cases C-293/17 and C-294/17,

REQUESTS for a preliminary ruling under Article 267 TFEU from the Raad van State (Council of State, Netherlands), made by decisions of 17 May 2017, received at the Court on 22 May 2017, in the proceedings

Coöperatie Mobilisatie for the Environment UA,
Vereniging Leefmilieu

v

College van gedeputeerde staten van Limburg,
College van gedeputeerde staten van Gelderland,

Intervener:

G. H. Wildenbeest,

Q&A: How the 'Dutch case' ruling is paralysing housebuilding

Housing development in South Hampshire and Herefordshire has been halted due to Natural England updating its legal advice following a European Court of Justice ruling known as the Dutch case. Here's what you need to know.

by James Agepung Parsons

Dorsetmouth is one of the first from south to planning systems begin to be updated following the ruling.

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Dutch Nitrogen Case

- Due to the high levels of pollution in the Solent and with no obvious means of mitigating the impacts, Natural England advised local authorities to put all new planning permissions on hold until solutions could be found.
- This advice was given following the Dutch Nitrogen case.
- On 07 November 2018 the European Court of Justice (CJEU) ruled on *Cooperation Mobilisation for the Environment v Vereniging Leefmilieu*.
- Where a European protected site is in unfavourable condition, the ability to permit activities which would give rise to additional pollution is 'necessarily limited' and would need careful justification to ensure that it is compatible with the Habitats Directive.
- House building has been halted in many parts south Hampshire for over two years – and can only resume when the developer can demonstrate 'nutrient neutrality'.

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Our nature-based solution

- We acquire intensive agricultural land, in appropriate locations, stop any further application of fertilisers and create natural wild habitats.
- By removing nitrogen from the Solent catchment, this creates the ability to sell 'nitrate credits' to mitigate the impact of new homes and allow house building to resume.
- Our scheme builds in additional 'headroom' to deliver nitrate reductions and wider water quality benefits (i.e. **more** than nutrient-neutrality).
- New nature reserves, protected **in perpetuity**, are created – expanding and enhancing vital wildlife habitats and adding to the nature recovery network.
- Developments must pass our ethical eligibility tests.

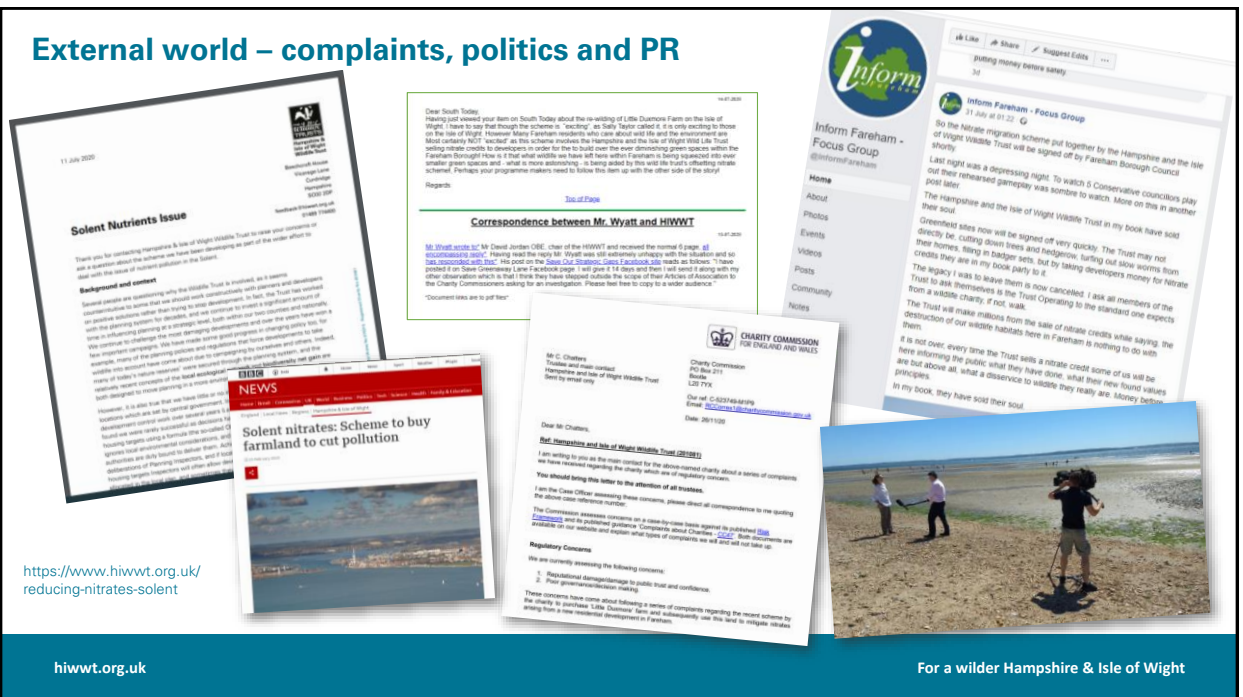


Deputy leader at Test Valley Borough Council, cllr Nick Adams-King, said:
"Hampshire & Isle of Wight Wildlife Trust brought forward a plan where land could be rewilded.

"We are going to be working with them because they have come up with a brilliant scheme, which would mean more places like Fishlake Meadows.

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External world – complaints, politics and PR



<https://www.hiwwt.org.uk/reducing-nitrates-solent>

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Our tests



1. Development within local plan or otherwise acceptable to local authority.
2. No objection from local authority ecologist, Natural England or the Wildlife Trust.
3. No loss of irreplaceable biodiversity.
4. Compliance demonstrated with all forms of ecological mitigation required by planning policy and environmental legislation.
5. Contributions made to other mitigation schemes in place where relevant.

With over-demand, preference will be given to developments which deliver Biodiversity Net Gain / contribute to the Nature Recovery Network.

Also signposting to the Building with Nature standard, and our ecological services.

And offering option of purchasing additional credits so as to voluntarily contribute to reductions.

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Mitigation sites

- We identify agricultural land within certain catchment areas and work with Natural England to determine the mitigation potential of the land if removed from intensive agricultural production.
- Mitigation potential is calculated using 10 years of agricultural use records and working out average nitrogen 'loss' from the site per year. Difference between this and future land use gives the net amount of nitrogen removed from system.
- We are then able to sell nitrate credits at an agreed rate either to developers or to local authorities. A credit being 1kg/N per year.
- The funds generated will enable us to purchase intensively managed arable land and enter into a legally binding contract manage this land in perpetuity.
- Little Duxmore Farm the first site we acquired has now been fully allocated

Cereals	31.2
Dairy	36.2
General Cropping	25.4
Horticulture	29.2
Pig	70.4
Lowland Grazing	13.0
Mixed	28.3
Poultry	70.7
Average for catchment area	26.9

Table 2 Farm types and average nitrogen-nitrate loss

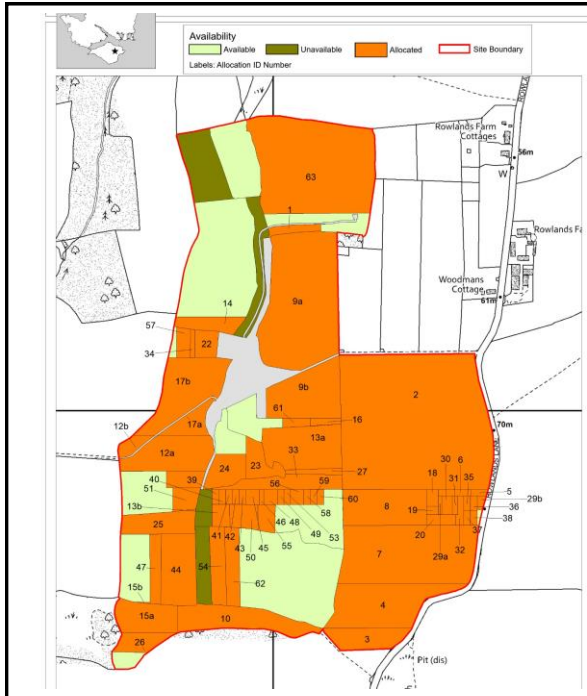
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Summary maps

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- The LPAs will want a method of confirming that areas haven't been sold twice.
- A summary map is the approach we have taken.
- There is a need for an internal quality control process to ensure that maps aren't issued in error.

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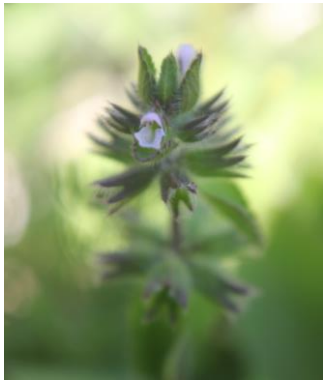
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Rare Arable flora found at Little Duxmore Farm:

Field woundwort, cabbage family, enchanter's nightshade, hairy tare, field speedwell and buttercup sp.

Within 12 months the assemblage of rare arable weeds would see Little Duxmore considered of European importance.



Images © Mark Spencer

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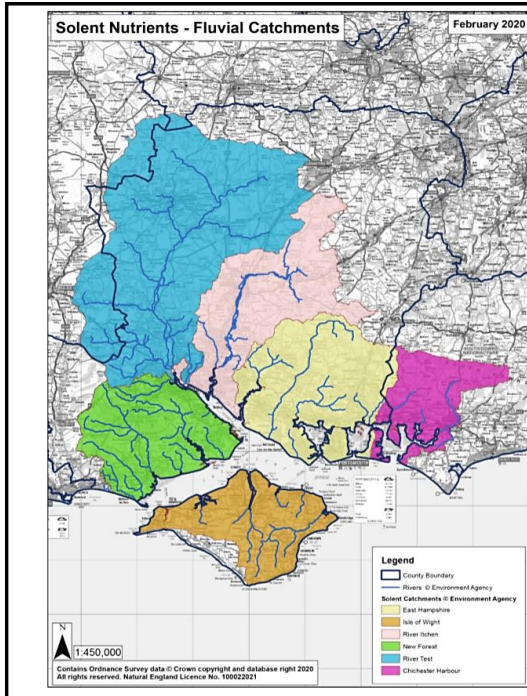
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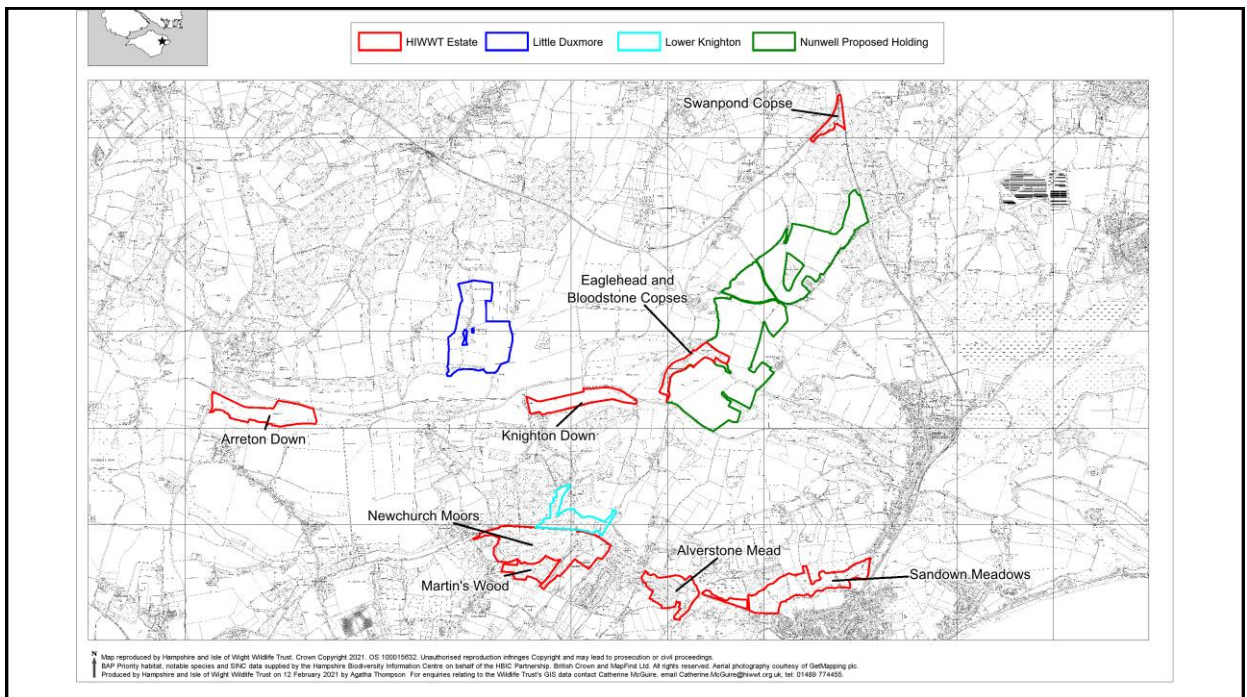


Scaling up the scheme

- Little Duxmore Farm has demonstrated proof of concept, unlocking around 1,150 homes.
- More than 200 'expressions of interest' on our database from developers.
- Local planning authorities will soon be able to purchase credits in bulk in advance (but must agree to our tests).
- We have agreed terms for our second acquisition (Nunwell Estate) and we are in discussions to acquire several other sites across the region, with a view to covering all catchments.
- The Trust is examining various options to finance the acquisition of the sites and the expansion of the scheme.
- Full ecological monitoring will be undertaken to demonstrate benefits.

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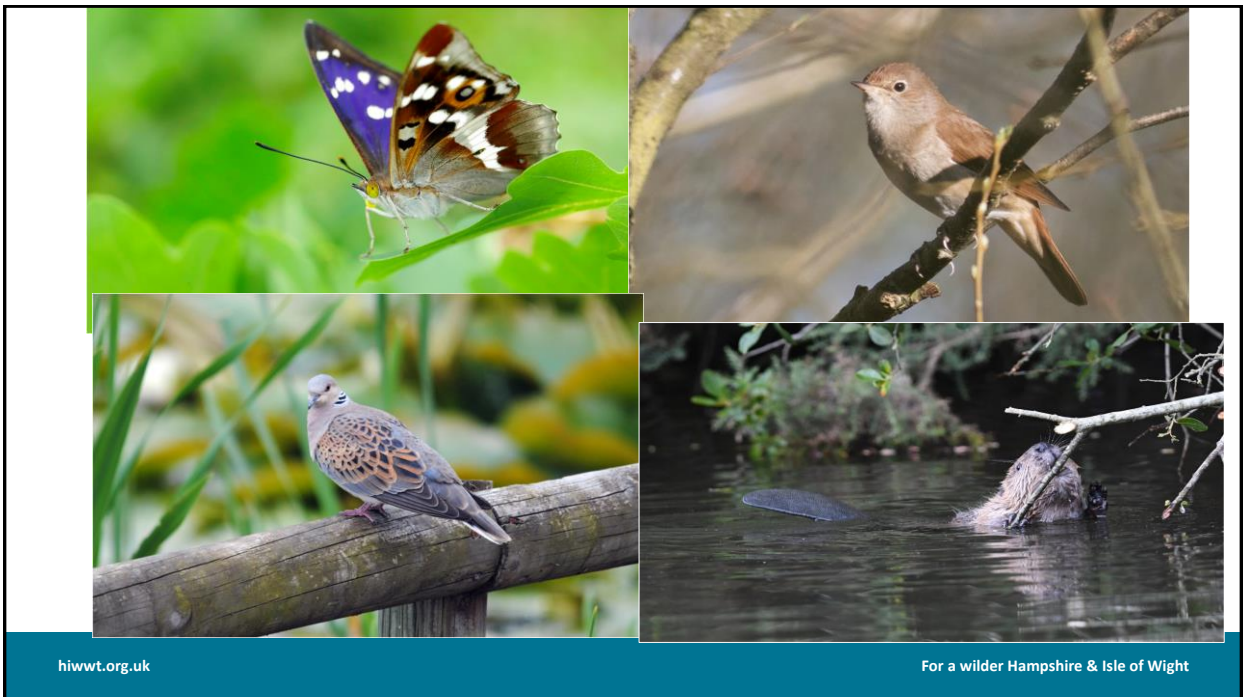
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Lessons learned



- Setting a scheme up will be time consuming and expensive (up to 100k on legal and professional fees and six months.)
- Get the public messaging ready in advance – you will not be popular with everyone..
- Make sure Governance is well documented – we had a Charity Commission complaint to deal with.
- The S106 agreement is the key document, try to minimise your commitments in it.
- Building relationships with LPA planning teams if important.
- Avoid committing to removing the land from agriculture.
- Larger developers will want a significant period for them to get planning permission which means payments may take 6 months to arrive.
- It's a lot of work you will need some dedicated senior officer time.

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A few observations.

“Rewilding” should be seen as one of the tools available not the only one.

It can help to re build the foundation of the ecosystem ie increase abundance.

It is less useful when trying to preserve rare species with very specific requirements.

Areas will still need to be managed.

Extensive grazing will remain the key management tool.

Sustainable food production should still be an aim of rewilding.

It doesn't fit neatly into the agri environment box.

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Wider benefits of 'rewilding' nature-based solutions



Revitalises wildlife



Locks away carbon



Cleans air and water



Reconnects us with nature



Restores our soil



Prevents us from flooding



Supports new economic opportunities

- Recent developments:
- Also investigating future models including stacking and blending with other ecosystem services / nature based solutions – carbon (Wilder Carbon), Biodiversity Net Gain etc.
- Also looking at liquidity options via loans or repayable investment.
- Mindful of lower-quality "imitation" schemes coming forward which could undermine NBS – vital our schemes are validated, monitored and we have good evidence to demonstrate benefits.



Contact us: nitrates@hiwwt.org.uk