

# Achieving a Nutrient Neutral Development: Navigating the guidance and legislation to successful outcomes

September 2022





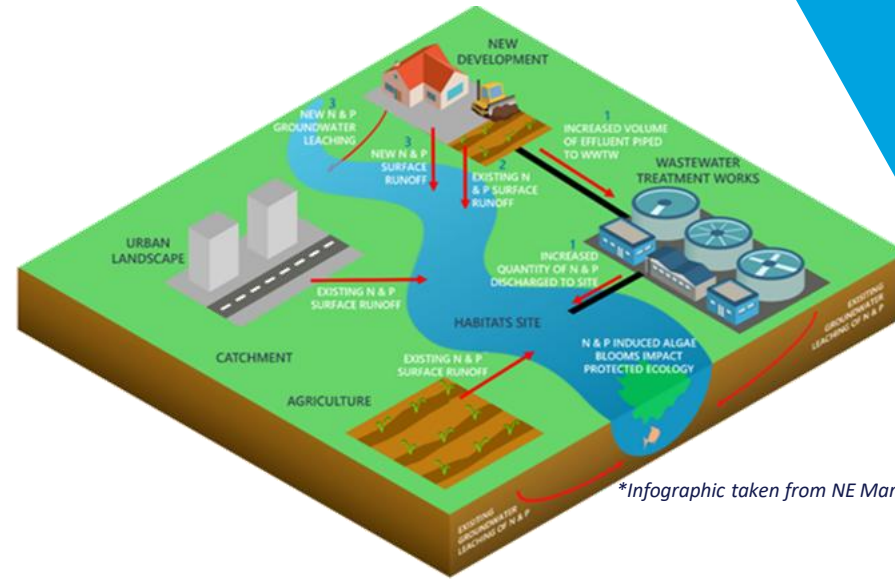
Dean Swann

Technical Director – Brookbanks

- What is the issue?
- Stakeholder Responses and Guidance
- Brookbanks' Approach: Methodology and Reporting
- Solution Finding

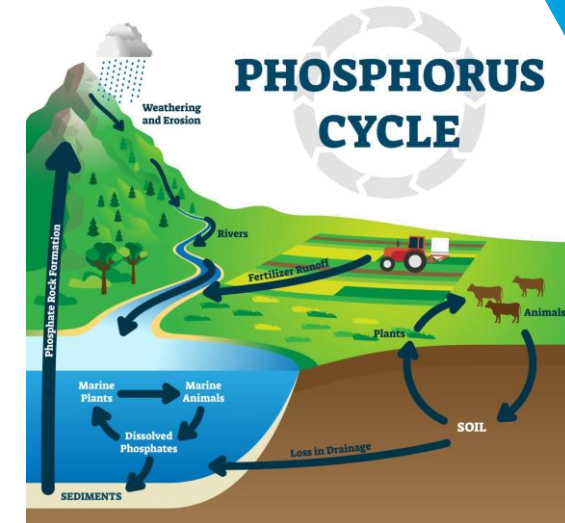
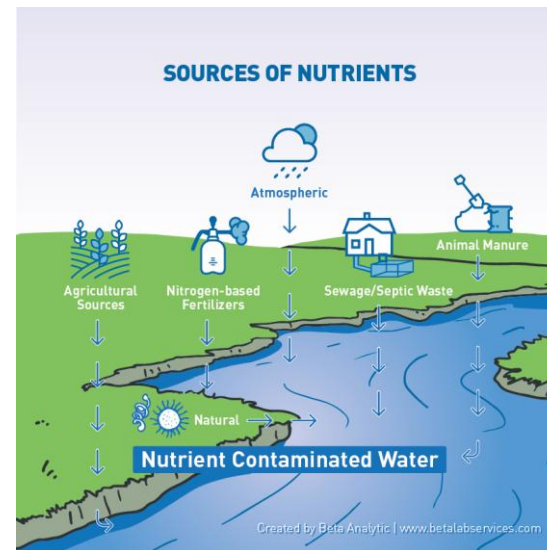
# What is it?

- Water Quality is affected by **excessive levels of nutrients**.
- **Eutrophication** occurs where levels of nutrients are too high in rivers, lakes, estuaries or the sea, causing excess growth of algae and plants that deteriorates water quality and damages local ecology.



\*Infographic taken from NE March 2022 guidance

Nitrogen	Phosphorus
Occurs in organic and inorganic forms from sources such as animal waste, fertilisers, detergents, soil erosion and vehicle exhausts.	Found in agriculture (e.g., fertilisers), food additives, animal and human waste.
Highly soluble and mostly occurs in dissolved form	Mostly exists in two forms particulate and dissolved
Greater concern around coastal areas	Greater concern around inland areas (Benthic layer of watercourses)



# Latest Guidance from Natural England

- March 16<sup>th</sup> 2022: New advice released covering the whole country now and new areas identified
- New calculators released for all sites across the country centrally
  - Latest Calculators have increased Phosphorous and Nitrogen leachate rates from development
  - Increase in Credits developed from agriculture but unlikely to mitigate increase from development rates
  - Information on use of the most recent performance figures from Wastewater Treatment Works (WwTW)
  - Smaller developments (less than 8 dwellings) may demonstrate exemption
- Mitigation sites needs to show management in perpetuity 85 to 125 years effectively
- Wyatt v Fareham BC (2021) EWHC 1434 Outcome 15<sup>th</sup> July JR, NE guidance to neutrality upheld.

Date: 16 March 2022

To: LPA Chief Executives & Heads of Planning,  
County Council Chief Executives and Heads of Planning,  
EA Area and National Team Directors,  
Planning Inspectorate,  
Natural Resources Wales (Cross border sites only) &  
Secretary of State for Department for Levelling Up Housing & Communities  
(DLUHC)

**NATURAL ENGLAND**

**BY EMAIL ONLY**

Customer Services  
Hornsey House  
Crease Business Park  
Siccia Way  
Crease  
Chesham  
CV11 6GJ  
T 0300 060 3900

Dear Sir / Madam

**Advice for development proposals with the potential to affect water quality resulting in adverse nutrient impacts on habitats sites.**

**1.0 Summary**

This letter sets out Natural England's advice for development proposals that have the potential to affect water quality in such a way that adverse nutrient impacts on designated habitats sites<sup>1</sup> cannot be ruled out.

It also provides an update to those Local Planning Authorities (LPAs) whose areas include catchments where Natural England has already advised on how to assess the nutrient impacts of new development and mitigate any adverse effects, including through application of the nutrient neutrality methodology. It includes:

- Supporting Information (Annex A) w/ available and how to take account of
- a national map showing the affected
- a list of habitats sites in unfavourable an adverse effect by contributing ad potential solution to enable develop
- a national generic Nutrient Neutrality
- a nutrient assessment methodology
- a flow diagram of the HFA process
- guidance on thresholds for insignifi
- Natural England Area Team contact
- Catchment Specific Nutrient Neutra covering email with this letter)
- Site specific catchment maps (attach
- Site specific evidence documents (n
- Nutrient Neutrality Principles (attach

<sup>1</sup> Habitat sites are sites which are protected by th Special Protection Areas (SPA). Any proposals th Ramsar sites are also included as these are prot proposals may affect them.

**Annex B: National Map of Catchments**

European protected sites requiring nutrient neutrality strategic solutions  
**Nutrient neutrality SSSI catchments**

- SSSI subject to nutrient neutrality strategy
- Nutrient neutrality SSSI catchment

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# “Nutrient Fix” Proposals

- The Government’s ‘**nutrient fix**’ proposals announced on **20 July 2022** offer a route out in the medium term:
  - A new legal duty on water companies in England to **upgrade wastewater treatment works by 2030** in ‘nutrient neutrality’ areas to the highest achievable technological levels.
  - A new **Nutrient Mitigation Scheme** established by Natural England, helping wildlife and boosting access to nature by investing in projects like new and expanded wetlands and woodlands. This will allow local planning authorities to grant planning permission for new developments in areas with nutrient pollution issues, providing for the development of sustainable new homes and ensuring building can go ahead. Defra and DLUHC will provide funding to pump prime the scheme. Scheme due to open in **Autumn 2022**
- This is a big step forward, but it remains to be seen how the costs of delivering Nutrient Mitigation Schemes will flow through to developers (and how they should be priced into land value/ Local Plan expectations) given that the land for mitigation is already beginning to attract significant landowner value expectation.

# Nutrient Advice Areas



# Response

## From Local Planning Authorities

- **Nutrient Credit Systems:** Continued lack of guidance or solutions – credits thought to be limited.
- Some LPA's now have their own calculators for on sites within their areas.
- LPAs continue to struggle to find appropriate solutions acceptable to Natural England

## From Water Companies

- Varying degrees of knowledge and accountability
  - E.g. Wessex Water want to sell credits but mired with issues from LPA's.
- Most acknowledge improvement is necessary but still consider works within the Asset Management Period (AMP) process, which cannot be funded by Developers.



## UK Government

- Limited advice for the development industry regarding navigating the issue as of May 2022
- March 16th written statement from the Department of Environment, Food and Rural Affairs [HCWS688]
- Talk of funding LPAs (limited) and what Water Companies are doing, however there is a lack of discussion on joining the dots back to the development industry.

# Latest Legal Opinion?

- LPAs advised they must apply the NE advice to all applications from Outline to Reserved Matters
- On 29<sup>th</sup> March 2022, the Home Builders Federation sought advice from Charles Banner QC who concluded:

*There is **no power under the Habitats Regulations for a LPA to require appropriate assessment** when considering applications to discharge conditions . This includes (but is not limited to) applications for approval of matters which have been reserved by condition.*

*Even if there were such a power under the Habitats Regulations, the regulations are secondary legislation and (being now deprived of the force of EU law) they **cannot frustrate the operation of the Town and Country Planning Act 1990**, which is primary legislation and pursuant to which the position is as set out at paras. 2-3 above (i.e. considerations going to the principle of the development cannot be relied upon to withhold discharge of conditions or reserved matters).*

***On either basis, it is plain that LPAs may not, in reliance on NE's advice, withhold consent for otherwise acceptable applications to discharge conditions or reserved matters.***





# What does this all mean ?

- Natural England are actively seeking to enforce the ruling
- All applications are affected regardless of size despite legal opinion from HBF
- Affects planning schemes at all stages including RM effectively stopping them in their tracks
- LPA Counsel opinion is that it would be fraught with issues to challenge Natural England interpretation
- Little political headroom to tackle the issue at a national level although it is acknowledged work is required
- Schemes from LPA's and Water Companies to assist are still in development
- Awaiting outcome of Wyatt v Fareham Borough Council in relation to judgement on the lawfulness of Natural England advice.



An aerial photograph of a residential development, showing rows of houses with dark roofs and light-colored walls. The houses are arranged in a grid-like pattern with winding roads. In the foreground, there is a large blue triangular overlay that contains text. The background shows a body of water and some trees.

# Brookbanks Reporting Methodology

Assessing your Site and  
Developing the Solution

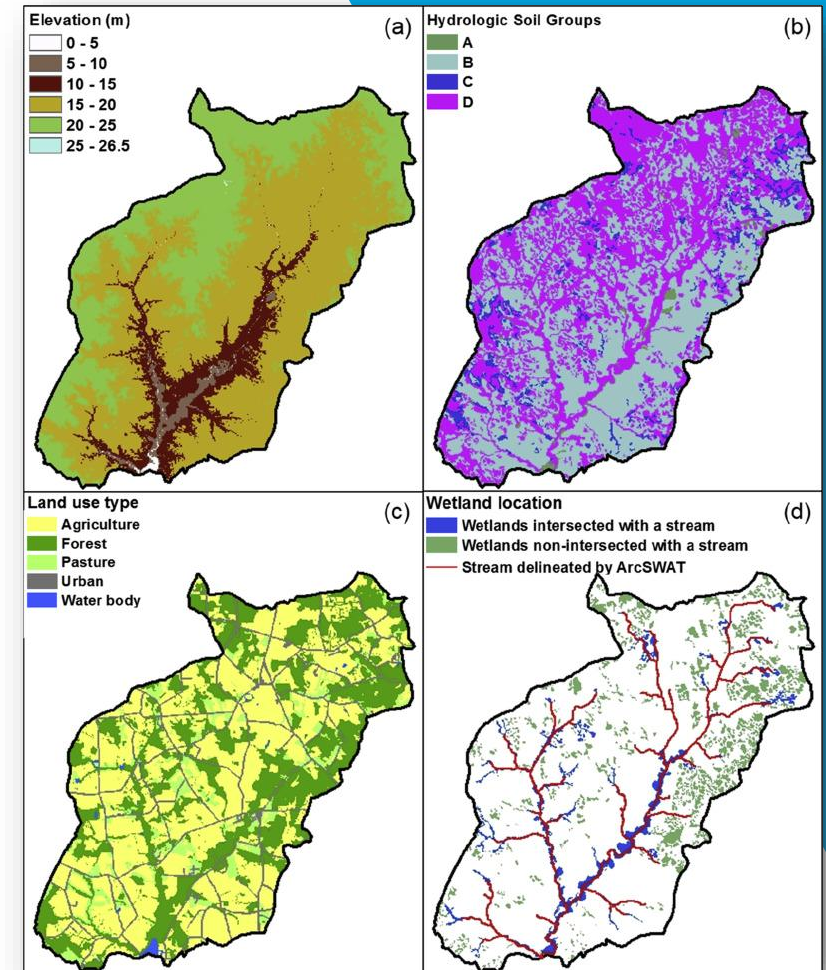
# Assessing Baseline Conditions

## Site Analysis

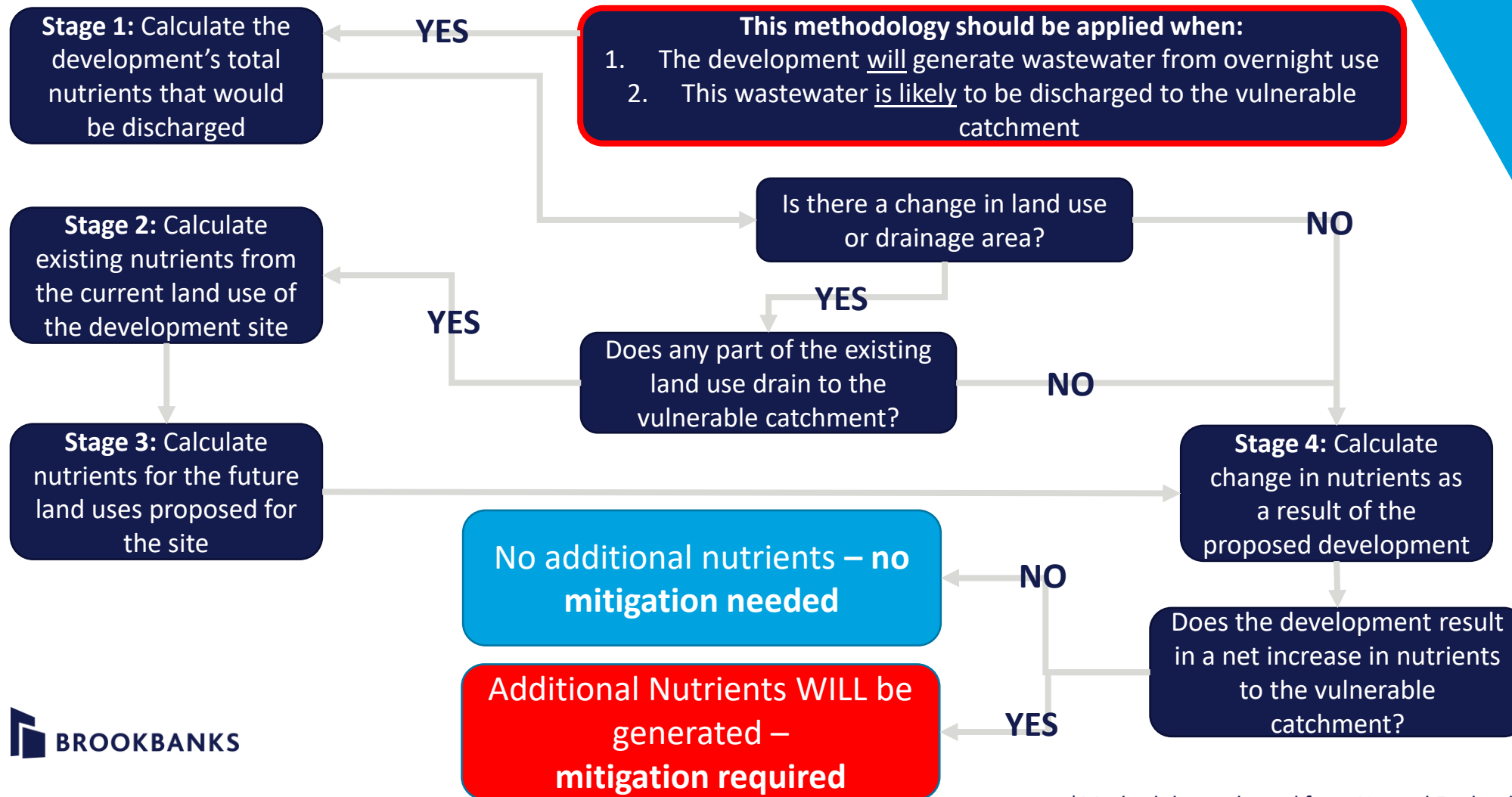
- Catchment Analysis
- Identifying Wastewater Treatment Works, consented discharge limits and APM7
- Determining existing land use and soil type
- Understanding your clients portfolio and land owned/controlled to find a potential solution

## Masterplan Analysis

- On larger schemes: Can the masterplan and phasing help develop a solution?



# Calculating Nutrient Budgets using an Approved Methodology



# Natural England Methodology

- Natural England’s letter from 16<sup>th</sup> March referred to a range of new calculators designed by NE to allow for calculation of nutrient budgets
- Figures vary from the original advice released. Some comparisons include:

	Original Advice (Nov. 2020)	Recent Calculator (March 2022)
Wastewater Treatment Limit	5 mgP/l	<b>8 mgP/l</b>
	27mgN/l	27mgN/l
Residential Urban Land	0.83kgTP/year	<b>1.10 kgTP/year - 2.30 kgTP/year</b>
	14.3kgTN/year	10.33 kgTN/year - 21.44kgTN/year
Cereals	0.36 kgTP/year	0.43 kgTP/year
	27.3 kgTN/year	24.15kgTN/year

- In general, leachate rates have increased across **most land use types**
- The new calculators allow you to input **average annual rainfall (mm)**
- Wastewater Treatment Works with no upper limit has been increased to an assumed discharge limit of 8mg/l

\*Comparison of “Advice on Nutrient Neutrality for New Development in the Stour Catchment in Relation to Stodmarsh Designated Sites - For Local Planning Authorities” (Nov. 2020) and “Stodmarsh SAC Nutrient Budget Calculator” (March 2022)

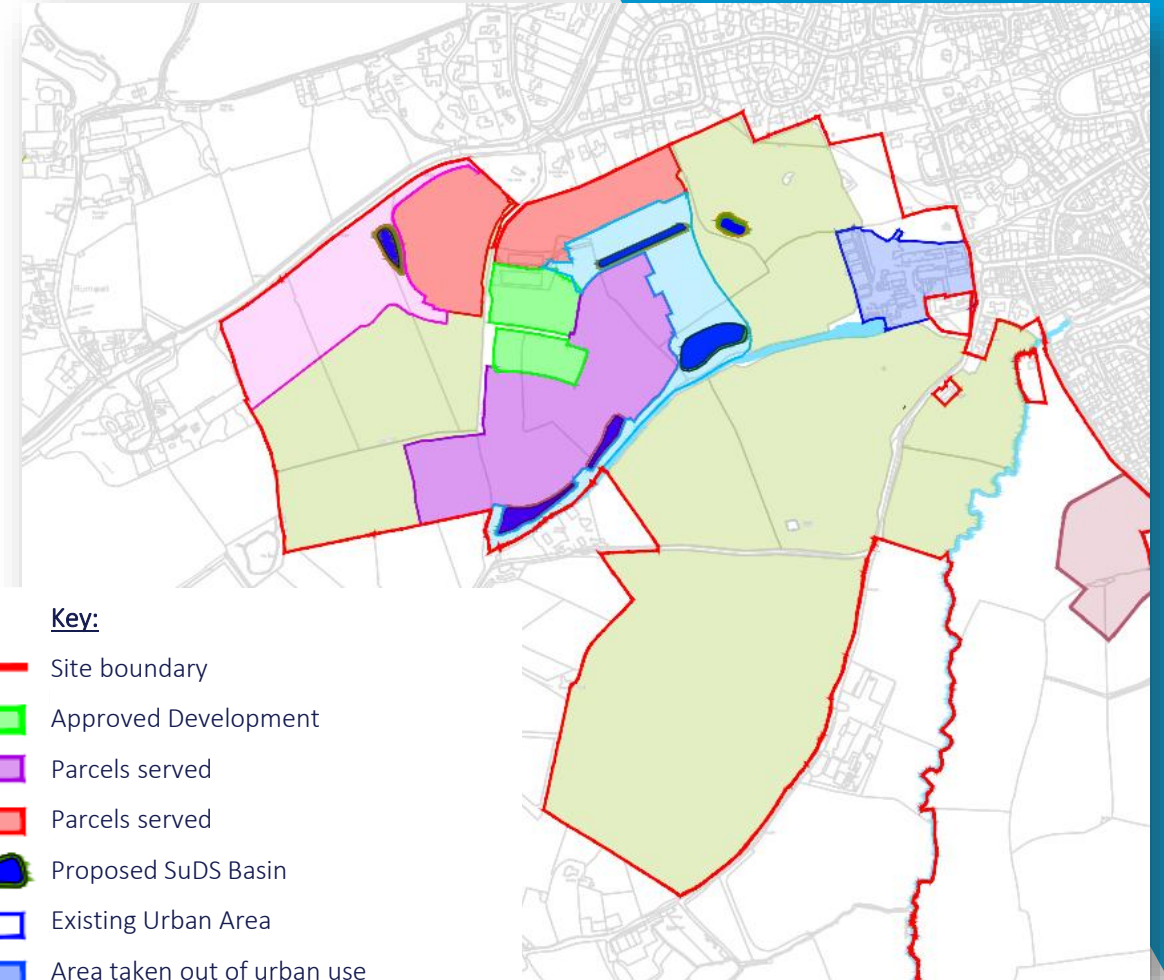
# Mitigation Analysis: Change of Land Use

- Taking land out of agricultural use
- Greenspace and SANG
- Woodlands
- Fallowed land with limited public access
- Management Strategies for land uses in the future



# Mitigation Analysis: Following of Land

- Typical Masterplan Analysis
- Making land yet to be developed work for you
- Using phasing to your advantage
- Giving time to LPAs and Water Authorities to develop their offers for offsetting
- No monitoring required calculations based on calculators accepted
- Accepted on many applications submitted by Brookbanks to date unlocking sites.



## Key:

- Site boundary
- Approved Development
- Parcels served
- Parcels served
- Proposed SuDS Basin
- Existing Urban Area
- Area taken out of urban use
- Area to be followed
- Area Followed for Open Space Use
- Area Excluded (Access and parking)
- Area Excluded (School Location)
- Strategic Surface Water Drains/ Sewers
- Stream

# Mitigation Analysis: SuDS and Wetland Treatment



- According to Natural England Guidance, wetland SuDS can remove N&P at rates of:
  - 12 kgP/ha/year
  - 930 kgN/ha/year
  - SuDS are required regardless so can be used as a multifunctional solution
- Natural England sensitive to use but like the natural approach..
- **Not all SuDS are equal!**
- Constructed Floated Wetlands (CFW) can remove up to 100kgP/ha/Year





# Mitigation Analysis: Nutrient Trade Schemes

- Nutrient Trading by LPAs and Water Companies: remain unestablished
- How far, how soon, how commercially viable
- Calculating when you will need them

**Poole Harbour Catchment Initiative**

## Poole Harbour Nutrient Management Scheme

**What is the Scheme?**

Poole Harbour Nutrient Management Scheme (PHNMS) is a whole catchment approach that brings together all the farmers in the Poole Harbour catchment under one entity. It will provide the tools and support for reducing nitrates and delivering additional environmental benefits for agriculture and other sectors especially the water company and new development. The scheme has a vision: **the farmers in the Poole Harbour catchments are the most nitrogen efficient in the world.**

This approach already has support from a majority of farmers in the area and will prevent the use of new regulations enabling them to maintain their businesses and to develop new market opportunities.

The scheme was initially developed by the National Farmers Union (NFU) in 2018 as a response to the threat of a proposed Water Protection Zone for the whole of Poole Harbour which under the Water Framework Directive is designated a 'transitional water body' and a 'special protected area'.

**Fig 1: Map showing the whole Poole Harbour Catchment area and its waterbodies**

**KEY TO FEATURES**

- Poole Harbour
- Poole Harbour Catchment
- Waterbodies
- Waterbodies



## Update on the 'Nutrient Neutrality' issue

JANUARY 29, 2020 ~ HCS EDITOR

Last night's Operations and Space Shaping Board gave us an insight into the latest impacts on Havant Borough Council's planning stalemate caused by the the Nutrient Neutrality issue.

Councillor Pike provided a brief context to the board, referring to the letter sent by HBC to the Secretaries of State on January 14th. The first paragraph of that letter gives a fairly concise explanation of the issue.

"...recent case law, most notably The Dutch Case is making it impossible to grant planning permission for all but a handful of planning applications for..."



## Innovative nitrate scheme launched in Solent

15th September 2020 | 28 views



# Mitigation Analysis: Improving Wastewater Treatment Works Discharge Limits

- Neat and Quick Solution
- Industry has off the shelf products ready to go.
- Treatment specialists we have spoken to outline the following efficiency levels:

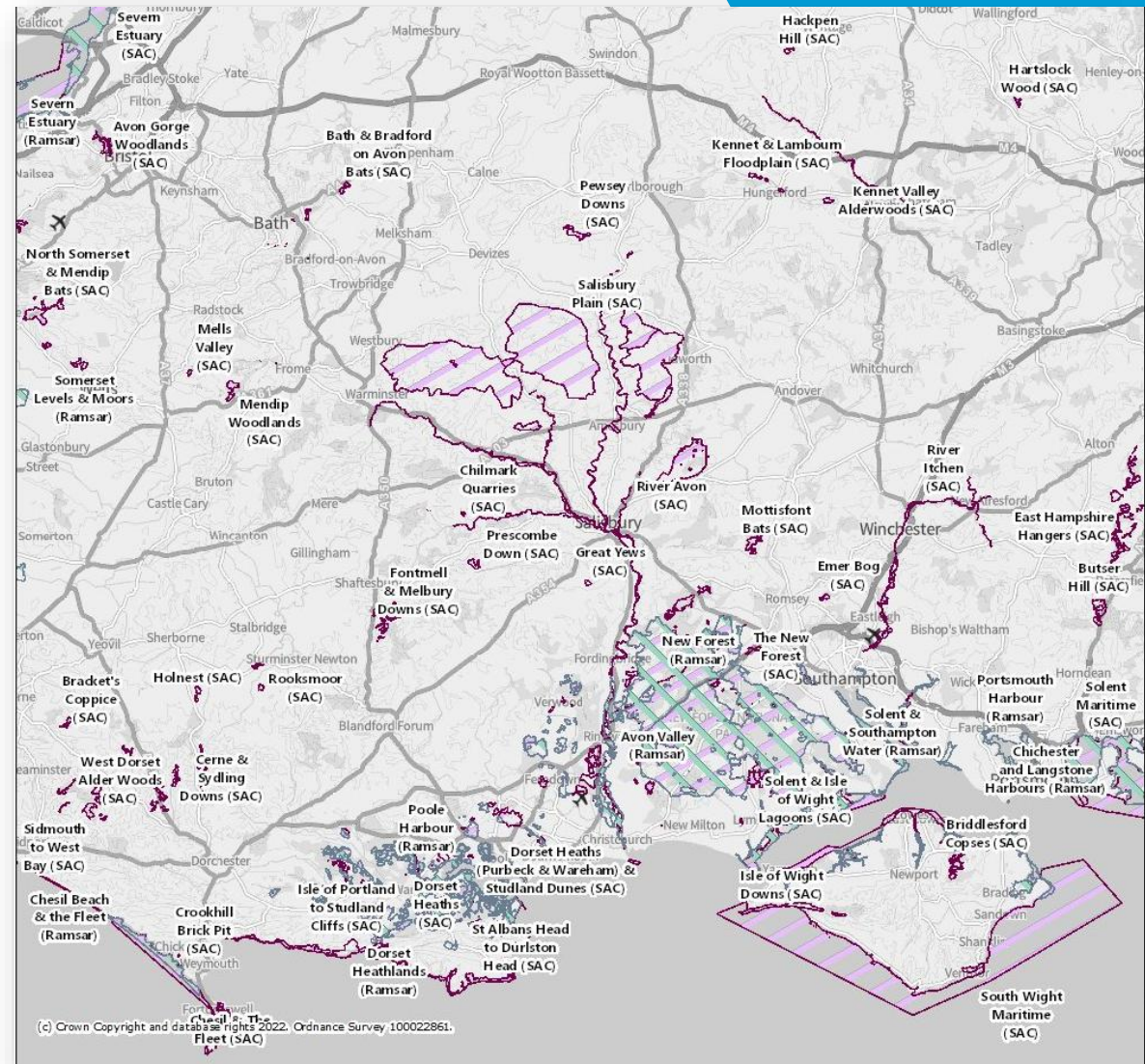
		
Phosphorus Treatment Efficiency	0.4 mg/l	0.5 mg/l
Nitrogen Treatment Efficiency	9.1 mg/l	10 mg/l

- Risks are the EA would need to be involved for the outfall and they have a none proliferation policy
- Water Authorities are not interested in adopting them, however above typically 500 dwellings to be commercial viable
- Long term liability and maintenance
- Initially an Expensive solution to purchase and install



# SAC vs. RAMSAR Sites

- NE is concerned that there are excessive levels of nutrients entering designated areas such as SACs, RAMSAR Sites and SSSIs
- The nature of the impacted body impacts the type and location of any potential mitigation strategy developed
- A bespoke strategy is required for all sites



# Solutions Matrix

	Bespoke WWTW	Wetland Traditional	Wetland Floating System	Fallowing Land permeable	Fallowing Land Impermeable	3rd Party Credits	Water Saving Devices
Complete Solution	No	Yes	Yes	Yes	Yes	Yes	Yes
Long Term Maintenance	No (inset)	Yes	Yes	Yes	Yes	No	Yes
Requires Land	Yes	Yes	Yes	Yes	Yes	No	No
Requires Land within Development	Yes	No	No	No	No	No	No
Adoptable	Yes (inset)	No	No	No	No	N/A	No
Proven Figures for Mitigation	Yes	No	No	Yes	Yes	Yes	No
Reliant on Proven Phosphorous Source	No	Yes	Yes	No	No	No	No
Unit Cost / Installation Cost	£4.5m/facility	£20/m <sup>2</sup> depression £20/m <sup>2</sup> planting	£30/ m <sup>2</sup> pond £235/ m <sup>2</sup> wetland	£25,092/ha	£25,092/ha	£20,000/Credit	£1,250/dwelling

# Unlocking Development

- The key to unlocking your development is to understand your land portfolio
- At Brookbanks, we offer an initial review through to detailed and thorough analysis of your site
- A commercial eye on every stage of the approach
- Natural England consider our approach the **“Gold Star Standard”**.
- Keeping you up to date with changes in legislations and latest Planning Successes
  
- Please contact us for any enquiries and we will work together to drive your development forward.
  
- Any Questions?



## Head Office Address

6150 Knights Court,  
Solihull Parkway,  
Birmingham Business Park,  
Birmingham.  
B37 7WY

T +44(0)121 329 4330

[brookbanks.com](http://brookbanks.com)

