

Blueprint for Water coalition response to Defra's small sewage discharge reform consultation

1. Introduction

The Blueprint for Water coalition is a unique coalition of environmental, water efficiency, fishing and angling organisations which call on the Government and its agencies to set out the necessary steps to achieve “sustainable water” by 2015. The Blueprint for Water is a campaign of Wildlife and Countryside Link. More information is available at www.blueprintforwater.org.uk.

2. General comments

We welcome the opportunity to respond to the Environment Agency's consultation on reform of the regulatory system to control small sewage discharges (SSDs) from septic tanks and small sewage treatment plants in England.

Evidence suggests that many septic tanks are working sub-optimally and contributing to failure of Water Framework Directive (WFD) water bodies to achieve Good Ecological Status (GES), through diffuse water pollution. Moreover uncertainty over the number, location and performance of septic tanks creates significant uncertainty about the contribution that other sectors, most notably agriculture are having on the water environment, hampering efforts to improve water quality. We believe that the proposals to deregulate will make the situation worse.

Whilst we appreciate Government's desire remove burdens on householders, we do not believe this justifies the wide ranging proposal to deregulate control of SSDs outlined in this consultation. We believe Government should recognise that poor water quality from SSDs itself imposes a burden on those affected through damage to the natural environment and by passing on costs of clean up to water companies or the farming sector – undermining the polluter pays principal and effectiveness of measures. Moreover we do not understand how such deregulation will be consistent with the Article 11.3 (g) of the WFD which states Basic Measures must include:

(g) for point source discharges liable to cause pollution, a requirement for prior regulation, such as a prohibition on the entry of pollutants into water, or for prior authorisation, or registration based on general binding rules, laying down emission controls for the pollutants concerned, including controls in accordance with Articles 10 and 16. These controls shall be periodically reviewed and, where necessary, updated;

This appears to place an obligation on Member States to ensure that all point source discharges liable to cause pollution are registered even if controls are introduced through General Binding Rules. It is our understanding that these *Basic Measures* cannot be voluntary and must be applied retrospectively to ongoing activities.

Link believes that septic tanks and small sewage treatment plants are widely mis-managed and that the damage caused by sub-optimally working septic tanks have been seriously underestimated. A study in Ireland concluded “88 % [of septic tanks] were found to be full of sludge to the outlet and not functioning efficiently”¹. Other research suggests that the contribution from sewage discharges in rural areas to total pollutant loadings can be as much as 10%². The interim report for the Ireland

¹ May, L., Place, C., O'Malley, M., & Spears, B. (2011) The impact of phosphorus Inputs from small discharges on designated freshwater sites - Final report to Natural England and Broads Authority.

² Scottish Government (2012) Delivering appropriate rural wastewater treatment – policy framework and action plan <http://www.scotland.gov.uk/Resource/0040/00402151.pdf>

National Inspection Plan shows that 53% of 420 household septic tanks inspected by Local Authorities have failed first inspection³.

We have no reason to believe that the situation in England will be dissimilar and therefore they must be dealt with proactively. In addition even when properly designed, constructed and maintained, septic tanks and small sewage treatment plants are only able to remove 40–70% of organic substrates expressed as BOD₅ and only 5–15% nitrogen and phosphorus. Such performance is insufficient to prevent water pollution⁴ in many circumstances.

We do not believe that the proposals within the consultation will address the impacts of SSDs on the environment, listed in Annex 4. For example, the consultation paper states that septic tanks had been identified as having an impact on 13 Sites of Special Scientific Interest (SSSIs). The proposed changes will do nothing to address this damage. Without mandatory registration for septic tanks older than 2010, we do not see how this situation can be expected to improve.

3. Specific comments on proposed regulatory framework

Removing the requirements for registration, record keeping and notification (points i-iii)

We do not believe that removing the requirements for registration, record keeping and notification is the best approach to dealing with the issue of pollution from SSDs. Mandatory registering of septic tanks can be an effective way to build up a record of the number, location and density of septic tanks in the country. Research indicates that for improved management of septic tanks it is important to be able to identify and quantify the effect that they may have on water quality and in order to do this information on the number, location, age and condition of septic tanks within a given management area is vital⁵. Registration can provide this information, whilst information from water companies and local authorities can only provide location information. Without this information it will not be possible to highlight hotspots of failing septic tanks and link that in to water quality data. Equally, with registration and a record of maintenance it would be possible to highlight areas where positive progress is made to reduce SSD pollution issues.

That said, we recognise the England registration system could be re-evaluated and simplified, thereby reducing administrative costs and burdens, without affecting its ability to deliver important environmental objectives. Link recommend a mandatory system is adopted as the voluntary approach so far employed has not seen significant uptake. Registration could be a required as part of house sale and purchase process. There are a variety of possible mechanisms, of which this is just one, which could help reduce the administrative burden of a registration system. While it is right to consider options for reducing this burden, the benefits to targeted action can ensure that required outcomes are not adversely affected.

Current research indicates that existing records of septic tanks and small sewage discharges in many areas reflected less than 10% of the actual number⁶. Information provided by the owner

³ Environmental Protection Agency, Ireland (2014) National Inspection Plan - Domestic Waste Water Treatment Systems 2013: An Interim Review for the Period 1st July to 28th February 2014
<http://www.epa.ie/pubs/advice/water/wastewater/nationalinspectionplan2013interimreview.html>

⁴ Babatunde, A.O. et al (2008) Constructed wetlands for environmental pollution control: A review of developments, research and practice in Ireland, *Environment International*, 34(1): 116-126

⁵ McCarthy, V. et al. (2012) A field study assessing the impact of on-site wastewater treatment systems on surface water quality in a Co. Monaghan catchment, supporting paper for the 2012 International Symposium on Domestic Wastewater Treatment & Disposal Systems
<http://www.epa-pictaural.com/ctr/m/wwater12/paper/valerieMcCarthy.pdf>

⁶ May, L. et al. (2012) Impact of on site sewage treatment systems on river water quality in UK catchments, supporting paper for the 2012 International Symposium on Domestic Wastewater Treatment & Disposal Systems
<http://www.epa-pictaural.com/ctr/m/wwater12/paper/lindaMay.pdf>

through a registration scheme would be more accurate than data inferred through third party sources. The potential inaccuracies in the latter could lead to inefficient deployment of resources.

Underestimating the numbers of septic tanks and small sewage discharges located in a catchment can lead to overestimation of the relative contribution from other diffuse sources, such as agriculture. In turn, this may lead to potential delays in meeting water quality limits due to disproportionate targeting of potential sources, as well as the potential to unnecessarily adversely affect relationships with important stakeholders, which could limit future ability to deliver positive land management practices through partnership approaches.

We recognise that Diffuse Water Pollution Management Plans are a valuable approach to tackle pollution; including SSDs in protected areas e.g. those designated SSSI and Natura 2000 sites. However, we also recognise that, to date, the vast majority of these plans lack detail and have driven very little action. A key problem facing Natural England in drawing up these plans is lack of data on the source and scale of nutrient pressures in each catchment. This cannot be derived without first knowing where the septic tanks and small sewage treatment plants are located which in turn cannot be known with any certainty unless there is an effective (compulsory) registration system. This is vital in ensuring the link between diffuse pollution and SSDs is properly evidenced in any given location, justifying any action required.

As others have noted “*Septic tank systems (STS) are a potential source of nutrient emissions to surface waters but few data exist in the UK to quantify their significance for eutrophication*”⁷. There is a very real risk that these proposals will perpetuate this situation as a lack of information about risk will mean they are unlikely to be targeted within River Basin Management Plans (RBMPs). Once RBMPs have been finalised there will be restricted opportunity for influencing the targeting of funds.

The proposal to remove homeowners’ obligation to keep records will create even less incentive to maintain septic tanks/package treatment plants. There is clear evidence that one of the most common reasons for failure of these systems is that they are not emptied sufficiently regularly. If records can’t be checked then this could exacerbate the situation and makes the ability to locate and enforce good practice more difficult.

The proposals rely on awareness raising around the general binding rules and owners of septic tanks and small sewage treatment plants abiding by these rules. While awareness raising is, of course, important (see below), without a form of registration or records of maintenance, it will be impossible to evidence whether such approaches are effectively delivering required outcomes or not. It will also undermine any efforts to target awareness raising and guidance campaigns.

By contrast, registration could trigger an automatic electronic response delivering guidance and information on general binding rules direct to the applicant, thereby targeting information where it is most required. This is much more focussed and less resource intensive than trying to target areas where it is considered likely that there are SSDs.

The requirement to inform the Environment Agency that a septic tank is no longer in use is essential if an up to date database is to be kept. Knowing which systems are no longer operational is vital to ensure the necessary data is held to target resource deployment and ultimately evidence delivery against objectives. We therefore do not support the removal of this requirement.

⁷ P.J.A. Withers,, H.P. Jarvie , C. Stoate (2011) Quantifying the impact of septic tank systems on eutrophication risk in rural headwaters. *Environment International* **37**: 644–653

We support the proposal to require that septic tanks and small sewage treatment plants should meet British Standards in force at time of installation with the important proviso that they should not be having a demonstrable negative impact on environmental quality. To argue otherwise would be to legitimise pollution from elderly under-performing systems, an approach which sets a dangerous precedent for other sectors and may not be defensible under EU or domestic law.

Public awareness campaign

We support a public awareness campaign; however, we believe that face to face interaction in targeted areas is the most effective way of reaching people, and resources need to be made available to carry out such a campaign effectively. We do not believe that there is a wide understanding amongst the general public about the impacts of SSDs working sub-optimally and what is necessary in order to keep an SSD working effectively. Owners of SSDs need to be made aware of what they are required to do and they need to be supported by in-depth guidance. There is an additional requirement to raise awareness around the use of environmentally damaging products being washed down the drain and promotion of less harmful alternatives. Registration can help to target awareness raising to where it is most required.

Targeted action plan for tackling hotspot areas

Once a clear idea has been established on locations of septic tanks and small sewage treatment plants mapping exercises can be undertaken to develop a risk analysis of vulnerable areas. This has been carried out in Ireland. The mapping exercise looked at layers such as soil drainage, permeability, groundwater vulnerability, aquifers, susceptibility of groundwater to nitrates, phosphates and pathogens, surface water body status, groundwater body status, location of septic tanks and combined these to establish a risk analysis⁸. The Ireland National Inspection Plan aims to make 1000 inspections in 2014 the majority being in high and very high risk areas and target response measures accordingly⁹. We believe SSDs could be having significant local impacts, and therefore if the UK government is to meet WFD targets it is vital these are addressed.

General binding rules and specific proposals

The consultation states that general binding rules are currently already required to prevent pollution but are not labelled as such. We therefore require clarity as to the processes and details of a public awareness campaign around these general binding rules to ensure that this information is more widely understood and adhered to.

We believe that the general binding rules are a good basis which all people who are responsible for a septic tank or small sewage treatment plant are required to act upon. However, we seek clarity as to how these general binding rules will be enforced and the penalties for non-compliance, as these are not detailed within the consultation document. We remain concerned about the potential cumulative impacts of a magnitude of small unmonitored discharges, and seek clarity on how the Environment Agency will assess whether or not this is having an impact. We would also like to know the assessment and evidence behind the decision to allow five cubic metres per day to be discharged to a water source as we are concerned this is a large volume that can be discharged without monitoring.

We support points iv to vii:

⁸ Environmental Protection Agency (2013) A Risk-Based Methodology to Assist in the Regulation of Domestic Waste Water Treatment Systems

https://www.epa.ie/pubs/reports/water/wastewater/EPA_DWWTs_RiskRanking.pdf

⁹ Environmental Protection Agency, Ireland (2014) National Inspection Plan - Domestic Waste Water Treatment Systems 2013: An Interim Review for the Period 1st July to 28th February 2014

<http://www.epa.ie/pubs/advice/water/wastewater/nationalinspectionplan2013interimreview.html>

- iv. Retaining (and updating) the requirements that apply to England for controlling small sewage discharges from domestic systems (listed below)
- v. Retaining (and updating) guidance on technical standards set by the Environment Agency through their duties as the Regulatory Authority to protect water resources and the environment
- vi. Clarifying that septic tanks and small sewage treatment plants should meet British Standards in force at time of installation
- vii. Clarifying that responsibility for the small sewage discharge lies with the owner of the property or land on which a discharge is made or the legal tenant if responsibility is transferred as part of a rental or leasehold agreement.

We do not support point viii – “to implement a more focused approach to permitting by reducing the number of *designated sensitive areas* where owners are routinely required to have an environmental permit for their discharge” our reasons for which are given below.

Designated sensitive areas

The proposals significantly weaken the protection of sensitive areas and wildlife dependent on these sites. In addition, we do not believe it is satisfactory or legally permissible to only require a permit for new discharges. Age affects the ability of septic tanks and small sewage treatment plants to function efficiently and without registration or permit for those already established septic tanks and small sewage treatment plants there is no way of knowing whether they are contributing to pollution in the area, regardless of whether they are being managed adequately or not.

The proposed requirement for permits for septic tanks or small sewage treatment plants “on or near to” sensitive areas needs defining.

- Sites where protected species and protected habitats are located: We do not agree with removing these sites from the list of designated sensitive areas. If these sites have unregulated SSDs discharging into them, the effluent could negatively impact the ecology of the site making it unsuitable for protected species such as great crested newt, European eel and otter which inhabit sites both with and without protected area status. The situation is similar with protected habitats. This has the potential to negatively impact on the Government’s ability to achieve targets set out in Biodiversity 2020: A strategy for England’s wildlife and ecosystem services¹⁰ targets and result in important unprotected habitat such as those providing corridors or stepping stones between protected areas becoming more at risk from diffuse pollution from SSDs.
- National nature reserves (NNRs): If there are no national nature reserves which are not also designated as SSSIs, then we suggest that the wording which states that SSSIs are designated sensitive areas clarifies that this also includes all NNRs.
- Local nature reserves and local wildlife sites: These sites are usually of high local importance. They support both locally and nationally threatened wildlife, and many sites will contain priority habitats and species. Natural England states that local nature reserves are “*an impressive natural resource which makes an important contribution to England’s biodiversity*”¹¹. In

¹⁰ Defra (2011) Biodiversity 2020: A strategy for England’s wildlife and ecosystem services https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69446/pb13583-biodiversity-strategy-2020-111111.pdf

¹¹ Natural England (downloaded 28/05/2014) Local Nature Reserves <http://www.naturalengland.org.uk/ourwork/conservation/designations/lmr/default.aspx>

addition, these sites play an important role in connecting local communities with nature; children's exposure to the environment is inextricably linked to their wellbeing¹².

Effluent from SSDs in such areas could contribute to loss of biodiversity and fragmentation of habitat which England has committed to halting through Biodiversity 2020, as well as reducing contact with nature from local communities. While these sites may lack the levels of statutory designation associated with some other sites, the potential negative impacts of SSDs remain significant and concerning.

- Ancient woodland: We do not support the removal of ancient woodland from the list of designated sensitive areas. Nutrient rich water, such as that which can result from SSDs, can negatively impact on ancient woodland. For example, phosphate and nitrogen concentration can negatively affect plant species diversity^{13,14}. Individual SSD inputs are small but if several systems were to discharge into ancient woodland then this could potentially change the ecology of the site. Under the proposals, septic tanks near to ancient woodland will be unregistered with no mechanism for checking the amount of effluent entering the woodland and no ways of assessing the potential impact on the habitat due to increased nutrient inputs from new developments.

We would welcome the opportunity to meet to discuss these issues further and we are keen to be kept informed about progress with reforming the regulatory system for small sewage discharges.

This response is supported by the following nine organisations:

- Amphibian and Reptile Conservation
- Buglife – The Invertebrate Conservation Trust
- Angling Trust
- Marine Conservation Society
- The Royal Society for the Protection of Birds
- The Rivers Trust
- Salmon & Trout Association
- WWF - UK
- Wildfowl & Wetlands Trust

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¹² UK National Ecosystem Assessment (2011) The UK National Ecosystem Assessment: Synthesis of the Key Findings. UNEP-WCMC, Cambridge.

¹³ Hermy, M., Honnay, O., Firbank, L., Grashof-Bokdam, C., & Lawesson, J. E. (1999) An ecological comparison between ancient and other forest plant species of Europe, and the implications for forest conservation. *Biological conservation*, 91(1), 9-22.

¹⁴ Hofmeister, J., Hošek, J., Modrý, M. & Roleček, J., (2009) The influence of light and nutrient availability on herb layer species richness in oak-dominated forests in central Bohemia. *Plant Ecology*, 205: 57–75