

SOLENT NUTRIENT TRADING PILOT

FREQUENTLY ASKED QUESTIONS FOR NUTRIENT CREDIT BUYERS

INTRODUCTION

The purpose of the Solent Nutrient Trading Pilot is to test the concept of nutrient trading and learn lessons to guide future nutrient trading projects of this kind in the Solent area and in other areas of England.

It is a pilot project that is under development so we do not have all of the answers yet. We anticipate the first trading process will run around **March 2022** but prior to that, steps need to be carried out to ensure there are sufficient mitigation sites available for trading to take place. For example, developing individual mitigation site proposals, certification of credits, drawing up preparatory legal agreements. The project team is working with landowners and farmers now in order to have a number of mitigation site proposals ready to go when trading starts.

This document seeks to start answering questions raised by developers and local planning authorities through our initial stakeholder engagement. These frequently asked questions will be updated regularly as and when we have new information to pass on, and in response to feedback. New or revised content will be clearly highlighted in later versions. A similar document for landowners can be found [here](#).

BACKGROUND

WHAT IS NUTRIENT POLLUTION?

The water environment within the Solent region is internationally important for its wildlife and is protected under the Water Environment Regulations and the Conservation of Habitats and Species Regulations as well as national protection for many parts of the coastline and their sea. There are high levels of nitrogen and phosphorus input to this water environment with sound evidence that these nutrients are causing eutrophication at these designated sites.

These nutrient inputs currently mostly come either from agricultural sources or from wastewater from existing housing and other development. The resulting dense mats of green algae and other effects on the marine ecology from an excessive presence of nutrients are impacting on the Solent's protected habitats and bird species.

WHAT IS NUTRIENT NEUTRALITY?

Nutrient Neutrality is a means of ensuring development can take place without adding to the damaging impacts of existing nutrient pollution on internationally important protected wildlife sites in the Solent. It is not seen as a long-term solution but one for the short to medium term because we recognise that it is not sustainable to continually take land out of agricultural production. In the long term every type of industry and land use needs to be more focused on managing nutrient pollution in order to protect these and other sites into the future. [Read our detailed guidance on achieving nutrient neutrality.](#)

WHAT IS NUTRIENT TRADING?

This is a mechanism for buyers and sellers to come together in an online marketplace where the environmental benefits from a mitigation site can be bought and sold.

WHAT IS A MITIGATION SITE?

A mitigation site is farmland that will change from a commercial agricultural use to an alternative land use that is nature based, such as woodland or wetland. It may also offer public amenity such as a new public access route, village green or community orchard in addition to, or instead of, habitat for wildlife.

WHAT ARE THE ENVIRONMENTAL BENEFITS?

These are the benefits that can be achieved by changing land use from agriculture to a nature-based use, for example, reduction in diffuse agricultural pollution, carbon sequestration, additional wildlife habitat, flood mitigation, increased areas for public access.

WHAT ARE NITROGEN CREDITS?

Nitrogen credits relate to the amount of nitrogen that will be taken out of the system by the mitigation land once agricultural production ceases. A method has been devised to [calculate credits for specific land parcels](#).

WHAT IS THE CURRENT NITROGEN MITIGATION DEMAND FROM DEVELOPMENT?

Currently there are around 5,500 dwellings that need to be mitigated for across the Solent catchment but this will change depending on number of developments that are mitigated through other schemes, numbers receiving planning permission and updated housing targets that may be set by Government.

HOW WILL WE KNOW THE MITIGATION IS WORKING?

The nutrient neutrality mitigation is intended to stop the impacts of additional nutrient loads *worsening* the condition of protected sites in the Solent. It is not designed to *improve* their condition, which would require even more stringent measures. We are engaged in wider work around agricultural policy reform and reviews of wastewater treatment works permits to help to improve the condition of protected sites. It can take a long time for impacts of mitigation to show up during site condition assessments.

HOW DO I REGISTER MY INTEREST IN THE PILOT?

If you haven't already registered your interest then please email the project mailbox Solent.Pilot@defra.gov.uk to provide your contact details and receive project updates.

DETAILED FAQs

METHODOLOGY

1. IS ONSITE MITIGATION THROUGH WASTE TREATMENT SYSTEMS ACCEPTABLE TO REDUCE NITROGEN?

Developers are encouraged to offset nutrients onsite where possible but their proposals must fully meet the requirements of the Habitats Regulations and be approved by both Natural England and local planning authorities. The Environment Agency has a presumption against private sewage treatment works in seweraged areas and will always seek connection to the mains sewer where possible and practicable so proposals will also need to be compliant with that expectation. See [appendix 1](#) for more.

2. WHY IS AN OCCUPANCY RATE OF 2.4 PEOPLE PER DWELLING USED IN THE CALCULATION?

Natural England has published guidance that states, as a starting point, local planning authorities should consider using the average national occupancy rate of 2.4 as this can be consistently applied across all affected areas. The guidance notes that developers that can demonstrate different occupancy levels can discuss their needs with competent authorities. For more detail on this see paragraph 4.19 of the [Solent Nutrient Neutrality Guidance](#).

3. WHY IS NITROGEN MITIGATION NOT REQUIRED FOR COMMERCIAL DEVELOPMENT?

Currently Natural England advice refers to residential dwellings as it assumes that anyone living in the catchment also works and uses facilities in the catchment. The wastewater generated by that person can be calculated using the population increase from new homes and other accommodation.

4. WHAT ARE FARMERS AND WATER COMPANIES DOING TO REDUCE NUTRIENT POLLUTION?

There are a number of measures required or voluntarily undertaken by farmers and water companies to protect the environment and reduce diffuse and direct pollution. See [appendix 2](#) for more.

AVAILABILITY OF CREDITS

5. IS THERE A LIST OF AVAILABLE SCHEMES WHERE I CAN CURRENTLY PURCHASE CREDITS?

A list of potential mitigation schemes available to developers is [published on the Partnership for South Hampshire website](#).

6. WILL ANY DEVELOPERS BE ABLE TO BUY NITROGEN CREDITS FROM THE NUTRIENT TRADING PILOT, OR WILL SOME BE EXCLUDED?

We anticipate that all developers with upcoming nitrogen credits needs will be able to use the platform to make offers for credits. However, please be aware the initial pilot market round is likely to focus on the Test and Itchen catchments where there is currently the biggest supply-demand gap for nitrogen credits.

TRADING PLATFORM

7. WILL THE PLATFORM HAVE ENOUGH CREDITS TO MEET CURRENT DEVELOPMENT NEEDS?

This is a pilot project so we are unable to predict exactly how many credits will be generated by the first trading market round. The numbers of credits available will depend upon the proposals coming forward from landowners. We envisage a process where market rounds are held periodically.

8. WILL AREAS LACKING MITIGATION SCHEMES BE PRIORITISED?

We are looking at the availability of credits in all catchments. For the pilot run of the nutrient trading process we intend to prioritise the areas with biggest shortfall between known demand and anticipated supply for the first trading process. Currently that is in the Test and Itchen catchment but that may change in time.

9. CAN DEVELOPMENTS OF LOWER COST HOUSING GET A DISCOUNT ON CREDITS?

It is up to the landowners to determine the price they are willing to sell credits at, and developers to decide how much to offer for credits.

10. WILL LARGE DEVELOPERS BE ABLE TO BUY UP ALL THE N CREDITS BEFORE THE SMALLER DEVELOPERS GET A CHANCE?

We are looking into ways to prevent this from happening and Local Authorities may also develop a scheme to help smaller developers access credits. This is important as we know smaller developers have been particularly impacted by this issue.

LOCATION

11. WHERE CAN MITIGATION SITES BE LOCATED?

We expect to be able to make available detailed maps showing individual catchments which apply. Generally, mitigation should go where the impact will be most beneficial in terms of removing nutrients from the system, such as close to watercourses. Depending on the type of land use change proposed, it should also go where it can most benefit local communities, nature or landscape objectives.

12. IS THERE ENOUGH AVAILABLE LAND TO SOLVE THIS PROBLEM IN THE LONG TERM?

Offsite mitigation to deliver nutrient neutrality is envisaged as an immediate solution to an urgent problem - it is not sustainable in the long term because of other land use pressures. It is a mechanism to allow development to take place without breaching Habitats Regulations and worsening the condition of internationally protected sites in the short to medium term.

OTHER SOLUTIONS

13. WHAT IF NEW TECHNOLOGY IS DEVELOPED TO REMOVE NITROGEN FROM DEVELOPMENTS?

If a development demonstrates nutrient neutrality then additional measures are not required.

14. COULD THERE BE A COUNCIL TAX LEVY INSTEAD OF AN ADDITIONAL COST TO DEVELOPERS?

Council tax is intended as a means for local residents to pay collectively for services provided by local authorities. Developers can recoup the costs of mitigation on completion of the development via house sales or by factoring such costs into the price paid for land. It would not be feasible to impose extra council tax charges for all to reduce costs to developers, especially where local residents oppose new developments.

APPENDIX 1

ENVIRONMENT AGENCY'S POSITION ON PACKAGE TREATMENT WORKS:

The EA expects developments discharging domestic sewage to connect to the public foul sewer where it is reasonable to do so. In deciding what is reasonable we will consider cost, practicality and environmental considerations. This is because discharges from wastewater treatment plants owned and operated by sewerage undertakers are significantly less likely to cause pollution than discharges from private plants treating domestic sewage or trade effluent. Private sewage treatment works do not perform as well as public ones as a result of problems including poor design, inadequate maintenance, difficulties funding upgrading or replacement and susceptibility to shock loads. Private systems are therefore more likely to fail to comply with their environmental permit and cause pollution.

EA will only agree to the use of private sewage disposal facilities within publicly seweraged areas and issue an environmental permit if the applicant can demonstrate that -

- they have explored the possibility of the sewerage undertaker, or a sewerage undertaker appointed under a NAV¹, adopting the sewerage system serving their development. This avoids the additional environmental risk that would arise if a private system was installed as it provides certainty on future management and maintenance of the works and on funding that would be required where it is necessary to improve the works to e.g. increase treatment capacity or meet new environmental standards and either:
- the additional cost of connecting to sewer would be unreasonable;
- connection is not practically feasible;

Or

- the proposed private sewerage system would provide additional environmental benefits that would outweigh the potential environmental risks for example the effluent may be treated on site for re-use in a production process or a grey-water system; to support re-charge of an aquifer or to augment flows in a watercourse; or to a significantly higher standard than is achieved by discharging via the public sewer.

Refer to the [EA's guidance for local planning authorities](#) when considering a planning application that involves non-mains drainage.

PTPs are not designed specifically to reduce the level of nutrients discharged from them. However, emerging technologies / innovative solutions such as SuDS and wetlands can reduce the level of nutrients, although quantifying this to the degree required to secure compliance is not mature. Such treatment types also require maintenance and can take up more land than conventional treatment. We encourage the use of SuDS to deal with issues at source, where maintenance and management can be less onerous and owned for example by householders.

The biggest benefit for storm overflows is (volume not treatment) using SuDS to attenuate flows and divert them away from combined sewers thus relieving the volume and process requirement at conventional works. Using natural systems can be more sustainable and

¹ New appointments and variations (NAVs) are limited companies which provide a water and/or sewerage service to customers in an area which was previously provided by the incumbent monopoly provider.

provide solutions that deliver more into the future rather than a conventional treatment option that has a finite capacity.

There must be clear demarcation with natural systems on what is the treatment process and what is the environment e.g. a reed bed on the outfall from a CSO may accumulate sewage debris – without this clarity, this could be interpreted as pollution of the environment rather than a natural screen within the curtilage of the sewage works i.e. part of the process.

WASTEWATER TREATMENT WORK (WWTW) UPGRADES IN SOLENT AREA:

EA has started work on a review of WWTW Nitrogen permits in the Solent area. This has been triggered by new water quality evidence shared by NE. The review will be undertaken in parallel with PR24 planning.

Upgrades to WWTWs are delivered through a 5-yearly asset management cycle. We are happy to be part of discussions around what might be feasible in terms of potential for mid-cycle WWTW upgrades, but any decisions will be with OFWAT.

For example, Southern Water is currently formulating its Drainage and Waste Water Management Plan. The deadline for this work is currently 31st December 2022 and should inform the capital investment programme from 2026. The DWMP will identify pressures on the whole wastewater system including downstream environmental needs and upstream ones e.g. climate, customer behaviours and population growth. If these show a significant risk they will be considered as drivers (which could be environmental (WINEP), capital maintenance or supply demand) for investment through their business plans. There will need to be some degree of prioritisation and testing of willingness/ability to pay for non-statutory schemes e.g. to proactively manage future growing risk. It is then down to OFWAT.

APPENDIX 2

WHAT ARE FARMERS AND WATER COMPANIES DOING?

FARMERS

Many farmers voluntarily carry out practices to help the environment and reduce diffuse pollution such as regularly testing soils and only applying the amount of nutrients crops need to grow; improving soil organic matter for example by using minimum or no till cultivation methods; using cover crops instead of leaving bare stubbles during the period between harvesting and sowing a new crop and using technology such as precision farming techniques to manage inputs efficiently. Farmers are also subject to legislation that obliges them to conform to rules, such as limiting rates of fertiliser applications and timings.

NITRATE VULNERABLE ZONES (NVZ)

These are areas, drawn up by the Environment Agency, where farmers' nutrient inputs and practice are restricted by legislation. In practice almost all of Hampshire (except the New Forest and other small areas, usually associated with heathland) and about three quarters of the Isle of Wight are within an NVZ.

There are periods when they may not apply any fertiliser or manures. They need to maintain sufficient slurry storage capacity, where relevant. They need to maintain records of nutrient applications in all fields within the NVZ areas and have to remain below specified application levels. Stocking rates apply and records of stock have to be maintained. Inspections are carried out by the Rural Payments Agency. [More information on NVZs.](#)

REDUCTION AND PREVENTION OF AGRICULTURAL DIFFUSE POLLUTION (ENGLAND) REGULATIONS 2018

(Commonly referred to as 'Farming Rules for Water')

More legislation around timings and use of fertilisers and manures along with measures to prevent/reduce soil erosion, improve practice generally and limit ammonia emissions. Aims to fulfil requirements for diffuse agricultural pollution in Water Framework Directive. Enforcement through Environment Agency. [Guidance on 'farming rules for water'](#).

THE WATER RESOURCES (CONTROL OF POLLUTION) (SILAGE, SLURRY AND AGRICULTURAL FUEL OIL) (ENGLAND) REGULATIONS 2010

(Usually referred to as SSAFO Regs)

These regulations set standards for the storage of silage, slurry and agricultural fuel oils, all of which can cause pollution incidents in the event of spills or leakages. There is emphasis on ensuring there is sufficient capacity for storage of these products and guidance has been produced to help farmers and landowners understand their responsibilities e.g. with respect to location of installations in relation to watercourses. The Environment Agency must be informed of substantial enlargement or reconstruction of existing installations and is able to offer guidance regarding regulatory compliance. [SSAFO guide for farmers.](#)

CATCHMENT SENSITIVE FARMING

An initiative through which farmers can receive advice and guidance about improvements to practice which will help reduce/prevent diffuse agricultural pollution. Participation is voluntary.

Catchment Sensitive Farming Officers (CSFO) are also authorised to give approval for sign off to certain capital grants aimed at improving certain aspects of farm infrastructure to reduce diffuse pollution. To date only operating in specific high-risk catchments, including several within the Solent area, but the initiative is due to undergo expansion that will virtually cover the whole of England in 2022.

Several water companies contribute to the funding of CSFO posts. Some employ in house staff to fulfil similar roles. [Catchment Sensitive Farming Evaluation Report](#).

AGRI-ENVIRONMENT SCHEMES

For more than 20 years there have been voluntary grant schemes to encourage farmers and landowners to take environmentally beneficial actions and create and/or manage habitats to benefit nature and the environment such as switch from arable production to grassland on fields that are subject to soil erosion, plant trees and place buffer strips next to watercourses and other sensitive habitats. Some options include management of grassland areas with low or no nutrient inputs.

Defra and partners are looking at agriculture's overall impact and how this can be reduced through forthcoming reforms to deliver further on-farm improvements, through for example Environmental Land Management and increased investment in enforcement.

WATER COMPANIES

Several private water companies supply England with water supplies, Southern Water and Portsmouth Water servicing the majority of the Solent's customers. The Water Services Regulation Authority (Ofwat) regulates the water industry in England and Wales. It regulates what they charge and also investigates any customer complaints that are not resolved by the water and sewerage providers.

Services such as sewage disposal may affect the quality of the environment. The Environment Agency regulates water companies on environmental issues and prescribe standards that the companies must follow in their operations. It also advises and monitors the industry on its environmental performance. The [Water Act 2003](#) requires EA to work with Ofwat around the treatment of matters of common interest and foster a greater exchange of information between the regulators.

The [Water Act 2014](#) introduced reforms to the water industry that aim to make it more innovative and responsive, and to increase resilience to hazards such as flooding and drought.

SOUTHERN WATER

Southern Water has several grant schemes available to landowners for on-farm improvements which work alongside measures agreed through agri-environment schemes and Catchment Sensitive Farming Advice. Southern Water are also currently going through a consultation exercise (2021) that will help to inform its investment plans for its next 5-year

business plan period. This includes upgrading or building new infrastructure some of which will be aimed at reducing pollution.

NITRATE REDUCTION SCHEME 2021/22

Aim is to reduce nitrate leaching to groundwater in order to reduce seasonal spikes in nitrate levels affecting drinking water sources, and thereby reduce reliance on expensive and energy-intensive nitrate removal treatment. Annual and multi-year incentives available to farmers to reduce fertiliser inputs and carry out specified beneficial practices:

FARM CAPITAL GRANT SCHEME

Aim is to protect and improve drinking water sources, by reducing soil, nutrient and pesticide losses to rivers, streams, lakes and groundwater. Farms within any of Southern Water's drinking water catchments are potentially eligible for funding. Items must enable good practice above and beyond regulatory minimum standards and is in addition to measures funded under the government agri-environment schemes.

SEPTIC TANK GRANT SCHEME

Aims to reduce the risks of nutrient and microbiological contamination of groundwater sources. Farms within one of any Southern Water groundwater catchment areas are potentially eligible for funding.

PORTSMOUTH WATER

Portsmouth Water has several grant schemes available to farmers and land managers across the East Hampshire and Arun & Western Streams catchments in their groundwater catchments. Portsmouth Water has funding for all grant's schemes until 2025. Grants of up to £10k per financial year per holding are available.

NITRATE INTERVENTION SCHEME

This scheme provides grants for land use and/or land management measures that reduce the risk of nitrate leaching into groundwaters. The scheme aims to directly assist farmers (and other land managers) in high sensitive catchment areas to deliver measures that aim to reduce nitrate leaching and improve farming efficiency.

[Rural Business & Farmers | cleanwater \(cleanwaterpartnership.co.uk\)](https://cleanwaterpartnership.co.uk)

CAPITAL GRANT SCHEME

The Capital Grant Scheme directly assists farmers (and other land managers) in sensitive areas, namely Source Protection Zones (SPZ), by part-funding capital items to reduce the risk of nitrate (and other) losses to groundwater.

NUTRIENT & SOIL TESTING SUPPORT

Portsmouth Water are offering grants to help farmers measure soil indices, soil mineral nitrogen and organic manures to make the most of their nutrient inputs to reduce the risk of over applications of costly and valuable nutrients.

COLLABORATIVE PROJECTS WITH NE/CSF

- Equine workshops and field trials to promote low fertilizer input herbal leys.
- Field trials sowing Italian ryegrass in maize to reduce nitrogen leaching into groundwater and reducing runoff into surface water.
- Carbon and nutrient management project which investigates relationship between soil carbon and nutrient retention.

FARMER ENGAGEMENT

A farmer workshop was held in July 2021 which promoted findings to farmers and key stakeholders on four nitrate leaching reduction trials.