



Nitrogen Neutrality in the Solent

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What is the planning issue?

The planning issue relates to 'likely' significant adverse effects caused by eutrophication resulting from increasing nitrogen levels (and to a lesser extent phosphorus) from land use and development restricting the growth, distribution and variety of food available for wading birds protected under the Conservation of Habitats and Species Regulations 2017 at internationally designated ecological sites across the Solent area.

For the avoidance of doubt, this issue differs from the recreational disturbance of bird species addressed through the Bird Aware 'Solent Recreation Mitigation Strategy' and may require additional mitigation measures.

Produced in draft in March 2018, the [Integrated Water Management Study](#) (IWMS) highlighted that internationally designated ecological sites (Special Protection Areas, Special Area of Conservation and potential SPA designations) located within the Partnership for Urban South Hampshire (PUSH) and surrounding area have the potential to be affected by increases in discharges of treated sewage effluent from future housing growth. Recognising this as a potential issue (and that further work was needed), the IWMS set out an action plan for the constituent local planning authorities of the PUSH area to develop a co-ordinated sub-regional mitigation strategy to address the nitrogen issue. This strategy is still being developed and no timetable for its production has been made available.

Notwithstanding the above, following the recent tightening of environmental regulations through European case law, Natural England is evidently becoming more proactive in their opposition to development proposals with objections noted in respect of Local Plans and to individual planning applications (even those of a minor nature).

What proposals are likely to be affected?

Whilst the area affected is still being refined, at present, the nitrogen issue is likely to affect all residential development proposals in the PUSH area (including areas to the north of PUSH) and parts of Chichester District. This includes applications that have been submitted but have not yet been determined, and may even affect reserved matters applications (even where nitrogen load was not highlighted as an issue at the outline application stage).

It may also be necessary to mitigate the impact of supporting land uses such as new open space including any SANG, Nature Reserves or Bird Refuge Areas, where these give rise to increased nitrogen load. However, Natural England has acknowledged that some open space, depending on its management and typology, may itself be counted as mitigation. Other types of development that attract people into a catchment area (i.e. tourism attractions / accommodation) may also need to address their nitrogen loading.

To determine whether the nitrogen load is likely to increase as a result of a particular development, Natural England has produced a 'working draft' Methodology to calculate the nitrogen budget for developments. (Please contact Turley if you would like a copy of the Methodology). In short, where the results of the calculation show a positive net balance in total nitrogen, mitigation to achieve 'nitrogen neutrality' is likely to be required.

How can impacts be mitigated?

Discussions with Natural England have indicated that significant (50+ dwellings) greenfield development will need to 'wash their own face' and achieve nitrogen neutrality. For sites below 50 dwellings, the expectation is that planning authorities will develop their own strategies to address impacts; which could include a financial contribution, either included within the Community Infrastructure Levy or levied separately. Details at this stage are, however, sketchy and there is a concern that variation in approach between authorities could create unnecessary complexity. However, it should be noted that a similar nitrogen impact mitigation scheme has operated for some years now within Poole and Purbeck in Dorset ([Nitrogen Reduction in Poole Harbour](#)). The approach used by those local planning authorities may provide a model for the Solent area to follow. We would encourage applicants to familiarise themselves with the Dorset approach to inform their own mitigation strategies.

Natural England has produced a draft Methodology setting out a number of mitigation options for achieving nitrogen neutrality, including through 'direct' or 'indirect' interventions.

Direct interventions

- I. Agreement with the wastewater treatment provider to maintain an increase in nitrogen removal at the Wastewater Treatment Works (WWTW).
- II. Provide measures that will remove nitrogen draining from the development site or discharged by the WWTW (such as additional wetland or reedbed planting).

Indirect interventions

- I. Agreement with the wastewater treatment provider or others to provide and maintain an increase in nitrogen offsetting from catchment management measures (this may include mini-farm wetland).
- II. Increase the size of the SANGs and Open Space provision for the development by taking agricultural land out of production to remove nitrogen runoff from this source.
- III. Establish changes, in perpetuity, to agricultural land within the wider landholding to remove more nitrogen runoff from this source.
- IV. Acquire, or support others in acquiring, agricultural land elsewhere within the river catchment area containing the development site, changing the land use in perpetuity (e.g. to woodland, heathland or conservation grassland) to remove more nitrogen runoff from this source and/or, if conditions are suitable, provide measures that will remove nitrogen on drainage pathways from land higher up the catchment (e.g. interception wetland).

Whilst not a mitigation 'option' per se, as the nitrogen load is calculated from the scale of water use, Natural England has indicated that all local planning authorities should impose planning conditions that require the dwellings to meet water efficiency standard of a maximum water use of 110L / person / day (as opposed to the default 125L / person / day). If this provision is taken forward, affected developments will have no alternative but to meet the higher 'Optional' Water Efficiency Building Regulations. It is understood that Natural England are also suggesting enhanced conditions in relation to Sustainable Urban Drainage (SuDS) and Construction Plans where these are identified as being required through the Habitats Regulations Assessment process.

Some of the options presented by Natural England require co-ordination at the sub-regional level and would appear simply unworkable at this stage. For example, land budgets / third party ownership constraints may stifle the solutions which require additional land take, particularly for schemes that are well progressed. Furthermore, recent European case law has raised the bar in terms of mitigation expectations. Whilst some flexibility is afforded to applicants (C-461/17 *Holohan v An Bord Pleanala*) where the competent authority is certain that planning conditions are strict enough to guarantee no adverse effect to the integrity of an international ecological site, it is still incumbent upon applicants to ensure that mitigation measures guarantee 'beyond all reasonable doubt that a project will not affect the integrity of an (protected) area' (C-164/17 *Grace and Sweetman v An Bord Pleanala*). In the context of the European Court of Justice (ECJ) rulings, it is questionable whether the indirect measures proposed can in fact be regarded as mitigation.

The practical implication is that, at the current time, direct end of pipe solutions at individual WWTWs, (i.e. for example upgrading nitrogen stripping processes and technology), are likely to be the most feasible solutions available to the majority of applicants. But, unfortunately, local guidance is scant. Information on which and to what extent WWTWs are in need of upgrading, and what upgrades would be most effective, is not readily available. Furthermore, upgrading facilities can be prohibitively expensive. There remains a notable absence of detailed understanding of costs, including how these might be proportioned between all 'offending' developments in the catchment area and the method of collecting funds (i.e. CIL, s106 or a combination of both).

In the absence of a co-ordinated sub-regional strategy, protracted negotiations with local planning authorities, sewage undertakers, the Environment Agency and Natural England seems almost inevitable. The knock on effect of this will be delays to Local Plan making and decision making, and a potential slowing of housing delivery in an area of considerable need.

What to do now?

At the present time, it is likely that Natural England will expect all relevant (large scale) developments to achieve nitrogen neutrality. Until a sub-regional mitigation strategy is in place, applicants will need to devise their own mitigation approach to do so. Applicants are strongly advised to engage with the local planning authority and relevant statutory consultees at the earliest stage in the development process.

We would also advise applicants to give detailed consideration as to whether Natural England's simplistic Methodology adequately captures likely impacts. For example, the Methodology appears to overlook the conclusions of the Integrated Waste Management Facility (IWMF) which states that some WWTWs may not need upgrading until 2020 to accommodate housing growth in the PUSH area. The implication must be that, in the short term at least, developments in certain locations should not be required to mitigate nitrogen impacts.

Looking forward, where feasible, those controlling land with development potential may benefit from some forward thinking and careful re-consideration of current agricultural land management practices / uses / crop rotations etc in advance of putting forward development proposals to improve future assessments of net nitrogen loading.

Air Quality Impacts

Whilst this briefing note deals with nitrogen loading, applicants should note that Natural England is also reviewing the potential impacts of road traffic emissions on the Solent international ecological sites. This issue is likely to become more prevalent going forward, and it is quite possible that further SPA mitigation to address the effects of vehicle movements may be required in due course.



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