

PAS - Workshop 5

Nutrient Neutrality – Planning for a Better Environment

5th and 10th May 2022

Agenda

1. Nature based solutions for nitrogen mitigation- John Durnell, Hampshire and Isle of Wight Wildlife Trust
2. Additionality and stacking environmental benefits and trading platforms - Timotheus Jn Baptiste and Doug McNab – Defra
3. A land owner's perspective for delivering a wetland - Jamie Butler, Meon Springs
4. The role of Ofwat and nutrient neutrality - Phillip Dixon, Ofwat

Nature-based solutions to Nitrate pollution in the Solent – A Nature Based solution

Presentation for Planning Advisory Service

John Durnell, Director of Nature Based Solutions, Hampshire & Isle of Wight Wildlife Trust

5th May 2022



About us



Wilder
FUTURE

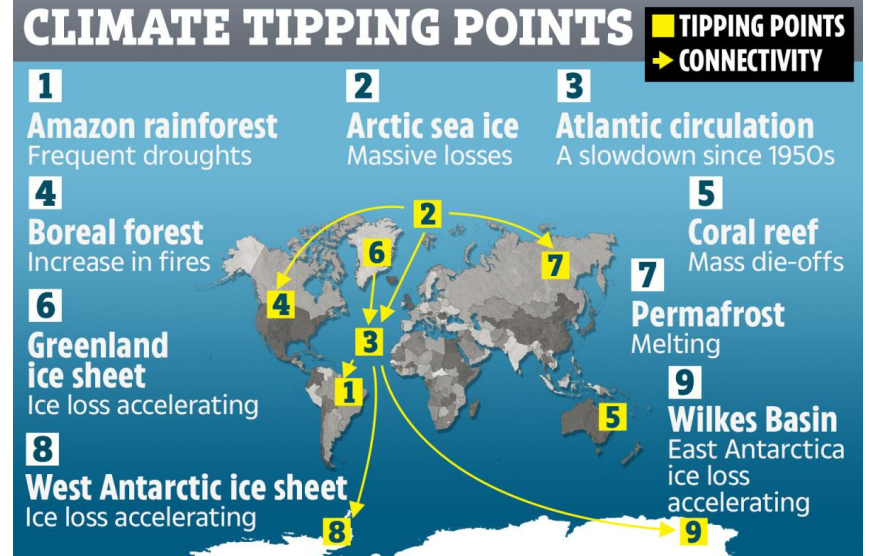
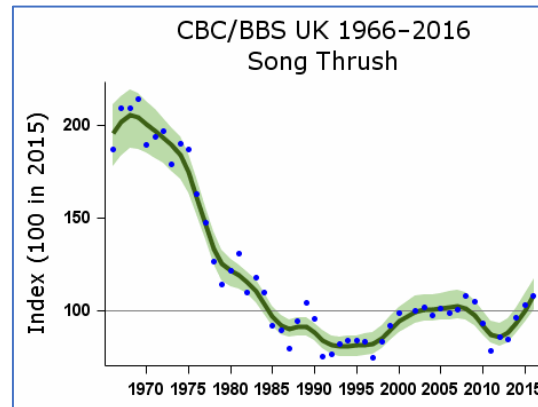
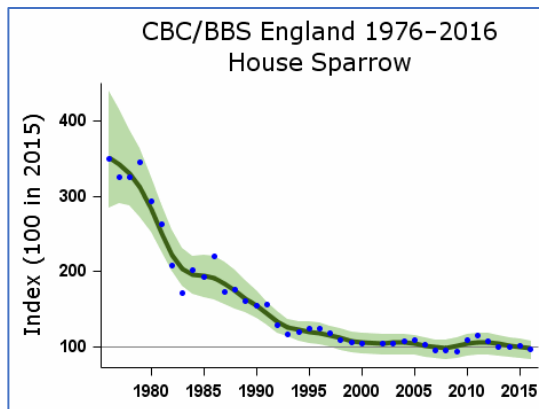
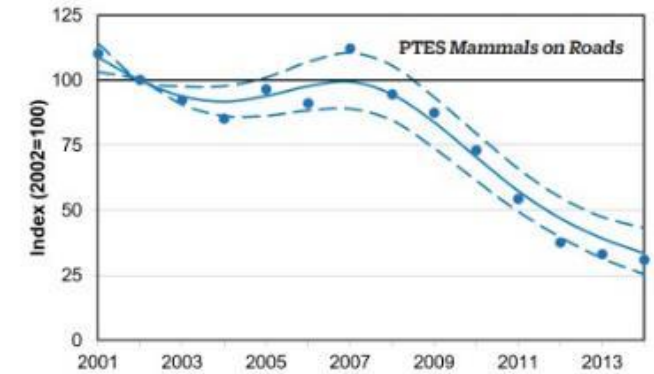
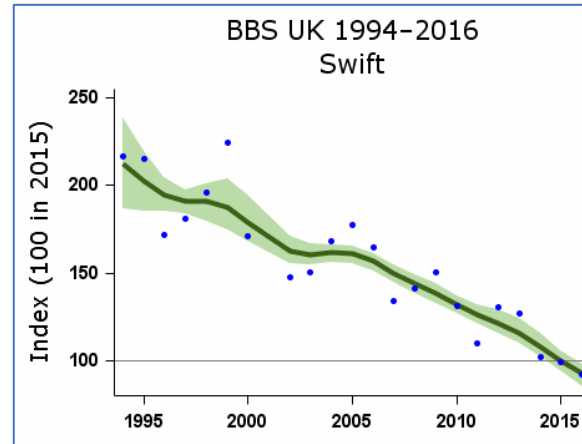
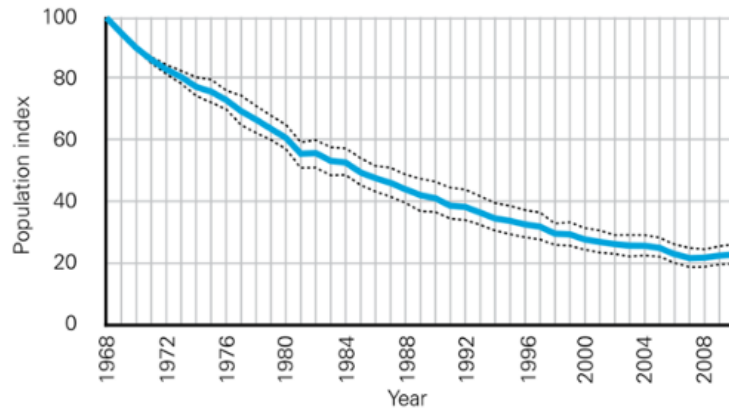
- Part of The Wildlife Trusts – 46 independent charities working towards a shared vision of a Wilder Future.
- Hampshire & Isle of Wight Wildlife Trust one of the largest, founded in 1960. We have 100 staff, 26,000 members, and over 50 nature reserves totalling 4,600 ha.
- Our headline goal is to put 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.

Where did we start?

Negative tipping points and graphs going the wrong way



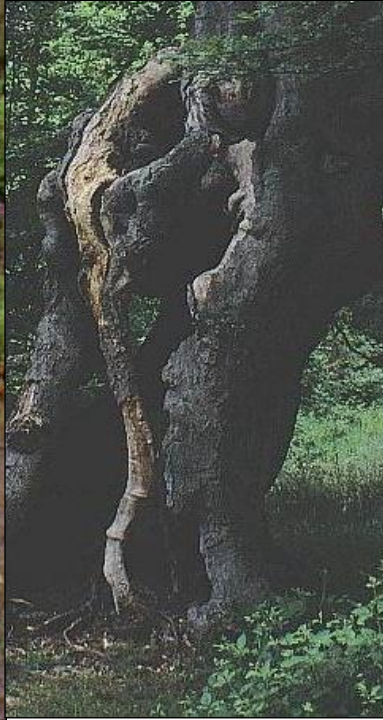
The Watchlist Indicator



40% of
lowland
heathland
lost



50% of
ancient
broadleaved
woodland
lost



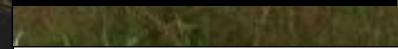
67% of
hedgerows
lost



75% of
actively
coppiced
woodland
lost



97% of
lowland
flower-rich
grassland
lost



Solent catchment areas

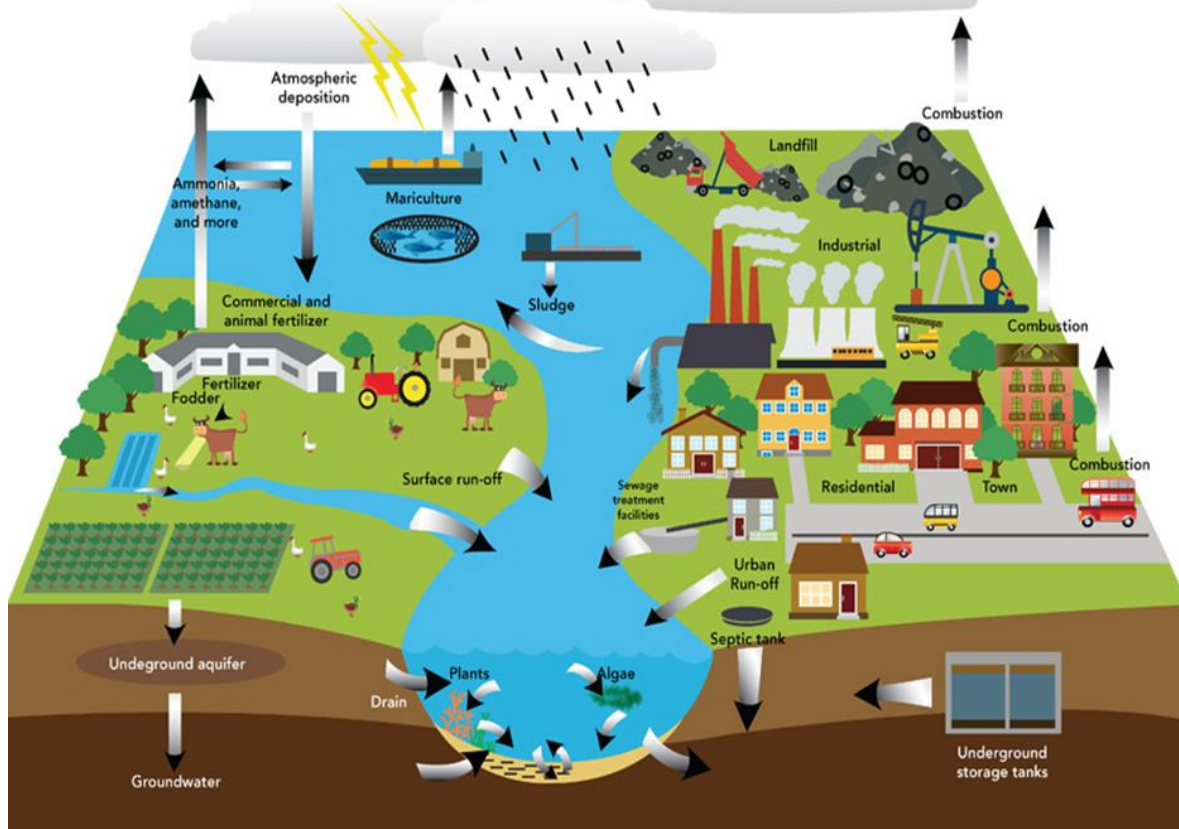


Hampshire & Isle of Wight
Wildlife Trust



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

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.



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.

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 Mobilisation 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 Agyepong-Parsons



Portsmouth is one city that has seen its planning system frozen by the Dutch ruling. Photograph:

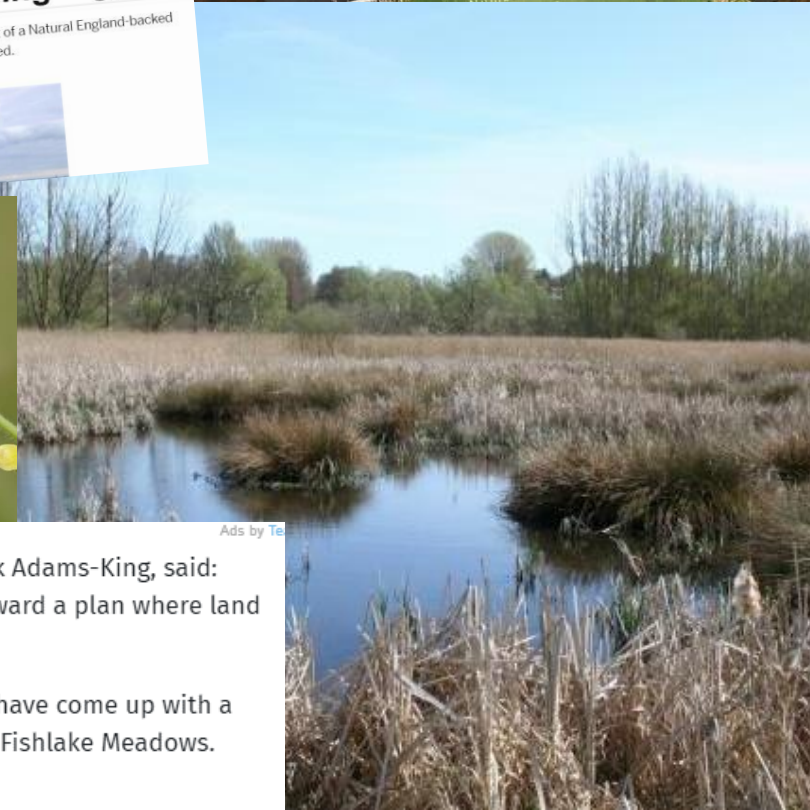
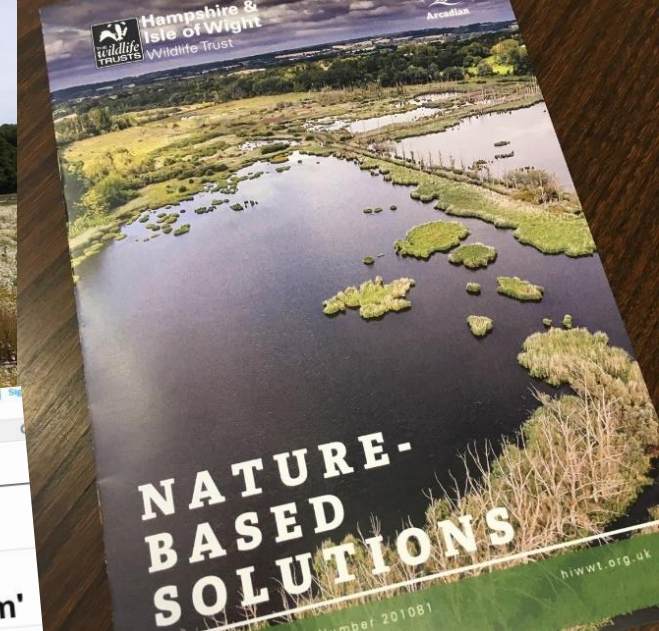
Dutch Nitrogen Case

- 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.
- We are also examining wetland options to address phosphate issues
- 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.



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.

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 using Natural England's calculator launched in March 2022.
- 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 and we have presold 1500kgs to Portsmouth CC from Nunwell our second site.

AVERAGE NITRATE-NITROGEN LOSS PER FARM TYPE IN THE SOLENT CATCHMENT AREA (kg/ha)

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

Solent Nutrient Budget Calculator - Version 2 - Read-Only

File Home Insert Draw Page Layout Formulas Data Review View Help

Calibri 11 A⁺ A⁻ B I U Font Wrap Text Merge & Center Alignment Sensitivity General 9% Conditional Formatting Format as Table Cell Styles Insert Delete Format Sort & Find & Filter Select Analyze Data

C25

User Inputs

Catchment: Isle of Wight Rivers

Soil drainage type: Freely draining

Annual average rainfall (mm): 1,000.1 - 1,100

Within Nitrate Vulnerable Zone (NVZ): Yes

Existing land use type(s)	Area (ha)	Annual nitrogen nutrient export (kg TN)
Cereals	1.00	27.22

Select existing (pre-development) land use types from the drop down list.

Solent Marine Sites Instructions Development site details Stage 1 Stage 2 Stage 3 Stage 4 Lookups ...



Process and legal framework (1)

- Sites acquired by the Trust for nitrate mitigation will be held as heritage assets, either freehold or long lease, for 125 years.
- A legal agreement will bind the Trust and the planning authorities to ensure the mitigation is delivered.
- The agreement is based on Section 106 of the Town and Country Planning Act 1990, and Section 33 of the Local Government (Miscellaneous Provisions) Act 1982.
- Agreements are signed by the Trust, the local authority granting planning permission and the local authority where the mitigation site is based who is responsible for monitoring compliance.
- The Trust offers developers both conditional contracts , triggered at planning permission and unconditional contracts for small demands where developers simply purchase credits upfront.



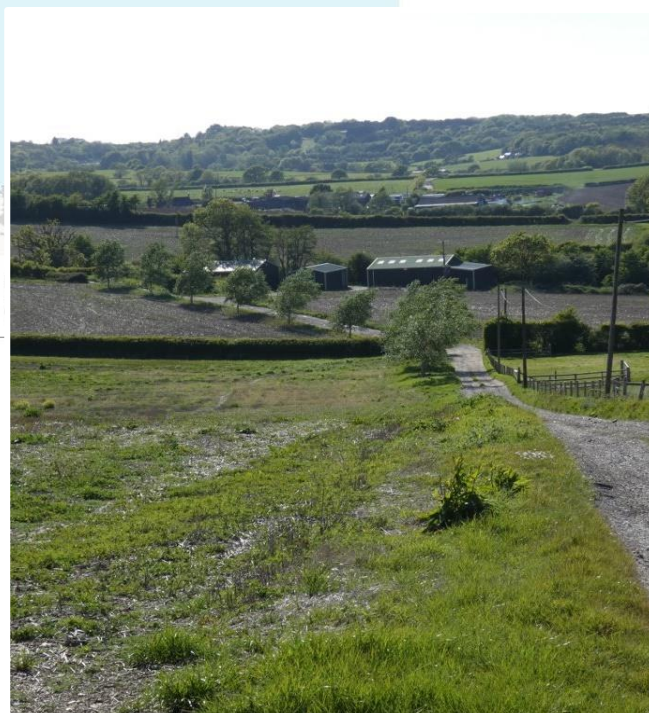
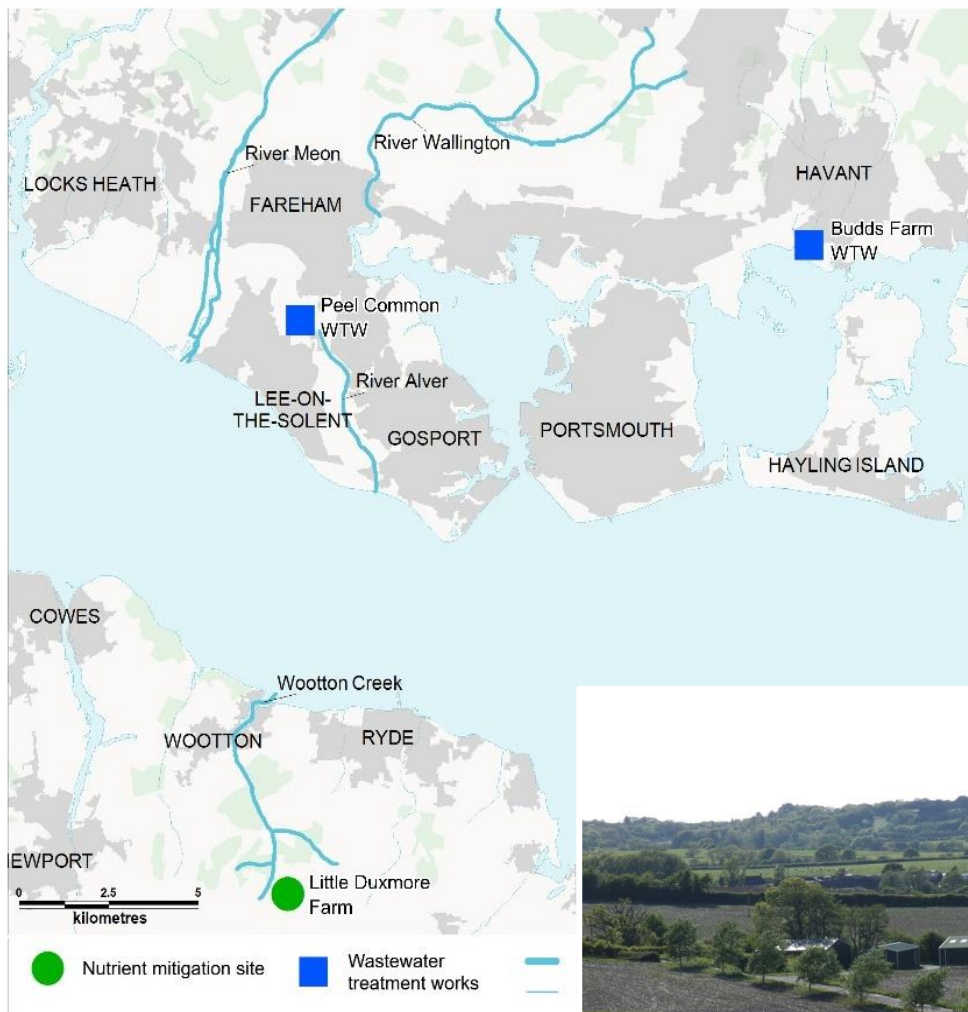
Process and legal framework (2)

- Developers will agree the number of nitrate credits they need, and apply to purchase these from the Trust.
- The Trust will screen each development to ensure it meets our tests (see overleaf), then allocate credits from what is available at each site.
- A map is issued and the boundary of the nitrate credits linked land parcel is mapped on the RLR.
- A short-lived contract is drawn up between the seller of credits (the Trust) and the buyer of credits (the developer) to guarantee the sale.
- The Trust submits a notice to the LPAs, accompanied by maps of the location of the mitigation land and a nitrate calculation as evidence of mitigation being in place, therefore allowing planning permission to be granted.
- Once payment is made by the developer, they have fulfilled their mitigation requirements.
- Some LPAs are also considering purchasing credits directly to facilitate their local plan; this is in discussion.

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Proof of concept

- Little Duxmore Farm Isle of Wight is the first example of this new type of nature-based solution.
- Approved by Natural England, we purchased it in April 2020 (with a loan from a major donor). The site is a 100 acre, ex-arable and poultry farm discharging into Wootton Creek and into the Solent.
- Our plans for “rewilding” the site removed 848 kg of nitrogen per year from the eastern Solent catchment – offsetting discharges from Peel Common and Budds Farm water treatment works.
- To deliver more than neutrality we will sell only 806 nitrate credits, holding back 5% (headroom) towards improving the quality of the Solent ecosystem.
- The area has changed dramatically over the past 18 months

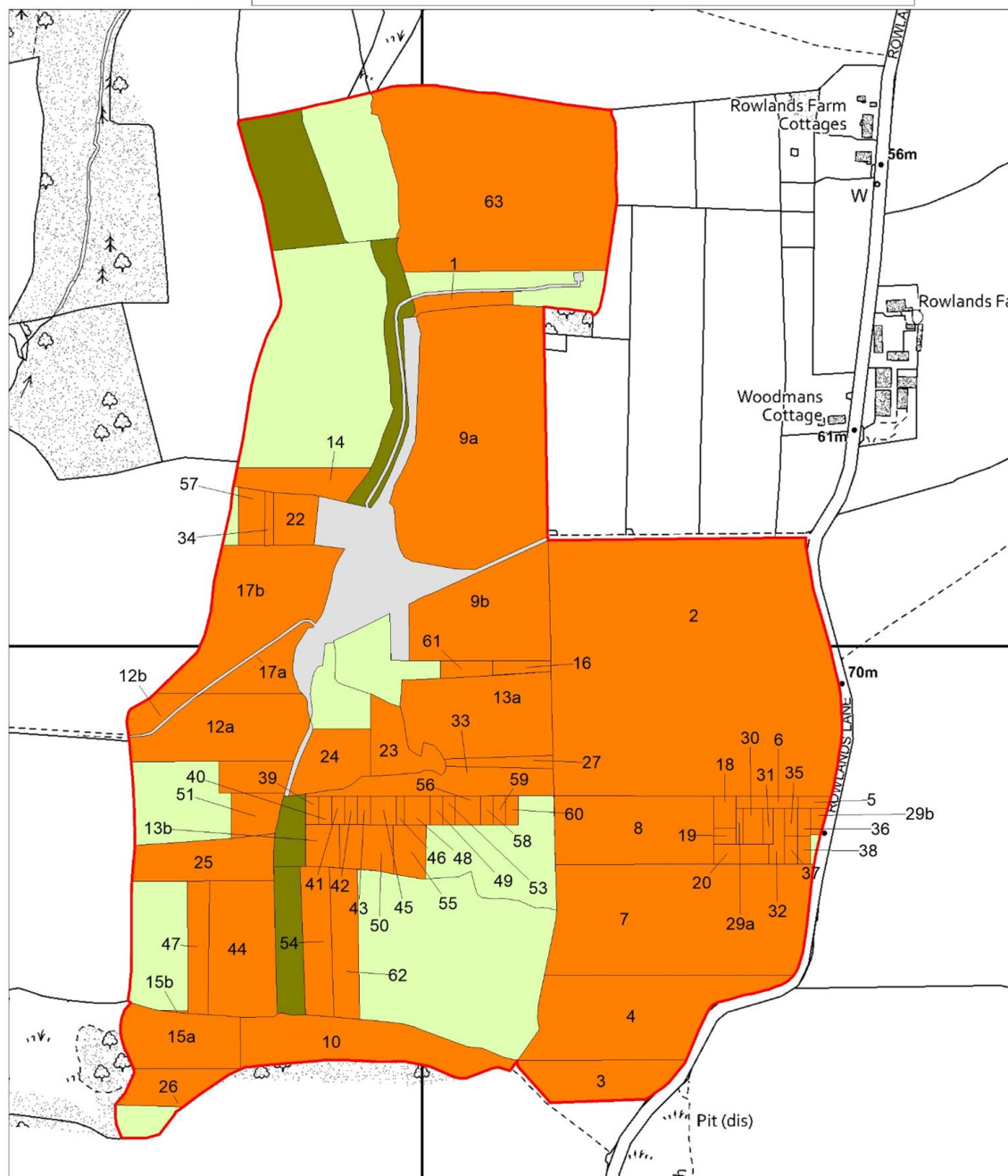




Availability

Available Unavailable Allocated Site Boundary

Labels: Allocation ID Number



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Mapping

- Each development will need to be mapped on the mitigation land.
- Some areas might be very small (e.g. 0.032ha for one house in Fareham)
- We purchased the mastermap tiles for the mitigation sites
- The obligations contained in the S106 only apply to the areas you sell.
- The maps will form part of the contract you enter into.

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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.

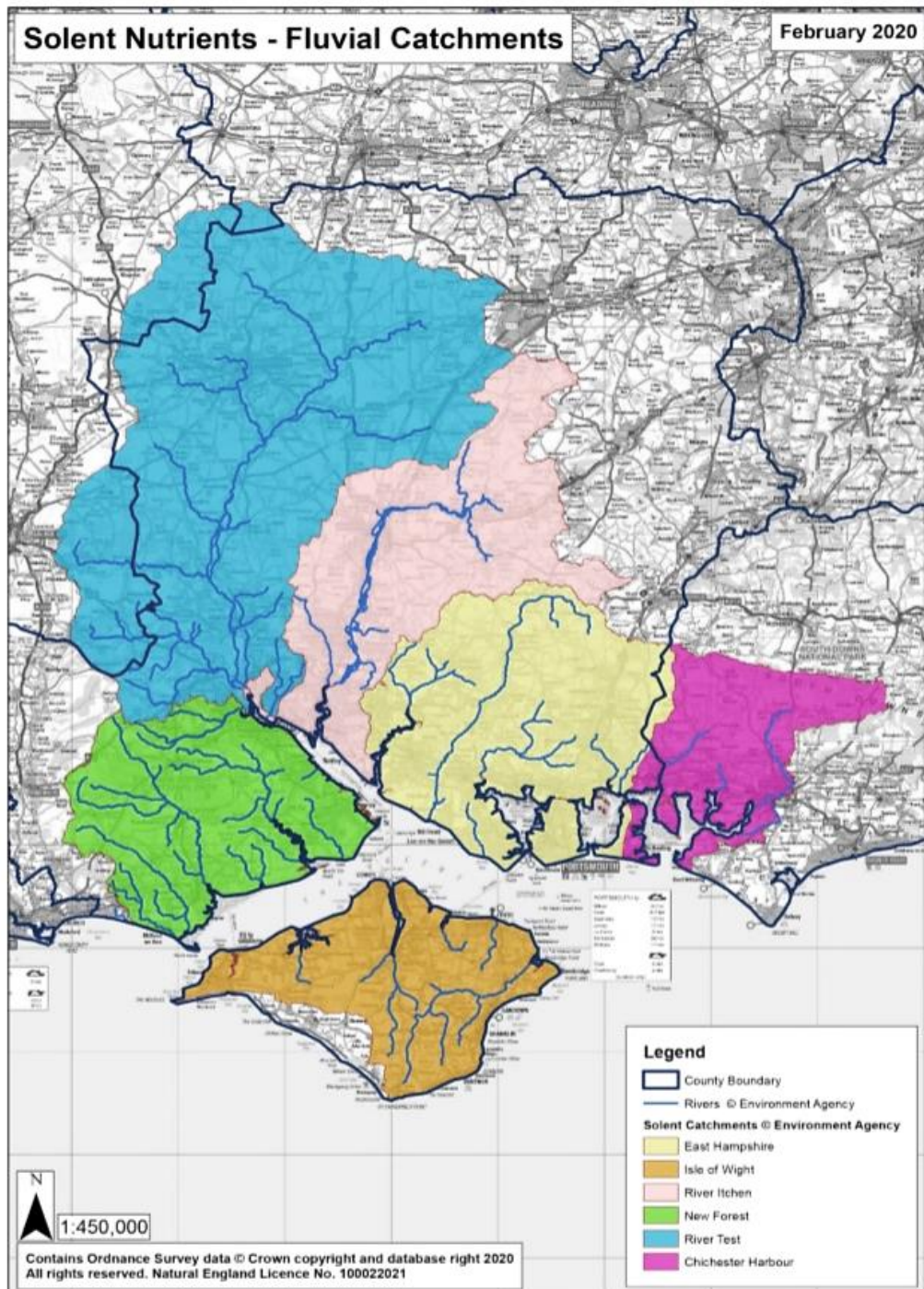


Images © Mark Spencer

hiwwt.org.uk

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Scaling up the scheme

- Little Duxmore Farm demonstrated proof of concept, unlocking around 1,150 homes.
- More than 200 'expressions of interest' on our database from developers.
- Local planning authorities with large social housing programmes can buy credits in bulk
- We have acquired our second site (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 different models including partnerships, brokerage and the development of a Trading Platform
- Full ecological monitoring will be undertaken to demonstrate benefits.



Little Duxmore Farm



Nunwell Estate



© Steve Waterhouse



© Mike Snelle





Lessons learned

- Setting a scheme up is time consuming and expensive (up to 100k on legal and professional fees and six to 12 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.
- Cross border enforcement issues were tricky but mechanisms do exist
- The S106 agreement is the key document. There are now have some templates which have worked
- Building relationships with between Planners and mitigation providers can speed things up.
- Larger developers will want a significant period for them to get planning permission up to 12 months.
- Stability of regulation is key if the private sector is going to invest.
- It's a lot of work you will need some dedicated senior officer time.

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Isle of Wight**
Wildlife Trust



CREATING A



HAMPSHIRE AND ISLE OF WIGHT

Contact us: nitrates@hiwwt.org.uk



Department
for Environment
Food & Rural Affairs

Introduction to stacking and overview of Solent Nutrient Market Pilot

Doug McNab and Tim Jn Baptiste, Defra



Environment
Agency



Forestry Commission



Aims of session

- Part 1: Overview of stacking and additionality – including key terms and risks
- Part 2: Overview of Solent nutrient market pilot

Part 1: Stacking overview

Context

- HMG has a target to raise at least £500 million of private sector annual finance into nature's recovery by 2027 and at least £1 billion per annum by 2030.
- Incentivising land management to deliver multiple environmental benefits is crucial for achieving goals for nature and net zero.
- Defra has committed to support the stacking of multiple public schemes and public and private finance to maximise the impact of public and private money (ELM payment principles).
- Aware of need to provide greater clarity to buyers and sellers of ecosystem services - as part of a framework of standards and rules for ecosystem markets.

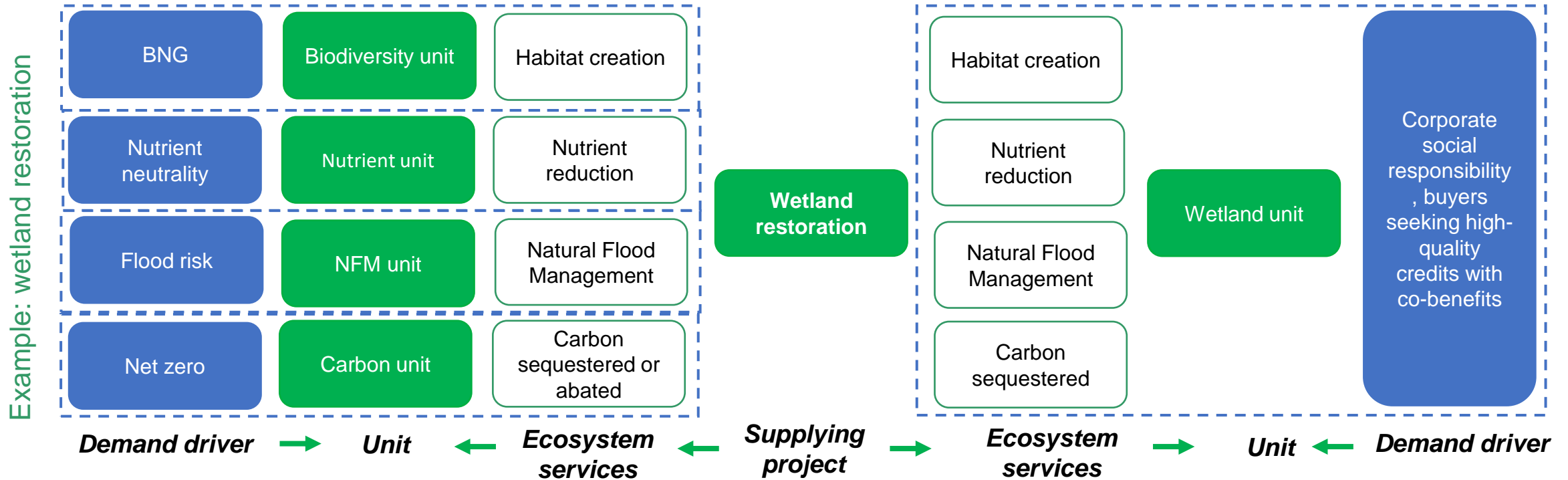
Definitions

Stacking

Ecosystem services produced on a parcel of land by an activity/set of activities are separately packaged into different credits and sold individually to different buyers.

Bundling

An aggregated suite of ecosystem services produced on a piece of land is sold as a single unit or credit to the same buyer.



Not stacking (spatially distinct)

- Different payments for different interventions.
- 1ha of woodland selling nutrient credits, another ha of woodland selling biodiversity units – other ecosystem services from each ha could be retired **or bundled in**.
- Only need to meet additionality rules of one scheme.



One property

Stacking (overlapping)

- Multiple payments for the same action(s).
- 1ha of woodland selling nutrient credits and biodiversity units.
- Must meet additionality rules of all schemes.



One property

Additionality

- When stacking, it is important to manage **additionality** – but it can be more complex to manage when multiple funding streams in play
- An ecosystem service is additional if it is over and above that which would have happened anyway i.e. under existing legal and financial circumstances
- Therefore, additionality is vital for ensuring real progress towards nature recovery and net zero – moving beyond the baseline
- Risks of non-additionality:
 - lower levels of environmental benefits – leading to reduced VFM
 - uncompensated/unmitigated pollution or losses
 - subsidising costs of regulated obligations

Additionality tests

- Need robust additionality tests, but tests are not always perfect (e.g. can be gamed, potential complexity) so looking at which tests are appropriate depending on the context and timing
- Additionality tests are an established concept in carbon markets
- Government will set out further detail on our policies and priorities for scaling up ecosystem markets later this year, including on this area

Woodland Carbon Code & Peatland Code have clear tests – including legal and investment – as part of their international accreditation. On their website.

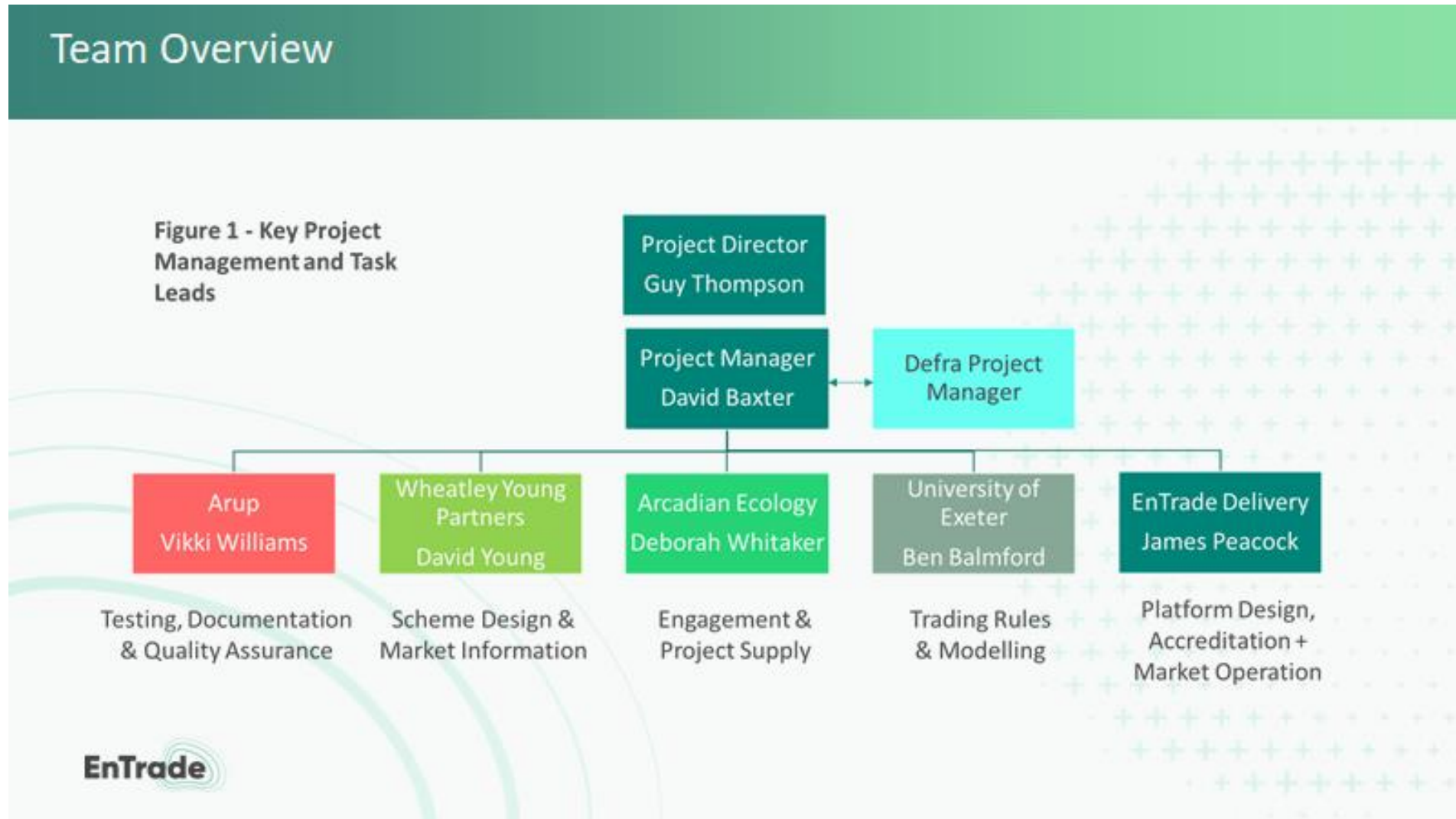
Biodiversity, water quality, NFM, other carbon markets - rules in development and being tested (e.g. Solent pilot) and consulted on (e.g. recent BNG consultation).

Part 2: Solent nutrient market pilot overview

Solent Nutrients Trading Pilot – aims/overview

- Aims to test an innovative market-based nutrient trading process for securing cost effective, long-term nature-based nutrient pollution mitigation
- A web-based process will enable landowners/market operator to put forward offers of credits for sale delivered by identified mitigation sites; and developers to make bids for these credits
- A typical mitigation site will involve changing land use from agriculture to woodland or wetland for at least 80 years
- This is a two-year multi-stakeholder project - Defra, MHCLG, NE, EA and FC, Partnership for South Hampshire, local stakeholders
- If successful, we will look to implement the approach across the Solent area and roll it out to other parts of England facing similar challenges

EnTrade consortium



Solent Nutrient Market Pilot - Objectives

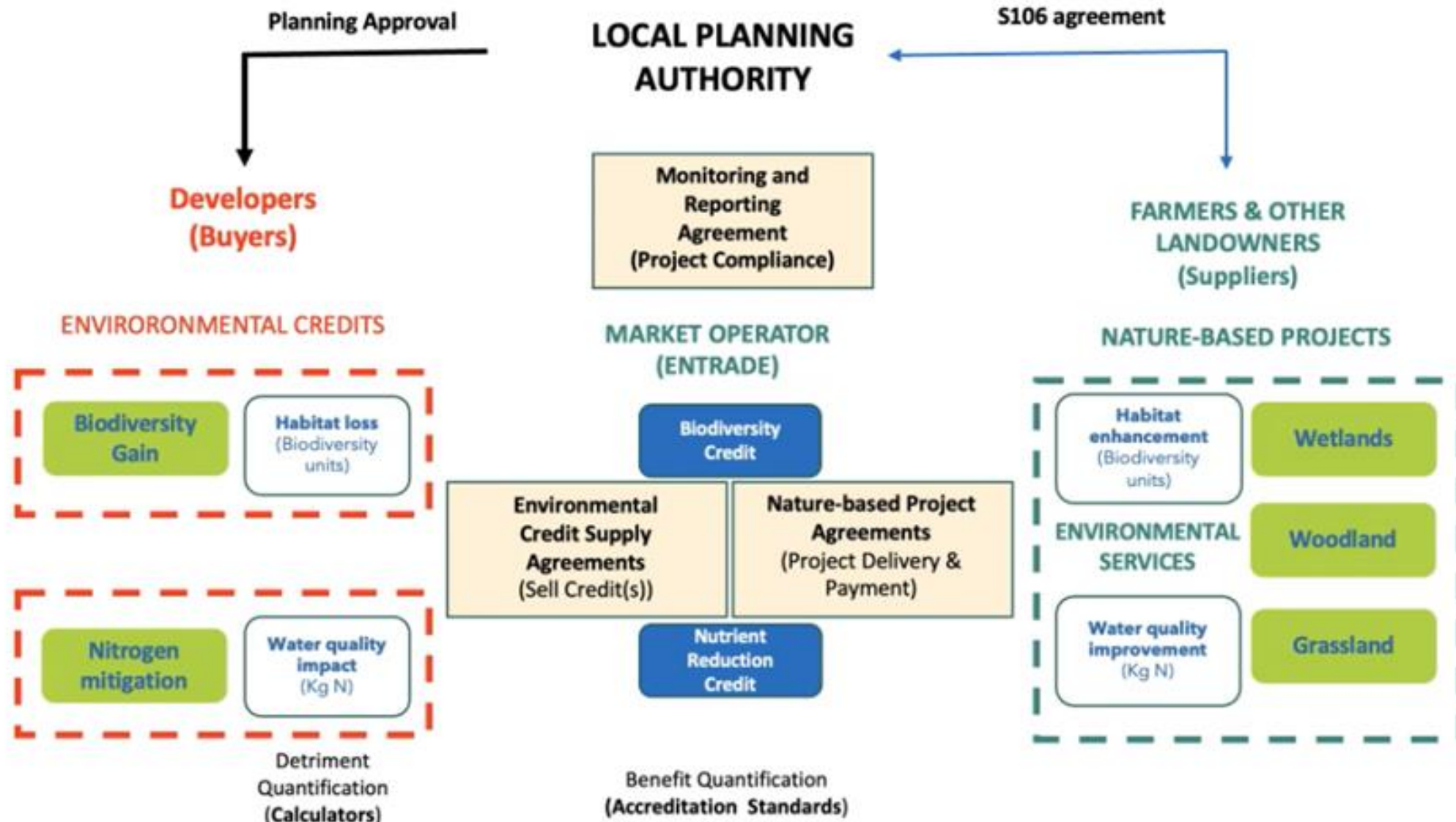
Overarching objectives:

1. To increase the supply of nutrient mitigation credits to developers/LPAs from long-term 80+ year land use change.
2. To provide an efficient mechanism for matching supply and demand.
3. The trading process should be auditable and transparent and perceived as fair and trustworthy by all participants.

Operational objectives:

1. Small developers should not be disadvantaged relative to larger developers in accessing credits.
2. To provide competitively priced credits to developers/LPAs (to minimise the impact on wider benefits of development e.g. affordable housing) while ensuring that landowners are reasonably remunerated for land use change (to drive participation).
3. The trading process (and platform) should be designed to allow other environmental benefits to be traded, now or later, facilitating integrated delivery of environmental outcomes (will maximise surplus and thus exchanges between sellers and buyers and benefit all market participants).
4. The trading process (and platform) should be designed to facilitate application to other geographic areas facing similar nutrient pollution challenges.

Proposed market structure



Progress to date...

2021:

- **Laying the foundations:** Rapid user research phase to inform market design; ongoing engagement with key stakeholders including LPAs and landowners; market design advice commissioned from Exeter University; EA completing water quality mapping/modelling; procurement; sharing of lessons learnt to date.

2022:

- **High-level market design** was agreed Jan 2022.
- **Phase 1 detailed design** (focusing on target areas, eligible projects, accreditation standards and additionality rules) agreed April 2022.
- **Engagement with local planning authorities** in the Test and Itchen catchment area, presenting and agreeing a high-level market design and proposals for legal agreements.
- Natural England is working with EnTrade on **farmer/landowner engagement activities**. Driving landowner participation and competition is key to a successful pilot.
- Environment Agency overseeing contracts to deliver water quality mapping and modelling work, including a **Land Use Choices Tool** that will support effective targeting and evaluation of potential mitigation projects and help us to identify wider benefits delivered.

Next steps...

- Step up stakeholder engagement, including EOI stage with landowners followed by screening and 'project development' phase to help landowners work up eligible projects that can enter the market
- Complete phase 2 detailed design (bidding rules, settlement rules, compliance and monitoring) and finalise market design
- Develop and test trading platform and site registry
- Develop user guidance, FAQs and key market materials
- Following project registration and accreditation, implement a market round in autumn/winter 2022 and complete legal agreements
- Complete water quality mapping and modelling work
- Final project report and separate Monitoring and Evaluation report to deliver lessons for roll out of trading approach elsewhere (March 2023)

Thank you for listening, any questions?



MEON SPRINGS



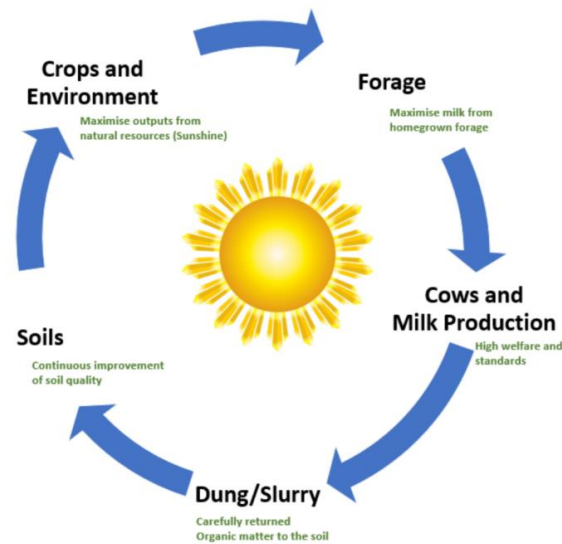
www.meonsprings.com/wetland



"The Valley is the Wetland"



Farming



SECTION 106 AGREEMENT Pursuant to Section 33
DEED OF UNILATERAL UNDERTAKING

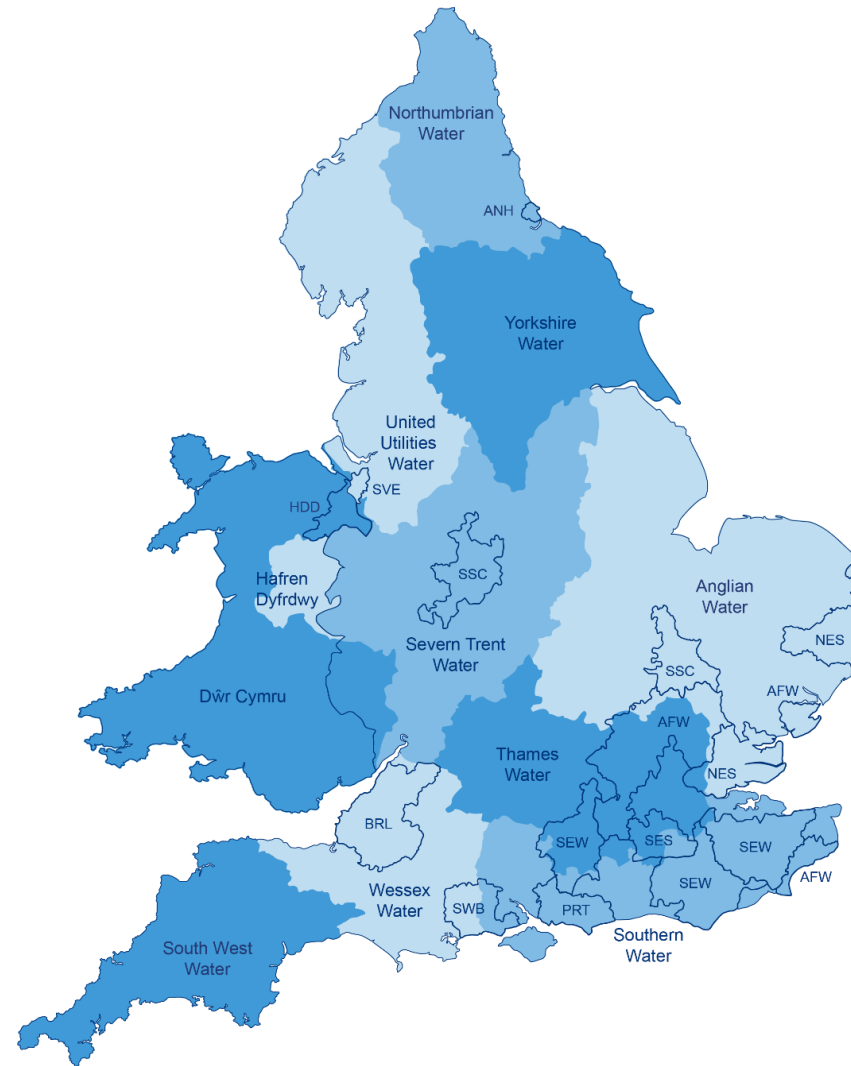
Planning Advisory Service Nutrient Neutrality workshop

Phillip Dixon
May 2022



Who we are

- Independent economic regulator of the water and sewerage sectors in England and Wales
- We were established in 1989 when the water and sewerage industry in England and Wales was privatised.
- We work within the framework of published Government policy, including any specific social and environmental guidance



- Background
- Defra's statements on NN
- Ofwat's role



Background

Ofwat's regulatory landscape for NN

Policy paper
February 2022: The government's strategic priorities for Ofwat
Updated 28 March 2022

[February 2022: The government's strategic priorities for Ofwat - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/february-2022-the-governments-strategic-priorities-for-ofwat)

Policy paper
Nutrient pollution: reducing the impact on protected sites
Published 16 March 2022

[Nutrient pollution: reducing the impact on protected sites - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/nutrient-pollution-reducing-the-impact-on-protected-sites)



Defra Strategic Policy Statement (February 2022)

“Environmental pressures, particularly from nutrients (phosphates and nitrates) and others such as unsustainable abstraction, are significant contributing factors to the decline of some of our protected sites... Ofwat and water companies should consider these environmental pressures in line with their environmental duties ...If water companies fail to play their part, Ofwat should consider where it is appropriate to use the regulatory framework to support such efforts.”

Building new and sustainable developments can support government priorities of economic growth and environmental protections, including, nutrient neutral development Therefore, the role of water companies in facilitating these activities for developers, self-lay providers, NAVs and retailers is crucial.

.....

We expect water companies to have regard to the impact of their operations on the government's target to increase the supply of new homes. Ofwat can play an important role in supporting these efforts so that where appropriate, water companies and home builders can work together to unlock new and sustainable property development.

.....We expect Ofwat to:

- promote greater collaboration between incumbents and their new connections customers, particularly on large-scale developments
- ...
- consider how its regulatory framework can enable water and wastewater services to support government's ambitions to increase housing supply, in line with its duty to contribute to the achievement of sustainable development



Improving wastewater treatment works

Ofwat is developing a proposal that could enable water companies to directly accept developer contributions for improvements to wastewater treatment works as a means of mitigating nutrient loads from new developments....The Secretary of State for Defra and the regulators will shortly be writing to water companies with a call for evidence to identify suitable projects.

Financial support

We welcome the new and proactive investment from Severn Trent Water, United Utilities, South West Water and Yorkshire Water in collectively investing an additional £24.5 million in reducing nutrient pollution affecting these sites, including nature based solutions.

Pollution from wastewater

We are working with the water industry and regulators to ensure that considerable investment is directed at reducing nutrient pollution from wastewater:

- from 2020 to 2025, water companies are investing £2.5 billion in measures that reduce nutrient pollution
- for the forthcoming Price Review period, Defra have recently published the [Strategic Policy Statement to Ofwat](#), making clear that Ofwat and water companies should consider nutrient pollution in line with their environmental duties (which includes the Habitat Regulations), and that water companies should be challenged to prioritise improvements to protected sites and to work with wider stakeholders to support efforts to tackle nutrient pollution



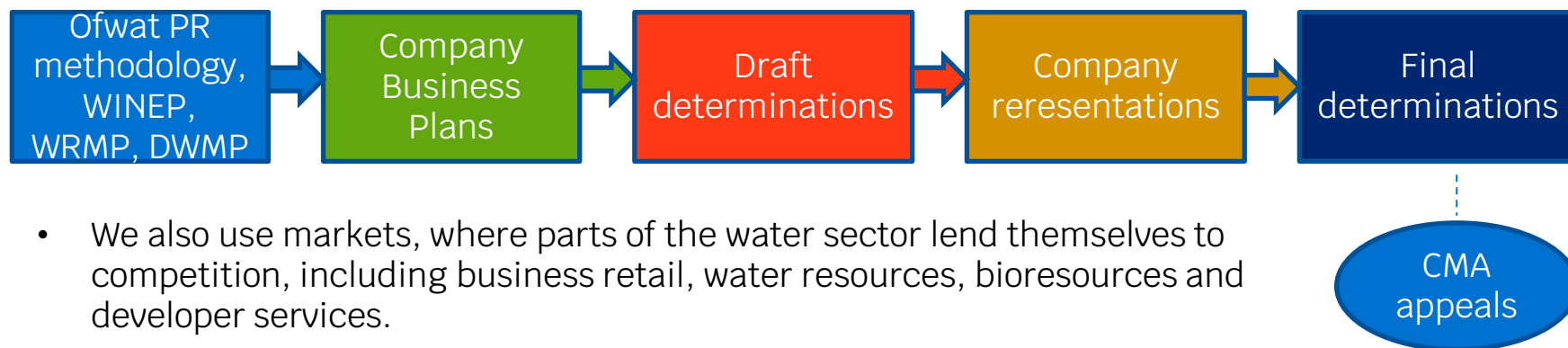
Ofwat's regulatory role

Why and how we regulate

Water and wastewater companies in England and Wales are regional monopolies. This can lead to poor outcomes for customers, communities and the environment. Our regulation addresses these issues, and also facilitates vital social and environmental needs.

We are mindful of the challenges posed by climate change, the need for affordability and the evolution of customers' interests.

- We use **price controls** to ensure companies deliver good outcomes for customers and the environment. These are **set for five year periods** and are updated through **price reviews** to take account of further information, changing objectives and new approaches to regulation.



- We also use markets, where parts of the water sector lend themselves to competition, including business retail, water resources, bioresources and developer services.
- We work closely with UK and Welsh Governments, EA and NRW, DWI, customers, companies and other stakeholders. Our strategy – Time to act, together – has more details.

Price control period 2020–25 (PR19)

- Companies already making improvements via WINEP, but these don't 'count' for NN.
- Price limits are already set for this period. Developers might be able to fund additional upgrades to WWTW, which they can use for NN.
- Very dependent on the particular WWTW, e.g. the scope to upgrade, the cost, time to deliver and the likely benefit.
- WINEP seeks most cost-effective schemes, so additional investment likely to be more costly / less beneficial

Price control period 2025–30 (PR24)

- We are working on our draft methodology for PR24 and will discuss with the Environment Agency how to regulate new projects which address nutrient loads from new developments.
- We are also discussing with Natural England the application of its nutrient neutrality principles in the wider context of environmental investment by water companies.
- We will say more in our PR24 draft methodology document in July 2022.

NAVs

- A different type of water company; still regulated by Ofwat, EA and DWI but smaller and more able to offer targeted mitigation, including through nature based solutions.
- May build WWTW with higher treatment standards

Market based solutions

- Third parties (eg EnTrade), landowners and others can offer mitigation solutions.
- Emerging credit markets.
- Not directly regulated by Ofwat; regulation should not undermine scope for market solutions.

Thank you for listening

