

Cork County Council

Environment Directorate

**Domestic Waste Water Treatment Systems
National Inspection Plan
2013**

Guidance Document

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This is a guidance and policy document only – it does not purport to be a legal interpretation. For the legal provisions relating to the Domestic waste water treatment system national inspection plan, please consult the relevant legislation and statutory instruments

1. Introduction

Domestic waste water treatment systems (DWWTS) serving individual households-include systems such as septic tanks, packaged plants, tertiary treatment units and associated discharge or infiltration areas.

DWWTS will be generally referred to as septic tanks in this guidance document. It is estimated that there are approx. 58,000 such systems in County Cork.

Where septic tanks are not properly located, designed, installed, operated and managed, they pose a threat to human health through possible contamination of drinking water wells, or from effluent ponding in gardens, exposing people and pets to untreated waste water.

There are around **1 million** *E. coli* bacteria in one litre of effluent from a septic tank. The drinking water standard for *E. coli* bacteria is **zero/100ml**.

A typical household (3 persons) will discharge 450 litres of wastewater effluent per day to a septic tank

In addition to the risk posed to human health, malfunctioning septic tanks also pose a risk to our watercourses and may impact on fishing, bathing waters and other amenities.

Risks from poorly operating septic tanks

- *Risk of direct contact with bacteria and viruses by children and domestic animals in particular - where percolation into the ground is inadequate and ponding and/or direct discharge of sewage to ditches and streams occurs.*
- *Risk of contaminating a drinking water source including private wells – where there is inadequate treatment of the sewage in the subsoil and/or bedrock,*
- *Risk of environmental pollution of water from excessive nitrogen and phosphorus where there is inadequate treatment of the sewage in the subsoil and/or bedrock, resulting in environmental pollution*

In order to reduce risks it is essential that adequate treatment of the sewage effluent occurs before safe disposal by percolation.

2. Legislation

In October 2009 The European Court of Justice found that Ireland had not met the legal obligation required by the 1975 Waste Framework Directive 1975/442/EC on the regulation of domestic waste water in our unsewered areas.

In response to this, the Water Services (Amendment) Act 2012 and regulations were introduced and provide for:

- **A national registration system** for septic tanks - *Approx. 50,000 households in Co. Cork, (c. 86% of eligible households), had registered by 1st July 2013*
- The preparation by the EPA of a **National Inspection Plan** for Septic tanks
- The provision of **grant aid** where remedial works are required to septic tanks
- **Planning exemption** of remedial works required following an inspection
- **Responsibilities of owners** of septic tanks to ensure their systems are operated and maintained in a correct manner.

3. Responsibilities of householders under the Water Services (Amendment) Act 2012

- All septic tanks must be registered - the registration fee payable is €50.
- Deadline for registering existing septic tanks is 1st February 2013.
- Registration remains open – there are no late payment fees.
- It is an offence under the 2012 Act for a householder not to register
- New septic tanks must be registered within 90 days of connection
- Information on registration at www.protectourwater.ie
- Produce a valid certificate of registration on request
- Maintain their treatment system so that it does not constitute a risk to human health or the environment.
- Remediate their treatment system if not operating properly.
- Provide evidence of the septic tank registration to the purchaser of the premises on completion of a sale

4. National Inspection Plan - to protect Public Health and the Environment

The National Inspection Plan uses two main strands to achieve protection of public health and the environment, namely through the

- 1) *Citizen Engagement Strategy (CES)* – which is a mechanism of raising owner awareness and responsibility &
- 2) *Risk based Inspection programme* – which identifies which septic tanks will be inspected

The success of this plan depends on a number of elements including commitments from government, local authorities and not least, rural communities. This investment in clean, healthy and protected water will be of benefit not only to the health and wellbeing of our people but also to farming, industry and rural tourism.

4.1. Council Citizen Engagement Strategy – Information & Communication

The council recognizes that promoting awareness among householders is a key element of environmental regulatory programmes and overall, the aim is to move to a situation, where a majority of homeowners with domestic waste water treatment systems know what to do, to ensure that their systems are well operated and maintained and act voluntarily to achieve this.

Accordingly the council will seek to promote public awareness of the National Inspection Plan as follows

- Use of the Council website to provide information on septic tanks & the National Inspection Plan at www.corkcoco.ie
- Use of council offices, Libraries, other public offices, & public events to distribute leaflets & posters
- Direct communication to the public, focus groups elected members through presentations where requested,
- Use text message alerts to make direct contact with registered householders
- Seek assistance of all members and council staff in promoting best practice in the management & maintenance of septic tanks.

4.2. Risk Based Inspection Programme

The second strand of the National Inspection Plan is a risk based inspection programme. All areas of the county are liable to inspection. Priority will be given to areas where water quality (particularly drinking water) is most at risk from pollution by septic tanks.

4.3. Selection of sites for inspection

The environment directorate will implement a scheduled inspection programme based on the selection criteria summarized below.

Criteria Key Points:

- Each 1 km² of the country has been assigned one of **4 risk categories** by the EPA
- These are **Low risk, Moderate risk, High risk and Very high risk**
- Risk categories further subdivided into **eight risk zones** based on the presence or absence of sensitive receptors.
- No of inspections specified by EPA for each of the eight risk zones, **1A-4A & 1B-4B**
- **More inspections where the risk is higher and fewer where risk is lower (Table 2).**
- **99** inspections allocated to Co Cork by EPA, **43** inspections “outside sensitive area” and **56** “inside sensitive areas”.
 - Inspections will be allocated equally per Division (*North 33, South 34, West 32*) and across risk zones where possible.
 - Prioritize inspection areas in each risk zone, based on **type of sensitive receptor** where relevant **and known poor water quality**
 - Randomly select individual septic tanks in the priority areas
- **EPA has advised that householder cannot request an inspection by the Council under the national Inspection programme.**

The EPA has ranked all areas of the country by the risk posed by domestic waste water to both human health and the environment.

Each 1 km² of the country has been assigned one of **4 risk categories** based on density of systems in the area, the type of soil or rock and who or what could be potentially affected.

Note 1 .These are as follows:

➤ **Low risk - Moderate risk - High risk - Very high risk**

Note 1 - Full details in the EPA report 'A Risk-Based Methodology to Assist in the Regulation of Domestic Waste Water Treatment Systems' (2013) (available on www.epa.ie).

Each risk category is then further subdivided, *based on the presence or absence of sensitive receptors* such as:

- Groundwater drinking water abstractions,
- Bathing waters,
- High quality river sites
- Sites containing the freshwater pearl mussel.

This results in **eight risk zones** as shown in Table 1 below.

Table 1: Division of the risk categories

Risk Ranking category	Risk Zones	
	Outside catchment area of sensitive receptors	Inside catchment area of sensitive receptors
Low	Zone 1A	Zone 1B
Moderate	Zone 2A	Zone 2B
High	Zone 3A	Zone 3B
Very high	Zone 4A	Zone 4B

The National Inspection Plan requires that a minimum of **99** inspections are carried out by Cork County Council over a twelve-month period starting in July 2013.

The EPA have allocated 99 to Co Cork and also specified that **43** inspections must be "outside sensitive areas" and **56** inspections must be "inside sensitive areas".

In general the council will allocate the 99 inspections equally per Division (*North 33, South 34, West 32*) and equally across risk zones where possible

Full details of the breakdown of allocation of inspections and number of inspections per division and risk zone are set out in Appendix 1

EPA has advised that householder cannot request an inspection by the Council under the national Inspection programme.

4.4. Appointment of Inspectors

The *Water Services Act 2007 (Registration and Inspections) Regulations 2012* (S.I. No. 384) sets out the content of an inspection and the requirements for the appointment of inspectors.

- Inspectors must demonstrate satisfactory training & competence before they will be appointed as an inspector by the EPA.
- The Agricultural section within the Environment directorate will be responsible for carrying out inspections under the National Inspection Plan.

4.5. Conducting a septic tank site inspection

The Council will notify the owner in writing at least 10 working days in advance of the inspection, specifying the date and time of inspection.

An Inspector will follow a standard inspection procedure and check is there evidence of;

1. Leaks from pipes, manholes, tanks,
2. Discharge of effluent or grey water to waters (e.g. drains, streams, groundwater),
3. Discharge of effluent or grey water to surface of ground,
4. Roof water or clean surface water entering the treatment system,
5. Poor maintenance of treatment system, nuisance odour or noise,
6. System components being absent, inaccessible, unfit for purpose, not operating, or in poor repair,
7. Tank not being desludged properly,
8. If an inspector cannot gain access to the septic tank, this will be reported as a non compliance.

The inspector will tell the householder what was found during the inspection and advise them of any non-compliances identified.

A Draft protocol in relation to conducting a septic tank site inspection is attached as Appendix 2

5. Advisory Notices

If a non compliance was detected the water service authority will issue an Advisory Notice to the householder within 21 days.

The Advisory Notice

- Will direct the owner to remedy the matters specified in the notice by a specified date.
- Will not specify the exact remedial works to be undertaken. As each case is site specific, the owner of the septic tank may be required to seek expert technical advice.

The remediation solution should be such that it embraces best practice and will result in improved treatment and reduced risk to human health and the environment.

Planning permission is not required for works on a septic tank to achieve compliance with an Advisory Notice.

If the environment directorate is satisfied that the system no longer poses a risk to human health or the environment, the environment directorate will notify the householder of this in writing.

6. Enforcement

In keeping with general policy, enforcement actions will be used only as a last resort. Where a non compliance is detected the operator/householder will in the first instance be issued an advisory notice and afforded an opportunity to comply by a specified date.

The environment directorate will work with the householder to assist them in seeking a suitable resolution to the non compliance issue.

It is an offence not to comply with an advisory notice and the environment directorate will take action under the Water Service Act to secure compliance.

7. Grant Aid

Grants are available for the carrying out of remediation, repair or upgrading works to, or replacement of, a domestic waste water treatment system, where such **works arises directly from an inspection** and subsequent issue of an **advisory notice** under the Water Services (Amendment) Act 2012.

At a minimum the DWWTS requiring remediation must have been **registered** by the owner of the premises connected to it by the prescribed date of **1st February 2013**. There are also **income limits** regarding eligibility for grant aid. More details are available from the [DECLG](#).

The council will make information on grant aid available to householders when an advisory notice is being issued.

8. Reporting & Measurement of compliance

An Information Technology system has been developed by the EPA for use by Water Services Authorities and the EPA.

The environment directorate will upload inspection details to the system which will be used by the EPA for EU reporting requirements under Water Framework Directive and Recommended Minimum Criteria for Inspections (RMCEI)

The EPA will review the awareness campaign and first series of inspections in 2014.

The primary purpose of the review will be to ensure that the strategies implemented by the council are successful and effective in protecting human health and the environment.

The environment directorate will review its performance on an annual basis, with respect to the number of inspections allocated to it in the Plan. Where inspections targets are not achieved the reasons for this will be documented as part of this review of performance.

9. Appendix 1

The criteria and rationale to allocate the inspections to each Division and each priority risk zone is set out below and summarised in Table 2

1. Initially the **99** inspections will be divided equally to each division where possible (*This will increase householder awareness of the issue, & encourage householders to carry out routine maintenance of their systems so that they will be operating as well as possible in the event of an inspection*)

Inspections in Risk Zones 1A-4A, outside sensitive receptors

2. *In Risk Zones 1A-4A, the areas **outside sensitive receptors**, a total of **43** inspections have been specified by the EPA for the county.*
3. There will be a total of **14** inspections for North, **15** for South and **14** for West.
4. The EPA have also specified for Cork that for *the areas outside sensitive receptors*, **13** inspections must be carried out in risk **Zone 1A**, **6** in **Zone 2A**, **6** in **Zone 3A** and **18** in **Zone 4A**
5. For each risk zone type, inspections will be again equally across the divisions - e.g. **Zone 1A**, the 13 inspections will be allocated – **4** to North, **5** to South and **4** to West
6. In each risk zone type, priority areas will be selected for inspection, based on **known poor water quality conditions** and individual households will be selected randomly.

Inspections in Risk Zones 1B-4B, inside sensitive receptors

7. The same exercise is applied to **Zones 1B-4B, the areas inside sensitive receptors**, and *where a total of **56** inspections are specified by the EPA for the county.*
8. In each zone **1B – 4B**, priority areas will be selected for inspection, based on the **type of sensitive receptor and poor water quality conditions** and individual households will be selected randomly.

Table 1 below outlines the number of inspections allocated to each risk zone by the EPA for County Cork.

For example Zone 1A North – *Outside catchment area of sensitive receptors*

- Overall **33** inspections allocated by council to north cork (one third of 99)
- **14** 1A- 4A zone inspections allocated to north cork (one third of 43)
- **13** inspections allocated by EPA to 1A zones in County (*a low risk zone with no sensitive receptors*)
- **4** IA zone inspections allocated to north cork (one third of 13)

For example Zone 4B West – *Inside catchment area of sensitive receptors*

- Overall **32** inspections allocated by council to West Cork (one third of 99)
- **18** 1B- 4B zone inspections allocated to West Cork (one third of 56)
- **24** inspections allocated by EPA to 4B zones in County (*which have very high risk and also contain sensitive receptors such as drinking water abstractions*)
- **8** 4B zone inspections allocated to West Cork (one third of 24)

Table 1 – Number of inspections per risk zone

	Division Total	<i>Outside catchment areas of sensitive receptors Zones 1A- 4A</i>				Total Zones 1A- 4A	<i>Inside catchment areas of sensitive receptors in Zones 1B – 4B</i>				Total Zones 1B – 4B
Division		Zone 1A Low	Zone 2A Moderate	Zone 3A High	Zone 4A Very High		Zone 1B Low	Zone 2B Moderate	Zone 3B High	Zone 4B Very High	
North	33	4	2	2	6	14	5	3	3	8	19
South	34	5	2	2	6	15	5	3	3	8	19
West	32	4	2	2	6	14	4	3	3	8	18
County Total	99	13	6	6	18	43	14	9	9	24	56

10. Appendix 2

Draft Protocol in relation to conducting a septic tank site inspection

1. Notification of inspection to householder

- The Council will notify the owner in writing at least 10 working days in advance of the inspection, specifying the date and time of inspection.
- The owner will be advised that the inspection will be generally non-intrusive in nature and they will be requested to facilitate the inspection by establishing the location of the septic tank serving the premises and to ensure that there is access to the premises for the carrying out of the inspection.
- Where the owner is not available at the inspection time specified, the council will endeavour to reschedule to facilitate them

2. Day of inspection

- Specially trained local authority inspectors will carry identification and authorization
- The inspector will meet the householder, explain the procedure for the inspection and what they are going to do –this could include visual inspections of site, inspection of tank, opening manholes, use of hoses to pour water down drains to check rainwater is not going to tank, checking of pumps, dipping of tank to check sludge depth
- Inspectors will check that the treatment system, as constructed, is fit for purpose and is not giving rise to a risk to public health or the environment.
- As part of completing the inspection form, the inspector may capture photographic evidence illustrating issues or problems with the site.
- The inspector will also gather supporting information on the septic tank management & registration details if available

3. Inspector Checklist

An Inspector will follow a standard inspection procedure and check is there evidence of;

1. Leaks from pipes, manholes, tanks,

2. Discharge of effluent or grey water to waters (e.g. drains, streams, groundwater),
3. Discharge of effluent or grey water to surface of ground,
4. Roof water or clean surface water entering the treatment system,
5. Poor maintenance of treatment system, nuisance odour or noise,
6. System components being absent, inaccessible, unfit for purpose, not operating, or in poor repair,
7. Tank not being desludged properly,
8. If an inspector cannot gain access to the septic, this will be reported as a non compliance. Access will also be assessed in light of potential health and safety issues.

If there is evidence of any of the above occurring, the council would assess that a treatment system is posing a risk to human health or the environment and will be determined a non compliance with the requirements of the Water Services Act 2007/2012 and associated regulations.

4. On completion of the inspection

- The inspector will tell the householder what was found during the inspection,
- Inform the householder of any non-compliances identified,
- Advise the householder of next steps in the inspection process,

5. After the Inspection

- If the system passes the inspection, the householder will be notified in writing within 21 days.
- If a non compliance was detected and the system is deemed to pose a risk to either public health or the environment the water service authority will issue an Advisory Notice to the householder within 21 days.
- Where a time extension is required by the owner for valid reasons they may apply to the WSA for such an extension.

6. Main provisions of the Advisory Notice will:

- State that the owner of the premises has contravened regulations;

- State that the domestic waste water treatment system constitutes a risk to human health or the environment;
- State the reasons for that opinion; and direct the owner to remedy the matters specified in the notice by a specified date.

The Advisory Notice will not specify the exact remedial works to be undertaken. As each case is site specific the owner of the septic tank may be required to seek expert technical advice.

The owner of the septic tank in receipt of an Advisory Notice may seek to have their system re-inspected for a fee of €20. The Advisory Notice may be confirmed, amended or cancelled as a result of the re-inspection.

In exceptional circumstances where an Advisory Notice has been issued it may be appealed to the District Court on the grounds that the appellant is not the person on whom the notice should have been served or any substantive or procedural illegality.

When the works specified in the Advisory notice have been completed the householder shall notify the WSA of this, in writing, within 10 days of completion of the works.

The WSA may carry out an inspection of the system to confirm that the system no longer poses a risk to human health or the environment.

If the WSA is satisfied that the system no longer poses a risk to human health or the environment the WSA shall notify the householder of this in writing.

7. Action re Follow up

In keeping with general policy, enforcement actions will be used only as a last resort. Where a non compliance is detected the operator/householder will in the first instance be issued an advisory notice and afforded an opportunity to comply by a specified date

The environment directorate will work with the householder to assist them in seeking a suitable resolution to the non compliance issue.

It is an offence not to comply with an advisory notice and the environment directorate will take action under the Water Service Act to secure compliance.

11. Appendix 3

Checklist for householder

What the householder can do to improve their treatment system

- ✓ Inspect and desludge your tank (where necessary) at least once a year. **Safety Note** – *it is dangerous to enter a septic tank or wastewater treatment system as they emit dangerous gases and only certified personnel should carry out this work*
- ✓ Only use permitted waste contractors to remove the sludge – a list of permitted waste collectors is available at www.nwcpc.ie.
- ✓ Do not treat grey water from washing machines and sinks in the wastewater treatment system.
- ✗ Do not allow rainwater from roofing or open yard areas into the wastewater treatment system and divert away to properly constructed soakaway
- ✗ Do not pour fat and grease down the sink.
- ✗ Do not over use bleach and disinfectants.
- ✗ Do not use sink macerators as they can increase the organic load by 30% and result in additional maintenance.
- ✗ Do not locate driveways or paved areas over the percolation area or polishing filter.

Managing your system & Ways to reduce loading to treatment systems

- ✓ Use a competent person to install your wastewater treatment systems
- ✓ Obtain a certificate of installation upon completion.
- ✓ Maintain your system in accordance with the guidance in the [EPA Code of Practice](#) and manufacturer's instructions.
- ✓ Install high efficiency shower heads.
- ✓ Install water saving devices in toilets.
- ✓ Fill the bathtub with only as much water as you need.

- ✓ Turn off the taps while brushing your teeth or shaving.
- ✓ Only run the dishwasher or washing machine when they are full.
- ✓ Maintain your plumbing to eliminate leaks.
- ✓ If you see effluent sitting on the ground near the tank/system then you should check that the septic tank/system has been desludged and that the sludge has not blocked the drainage pipes. It could also be due to poor drainage conditions at the site and you should seek specialist advice.

Remediation Work Required to Comply with an Advisory Notice

- Where an on-site system fails an inspection, there is no question of imposing modern standards on older systems.
- Nor is there any question of householders having to acquire additional land to facilitate remediation work.
- Planning permission is not required for works on a septic tank to achieve compliance with an Advisory Notice.
- Remediation of existing septic tanks may have regard to the techniques, technologies and solutions set out in the *EPA Code of Practice: Wastewater Treatment Systems serving Single Houses (p.e. <10)* (EPA, 2009), but it is not bound by the full requirements of the code.

Designing & Carrying Out the Remediation Work

- Engage Competent Persons to design, & install, any remediation works to the system
- Check that the person you are engaging has an appropriate qualification and relevant experience in the area of wastewater treatment for single houses.
- The wastewater professional should demonstrate that the proposed solution will result in improved treatment and reduced risk to human health and the environment.