

# Sustainable Water Network (SWAN)

## Response to the Public Consultation on the Proposed National Inspection Plan for Domestic Waste Water Treatment Systems



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## 1. Introduction to SWAN

The Sustainable Water Network (SWAN) is an umbrella network of 25 of Ireland's leading environmental NGOs, national and regional, working together to protect and enhance Ireland's aquatic resources through coordinated participation in the implementation of the Water Framework Directive (WFD) and other water-related policy and legislation. SWAN member groups are listed in Appendix I. SWAN has been actively engaged in Water Framework Directive (WFD) and other water policy implementation at both national and River Basin District (RBD) level since 2004, responding to water-related public consultations and representing the environmental sector on WFD River Basin District (RBD) Advisory Councils, the South Eastern RBD Management Group and other water policy-related fora.

## 2. Overarching Comments

SWAN's welcomes the opportunity to comment on the proposed National Inspection Plan (NIP) for domestic waste water treatment systems (DWWTS). We also welcome the introduction of primary legislation in the form of the Water Services (Amendment) Act 2012 in addition to the Water Services Acts 2007 and 2012 (Domestic Waste Water Treatment Systems) Regulations 2012 to control discharges from domestic wastewater treatment systems (DWWT systems). If implemented effectively, these have the potential to substantially contribute towards addressing a significant diffuse pressure on Ireland's aquatic resources, as identified during the Water Framework Directive (WFD) River Basin Management Planning process.

In terms of public information, the NIP discussion document is clear and well written and SWAN welcomes the clear statement at the outset that DWWTS *"not properly located, designed, installed, operated or managed"* pose a risk to human health and the environment. Likewise, the clear reiteration of the requirements of the Water Services Amendment Act 2012 and Domestic Waste Water Treatment Systems Regulations regarding the legal obligations of homeowners to *"ensure that their systems are operating and managed properly and are not creating a risk to human health and the environment"* is important and welcome.

The target audience for the document however is unclear. The *'What you need to do'* and *'what to expect from an inspection of a DWWTS'* sections suggest that this is a public awareness document aimed at homeowners. Whereas other sections dealing with, for example, the risk-based approach and citizen engagement fit more closely the *'discussion document'* remit and appear to be aimed more at stakeholder representative bodies with the objective of stimulating a policy response. It may be worthwhile to consider who exactly the intended readership of the final document is and to pitch it accordingly.

In terms of the overall approach, SWAN very much welcomes all initiatives to stimulate citizen engagement, and indeed has been advocating this in all areas of water management for a number of years. We furthermore very much welcome indications that the EPA is moving generally towards an increased emphasis on this approach in conjunction with enforcement. However, given the particular circumstances of the DWWTS issue, citizen engagement needs to be seen as a long-term strategy and should not be seen as a replacement for a comprehensive and robust inspection and enforcement regime in the short-term. (See Section 3.3 for more on this)

A scientifically robust risk-based inspection system is an extremely positive development and to be welcomed. However, this can only be adjudged to be effective if it results in the remediation of DWWTS which are posing a risk to human health and the environment. The Inspection Plan in itself is only as good as the onsite improvements it

delivers. The lack of any detail on remediation and what actual measures follow on from the detection of a malfunctioning system is the greatest weakness in the NIP in the view of SWAN members and we propose that this gap be addressed in the final document. (See Section 4. for more on this)

### Water Framework Directive objectives

In relation to the legislative context governing the inspection and licensing system, septic tanks and other domestic waste water treatment systems have been identified as a significant threat to meeting the environmental objectives set by the Water Framework Directive (WFD). For example, in the Shannon international River Basin District, 42 rivers have been assessed as being at risk of failing to achieve the required standards due to unsuitable hydrogeological conditions and the associated high density and location of unsewered properties in these areas.<sup>1</sup> It is imperative that the achievement of WFD objectives is a key consideration for the design of the National Inspection Plan and that furthermore a key criterion in the assessment of any system must be whether the system is compromising the status of surface or groundwater bodies in the vicinity of the site. Therefore the National Inspection Plan should be designed with reference to the WFD 2008 Programmes of Measures Study on Unsewered Wastewater Treatment Systems<sup>2</sup> in addition to any further more up-to-date analysis which has been conducted since. It must be stressed that the NIP can only be viewed as an effective measure under the WFD Programme of Measures to address the diffuse pressure from DWWTs, if it results in demonstrable remediation of polluting DWWS.

## 3. Detailed Comments by Section

### 3.1. Reasons for a National Inspection Plan; Domestic waste water treatment system use in Ireland; Risks posed by wastewater to human health and the environment

In terms of a public awareness document these sections are good; they set out the relevant facts clearly and in non-technical language. The impact is enhanced by the use of photographs.

### 3.2. What you need to do

SWAN does not agree with the assertion that registration “*is the first step in ensuring your system does not pose a risk to your family of the local environment...*” This could be perceived as giving the incorrect impression to homeowners that the NIP is a bureaucratic exercise only. Registration in itself obviously is not a step towards remediating a malfunctioning system, especially since registration will in fact, according to the discussion document, lessen the chance of inspection. We would advise amending this wording. It may be appropriate to link this section with the following s on ‘*Operation and Maintenance*’, since these are in reality more effective steps to ensuring systems are not a threat.

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<sup>1</sup> Shannon International River Basin Management Plan 2009 – 2015. Limerick County Council, July 2010  
<http://www.shannonrbd.com/pdf/sea/ShIRBD%20RBMP%20Dec2010.pdf>

<sup>2</sup> Programme of Measures: Unsewered Wastewater Treatment Systems. National Study. Final Report, Galway County Council, November 2008  
[http://www.wfdireland.ie/docs/23\\_UnseweredWasteWaterTreatmentSystems/Programme%20of%20Measures%20Unsewered%20Wastewater%20National%20Study\\_v2.pdf](http://www.wfdireland.ie/docs/23_UnseweredWasteWaterTreatmentSystems/Programme%20of%20Measures%20Unsewered%20Wastewater%20National%20Study_v2.pdf)

### 3.3. Inspection Plan – general principles

SWAN agrees with the principle of a scientifically-robust, risk-based approach to inspections, complemented by citizen engagement initiatives. However, unfortunately neither the detail of the system, nor the decision-making mechanism by which the risk-based approach will be applied is included in the discussion document. Therefore it is difficult to provide comment as to whether we believe the proposed system is likely to be effective in protecting the water environment and contributing towards the meeting of WFD objectives.

Regarding the aims of the NIP as set out on page 4, SWAN believes that an overarching aim, an amended version of the 7<sup>th</sup> aim as follows would be appropriate: To ensure that *“risks to human health and the environment are identified and managed addressed”*

The current aims, as set out, to ensure that *“Adequate treatment of domestic waste water is in place”* and that *“Treatment systems are adequately operated and maintained”* should also be emphasised. An additional aim that advice and direction be provided to households on how to remedy problems identified during an inspection should also be added. This site-specific direction should be differentiated from more general public awareness information.

Whilst not enumerated, the ordering of the list suggests priority and whilst public information and engagement is important, the overall aim of addressing the risks from malfunctioning systems should be prioritised and thus the aims pertaining to these should be set out foremost, rather than after the public engagement objectives.

SWAN fundamentally disagrees with the approach whereby the incentive of a lower probability of inspection be offered to those who register their systems. This runs counter to the principle of an objective risk-based system and is clearly not science-based. SWAN urges the removal of this incentive.

#### **Risk-based Inspection**

As set out above, SWAN agrees in principle with the risk-based approach to inspections, but believes further information regarding the decision-making mechanisms by which this will be implemented is necessary in order for stakeholders to make a full and meaningful response. This detail is needed in relation to both the design of the NIP tool by the EPA and the mechanism by which the Local Authorities will use the GIS tool to select actual sites for inspection. Whilst we acknowledge that stakeholders may not have the capacity to respond to detailed technical documents, we believe there is inadequate detail on the constituent elements of the NIP and how it will be implemented.

Even with a risk-based system, decisions regarding the percentage of systems to be inspected per year; the regularity with which sites are visited and the criteria used during site inspections must be made and these elements will be vital to the success of the scheme in addressing the local impacts of DWWTS and the achievement of WFD objectives. SWAN is concerned that economic considerations have led to a risk-based system which may be excessively pared-down in terms of the temporal and spatial frequency of inspections.

SWAN welcomes the S-P-R model for identification of critical source areas using GIS layers for *“housing density, the prevailing ground conditions.....and aquifer classification”*. We further welcome the statement from the EPA (at the meeting with the Environment Pillar) that a further layer which includes sensitive receptors is being added to the GIS tool. However, it is not clear from the document how exactly *‘proximity to sensitive receptors’* *“will be taken into account”* and to what extent WFD and N2000 criteria will be included in that selection process. Whilst it is furthermore not clear from the document where responsibility for this will lie, according to Sweeney & Keegan

(2012)<sup>3</sup>, local authorities will prioritise the site inspections based on the site selection criteria combined with local knowledge and WFD priorities within their functional area. SWAN welcomes the explicit inclusion of WFD priorities but is concerned about responsibility lying with local authorities, who have an inconsistent record regarding implementation of N2000 requirements especially. If this is the case, then the process by which WFD and N2000 criteria are incorporated into the site-selection decision-making process by Local Authorities should be clearly set out in guidelines from the EPA.

### Role of Local Authorities & Training of Inspectors

SWAN has very serious misgivings regarding the decision to give the responsibility for the carrying out of the inspection plan to Local Authorities. The inclusion of 'local priorities' in the decision-making process, if not strictly defined and overseen, introduces a level of potential subjectivity into the site selection process. This combined with the incentive of less likely inspection for those who are registered, erodes the scientific, risk-based approach of the NIP.

In response to the consultation in March, SWAN welcomed the requirement in the Act that any inspector "*... is the holder of a prescribed professional or technical qualification [and]...has satisfactorily completed a prescribed training course...*" SWAN does not believe that a consistently high level of expertise exists across all local authorities to make the necessary objective decisions regarding site selection, nor that this can be addressed through a short training course for staff. Unless there is an extremely high level of technical training, proscriptive guidance and constant oversight and regular auditing on the part of the EPA, this approach will not result in a national inspection plan with a sufficiently and consistently robust standard across the country. It needs to be recognised that this exceptionally high level of supervision by the EPA of the local authorities will be very resource intensive and must be budgeted for accordingly.

In addition, a potential conflict of interest exists, where authorities responsible for issuing inappropriate planning permissions are responsible for inspecting sites which are non-functioning due to issues directly related to a poor planning decision made by the same authority. This issue needs to be recognised and discussed with Local Authorities and guidance issued to address it.

### **Citizen Engagement**

SWAN fully supports citizen engagement as a key element of implementing any environmental policy or legislation and indeed has advocated for public participation in water management issues for many years. However, given the particular circumstances and context of the establishment of the NIP, we have concerns regarding an over-reliance on the citizen engagement element of the programme. Citizen engagement must be seen as a long-term strategy rather than a replacement for the necessary comprehensive and robust inspection and enforcement regime in the short-term.

The particular circumstances militating against short-term success of citizen engagement include the late initiation of engagement activities after the announcement of registration and inspections and the resulting political campaign against 'septic tank charges'. Best practise in public participation is to initiate engagement with the public as early in

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<sup>3</sup> Sweeney L. & Keegan M. (2012) National Inspection plan for DWWTs- a proposed approach. International Symposium on Domestic Waste Water Treatment & Disposal Systems, 10th&11th September 2012, Trinity College, Dublin.

a process as possible and definitely at a stage where the public can have some influence over the outcome. At this stage, most decisions regarding inspection and registrations fees etc have been made.

Another factor is the very specialised and resource-intensive nature of successful citizen engagement initiatives. Key elements of successful public participation projects include specifically qualified professionals, often trained in social sciences and long term engagement where trust is built up between officials, facilitators and stakeholders. It would be extremely challenging for EPA and public authority staff from scientific and administrative backgrounds to engage, build trust with and change the behaviour of stakeholders /homeowners who may very possibly have a negative perception on the NIP due to media coverage and political campaigning.

A well-resourced citizen engagement initiative led by suitably qualified professionals has a vital role to play in a longer term strategy and SWAN fulsomely welcomes the EPA's move in this direction. However, in the short term, where immediate pressures need to be addressed, the proposed citizen engagement initiative, without an indication regarding allocation of necessary resources, can only be seen as complimentary to short-term inspection and enforcement.

Notwithstanding these concerns, SWAN fully supports all the public awareness and engagement initiatives put forward in the discussion document. The innovative multimedia and other material on the EPA website is very good and links to this should be put on the homepages of all Local Authority websites. If Local Authorities are to be responsible for implementing the NIP then it is vital to secure commitment from them in terms of delivering on public awareness also. We propose that the Environmental Awareness Officers in the Local Authorities are the appropriate key contacts to facilitate this and should be appointed and resourced to lead local awareness campaigns.

As we have seen in recent months, it will be a significant challenge to encourage owners of septic tanks and other on-site wastewater treatment systems to engage in a positive way with the new inspection and monitoring regime. SWAN has found that the most effective way to get the message to local communities, in addition to the use of local print and radio media is to work with local community groups – Community Councils, and community fora. Cooperation with Strategic Policy Committees (SPCs) in each Local Authority is also important. The Environment Pillar has representatives on SPCs on all Local Authorities and may be able to facilitate a cooperative approach with these bodies.

In a survey commissioned by SWAN on behalf of DEHLG (as it was) in 2009, it was found that the public are more likely to be willing to pay for water protection measures, if they first appreciate the value of their local water resources. Therefore this is an important element which should be included in any awareness-raising activities and materials. This would provide a positive counter-balance to the negative messages about risks to human health and the environment.

## **Inspection**

In the opening paragraph of this section, which outlines a broad range of inspection types, it is striking that on-site inspections are listed last. This reinforces the distinct impression, given throughout the discussion document, that all possible measures are being taken, for economic reasons, to minimise the number of site inspections. Despite the proven effectiveness of a risk-based system, given the lack of detail in the document regarding frequency of inspections, this is of serious concern to SWAN. It is also unclear what '*proxy inspections*' involve.

## What to expect from an inspection of a DWWTS

SWAN has a number of concerns regarding this section, enumerated below:

- I. SWAN believes that the inspector should check not just for “*untreated waste water which contains high levels of coliforms*” but also high levels of nutrients. This is supported by Daly (2012)<sup>4</sup> who states that approximately 15% of the country has a very high likelihood of MRP from septic tanks reaching groundwater and that ~30% of the country has a very high likelihood of nitrate from septic tanks reaching groundwater. DWWTS have been identified as a significant source of nutrients.
- II. The EPA has previously stated (O’Leary, 2012) that the inspector will ‘request information regarding maintenance, servicing and operation of a DWWTS’. This requirement should be included in the NIP<sup>5</sup>.
- III. The discussion document states that ‘*The Inspector will carry identification and will check that the treatment system, as constructed, is fit for purpose.*’ A requirement for the treatment system, where applicable, to comply with the EN 12566 standards and their National Annexes should be included as part of this fit for purpose assessment (Smyth, 2012)<sup>6</sup>
- IV. Follow-up action after problems are detected, as set out in the document, is wholly inadequate:
  - a. There is no provision made for immediate action in the case of serious risk to human health or the environment. Twenty one days for the issuing of an Advisory Notice may be sufficient in the case of minor to moderate pollution but such a delay is not appropriate for more serious cases. Whilst the appeals process in the NIP, as set out in the Act is necessary, it is vital that non-compliant systems posing serious risks to public health and the environment be addressed immediately to avoid further pollution.
  - b. The document states that the Advisory Notice “*will instruct the homeowner to remedy the problem...*” and “*...MAY specify measures to be taken*” (SWAN capitalisation). If this system is to be effective, it is imperative that the notice definitely contains detailed directions as to what measures need to be carried out to remediate the problem. Inspectors should be sufficiently trained so that they are qualified to provide this guidance in the notice. A registered list of suitable qualified people/businesses that are authorised to carry out the required measures/maintenance should be also be provided. In the case where the householder can undertake certain measures themselves it should be ensured that they are provided with the appropriate knowledge with which to do this. (See Section 4. for more on remediation)
  - c. There are no measures for follow-up enforcement outlined, including *i*) no provision for a follow-up inspection to ensure that the required remediation measures have been carried out to address the detected problems and *ii*) no provision for administrative sanctions for non-compliance. (The only follow-up inspection referred to is in the case of an appeal by the homeowner)

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<sup>4</sup> Daly D. (2012) A risk based methodology to assist in the regulation of domestic waste water treatment systems. *International Symposium on Domestic Waste Water Treatment & Disposal Systems*, 10<sup>th</sup> & 11<sup>th</sup> September 2012, Trinity College, Dublin.

<sup>5</sup> O’Leary G. (2012) Setting the scene. *International Symposium on Domestic Waste Water Treatment & Disposal Systems*, 10<sup>th</sup> & 11<sup>th</sup> September 2012, Trinity College, Dublin.

<sup>6</sup> Smyth E. (2012) Waste water treatment systems EN certification and National Annexes. *International Symposium on Domestic Waste Water Treatment & Disposal Systems*, 10<sup>th</sup> & 11<sup>th</sup> September 2012, Trinity College, Dublin.

## 4. Remediation of non-compliant systems & enforcement

The key weakness of the proposed NIP is the lack of any detail regarding measures to remediate non-compliant systems (and how these are going to be funded). This is a very obvious omission and was echoed in feedback from the majority of SWAN members. From SWAN's perspective the effectiveness of the inspection plan can only be measured ultimately by the improved water quality it delivers and this can only happen if non-compliant systems are fixed. SWAN agrees that this can partially happen through voluntary improved maintenance on the part of owners as a result of a public awareness campaign. However, in reality a substantial proportion of systems - particularly in regions with unsuitable soil conditions - will need remediation action after inspection and whilst such actions will vary from the simplest solutions to more complex measures, this complexity should not result in the issue being omitted from the national inspection plan document. An additional section addressing the issue of remediation should be added to the final NIP in SWAN's view.

In addition to the above concerns, the omission of this issue results in a high level of uncertainty and a potential for speculation regarding potential costs on the part of home owners. This uncertainty provides suitable conditions for successful campaigning against registration or indeed wider cooperation.

From a social justice point of view, it is important that an ability to pay assessment, with a grant scheme for households below a certain income, be part of the remediation programme. Non-ability of householders to pay must not prevent remediation measures; in such cases SWAN recommends that the competent authority step in to take whatever measures necessary to halt pollution. The unfairness of penalising homeowners for the misjudgement by Local Authorities in granting planning permission on inappropriate sites or with inadequate site assessments must also be acknowledged and addressed as part of any remediation programme.

In summary, as presented, the proposed NIP could potentially represent a bureaucratic exercise whose end product is an Advisory Notice, which "may" specify remediation measures. What happens after this, apart from an appeal is unclear. This is not acceptable in SWAN's view and does not constitute an effective national strategy to address the risks posed by DWWTS on our aquatic environment.

## 5. Resources

SWAN believes that the NIP will only be successful if the necessary substantial resources are made available to ensure adequate temporal and spatial frequency of inspections; a meaningful long-term citizen engagement strategy and a well-funded grant-aided remediation programme to fix the systems which are posing a risk to surface and groundwaters. SWAN fully supports the provision of such funding to the EPA to ensure the delivery of an effective national programme to address the risks posed by DWWTS to human health and the environment.

## Appendix I

### SWAN Member Organisations & Board Members

SWAN National Groups		SWAN Regional & Local Groups	
1.	An Taisce	16.	Carra Mask Corrib Water Protection Group
2.	Bat Conservation Ireland		
3.	Birdwatch Ireland	17.	Cavan Leitrim Environmental Awareness Network
4.	Coastwatch Europe Network		
5.	Coomhola Salmon Trust Ltd.	18.	Cork Environmental Forum
6.	Eco-UNESCO	19.	Longford Environmental Alliance
7.	Friends of the Earth	20.	Macroom District Environmental Group
8.	Friends of the Irish Environment		
9.	Irish Doctor's Environmental Association	21.	Save Our Lough Derg
10.	Irish Peatland Conservation Council	22.	Save Our Lough Ree
11.	Irish Seal Sanctuary	23.	Save The Swilly
12.	Irish Water and Fish Preservation Society	24.	Shannon Whale & Dolphin Foundation
13.	Irish Whale and Dolphin Group		
14.	Irish Wildlife Trust	25.	Slaney River Trust
15.	Voice Of Irish Concern for the Environment (VOICE)		

SWAN Board of Directors:	
Mark Boyden, Chair	Coomhola Salmon Trust
Eamonn Moore, Vice Chair	An Taisce
Karin Dubsky, Director	Coastwatch Europe
David Healy, Director	Friends of the Irish Environment
David Lee, Director	Cork Environmental Forum
Elaine Nevin, Director	ecoUNESCO
Joachim Schaefer, Director	Cavan Leitrim Environmental Awareness Network