

Nitrate Pollution Prevention Regulations 2008

Nitrate Vulnerable Zones (NVZs)

Questions and answers

Version 1, 17 December 2008

The questions and answers below are intended to support the advice given in the set of leaflets 'Guidance for farmers in Nitrate Vulnerable Zones', produced by Defra and the Environment Agency. You can find these on the [Defra website](#). Where appropriate, the answers refer to the relevant leaflet(s).

These answers are for guidance purposes only and are given as practical advice on how to carry on your farming activities taking into account the Regulations. The answers are not intended to constitute legal advice. If you follow the advice given here and in the leaflets on any particular issue, the Environment Agency will take this into account in its enforcement of the Regulations. If you are in doubt on any particular aspect, you should seek advice from the dedicated helpline (0845 345 1302). The specific statutory requirements are set out in the Nitrate Pollution Prevention Regulations 2008.

The questions in this document are divided into the following sections:

Section A: General questions

Section B: NVZ designation

Section C: Implementation (scope, timing and enforcement)

Section D: Storage of organic manure

Section E: Livestock manure N farm limit

Section F: Planning nitrogen use

Section G: The N max limit

Section H: Field application of organic manures, including closed periods

Section I: Field application of manufactured nitrogen fertilisers, including closed periods

Section J: Record keeping

Section A: General questions

A1 Q: Where can I find more advice, information and support about the new Nitrate Vulnerable Zone (NVZ) Regulations?

A: If you have land in an NVZ you will have to meet new regulations from 1 January 2009. To ensure you know what this means, and that you take the necessary action to comply, a national package of advice and support has been released. The package includes:

A **helpline** that answers technical queries from farmers and advisors. The telephone number is 0845 345 1302 (Monday – Friday, 7am – 7pm, until 31 March 2009). Calls will be charged at the local rate.

Information events for farmers and advisors. The events are being organised throughout England. Invitations are being sent out but you can find out about events in your region through the helpline and at <http://www.crosscompliance.org.uk>.

NVZ guidance leaflets, covering different aspects of the new rules, available on [Defra's website](#). Printed copies will be available at events.

Software tools that have been developed to provide extra help with some of the calculations required under the new rules. These are available free of charge by visiting <http://www.planet4farmers.co.uk> or telephoning 08456 023 864.
(05/12/2008)

A2 Q: How will I know whether it affects me?

A: If you have land located in an NVZ, it's likely that you will have already received a letter from Defra about the new rules. NVZs now cover almost 70 per cent of England, so even if you haven't received a letter, you should find out if you are in an NVZ. You can do this using the detailed maps that are available on [Defra's website](#).
(05/12/2008)

A3 Q: Why do we need the Regulations?

A: The Nitrate Pollution Prevention Regulations 2008 have been introduced to implement the European Community's Nitrates Directive, to reduce nitrogen losses from agriculture to water. They designate areas where nitrate pollution is a problem, known as Nitrate Vulnerable Zones (NVZs). There are rules for certain farming practices which must be followed within these zones.
(05/12/2008)

A4 Q: I have heard that nitrate levels are falling. Why tighten the rules further?

A: This is incorrect.

Current monitoring shows that for every groundwater site showing a falling trend in nitrate concentration, there are three sites showing a rising trend – with the Midlands and East of England being the worst affected regions.

The opposite trend exists for rivers found within NVZs, with three out of four having a very slight fall in nitrate concentrations since 2000. But half of rivers within the zones still exceed nitrate limits and the downward trends are very slight.

We also know that a number of estuaries and marine waters suffer disturbances to their ecology due to elevated nitrate levels.

We need to protect the quality of drinking water in the long term. This inevitably means keeping nitrate levels below the 50mg/l value.
(05/12/2008)

A5 Q: Why is nearly 70 per cent of England vulnerable to nitrate pollution, compared to only 4 per cent of Wales and 15 per cent of Scotland?

A: This is due to differences in existing nitrate concentrations of surface and ground waters, which are influenced by differences in farming systems, geology, soil type, rainfall and other environmental factors. The combination of these factors mean that more waterways in Wales and Scotland have acceptable nitrate concentrations.
(05/12/2008)

A6 Q: Where are Nitrate Vulnerable Zones (NVZs)?

A: The agricultural land area in England designated as NVZs has been increased to about 68 per cent. To find out if your land is designated, see [question B1](#) below. If you think your land has been wrongly designated as an NVZ, you may appeal against the designation. Appeals, including all supporting evidence, must be submitted to Defra in writing by 31 January 2009. See [Defra's website](#) for more details.
(05/12/2008)

A7 Q: Who is responsible for complying with the Regulations?

A: This answer is being prepared.

There are a number of specific issues relating to responsibilities which have been raised. These include:

- tenant and landlord responsibilities;
- short term grazing licences, 'tack' arrangements;
- potato and vegetable growing contracts;

- outdoor pigs on rented land;
- relationship to Single Farm Payments.

A8 Q: How will the rules be enforced?

A: The Environment Agency is responsible for assessing farmers' compliance with these Regulations and they do this by visiting farms. Compliance with the rules is also a Statutory Management Requirement (SMR) for cross compliance under the Single Payment Scheme. This means that farmers have to comply with the NVZ rules to be entitled to their full payment. If they don't comply, their payment could be reduced.
(05/12/2008)

A9 Q: When do the rules apply?

A: For land or holdings within a pre-existing NVZ (designated in 1996 or 2002, and designated again in 2008), you must comply with the new rules from 1 January 2009. Although for some rules, a later compliance date applies (see [question C1](#) below). For land or holdings within new NVZs (those designated in 2008 for the first time), the rules do not start until 1 January 2010.
(05/12/2008)

A10 Q: Are there any grants available for building slurry storage?

A: There is no specific grant scheme for storage. Some funding for store covers or related infrastructure to reduce slurry volumes, may be available from the Catchment Sensitive Farming programme (in the catchments where this operates). There may also be funding available under the Rural Development Programme for England, which is administered by Regional Development Agencies. If you build storage facilities, you may be eligible for a tax allowance – you should take advice from your accountant or tax specialist.

No grants or tax allowances are available in Wales at present.
(05/12/2008)

A11 Q: Are the new rules part of Cross Compliance?

A: Yes, the new rules will be part of Cross Compliance. A revised Penalties Matrix is being developed to reflect the new Regulations. Transitional arrangements and also the proposed derogation (see [question E3](#) for details) will have to be factored in to the enforcement arrangements. More information will be available in the 2009 Cross Compliance handbook or the Rural Payments Agency website (or Rural Inspectorate Wales in Wales).
(05/12/2008)

Section B: NVZ designation

B1 Q: How do I find out if I am in an NVZ?

A: NVZ maps are available via the [Defra website](#). The maps are hosted on an interactive website called MAGIC. The Defra site also includes instructions on how to use the MAGIC site. The interactive map not only allows you to view the designated area at a field boundary scale, but also to find out the reason for the designation.

If you do not have internet access, contact the Defra helpline on 08459 33 55 77 or email helpline@defra.gsi.gov.uk and they will send you hard copies of the designations.
(05/12/2008)

B2 Q: Can I appeal against my land being designated?

A: If you are a land owners or occupier, you can appeal against the inclusion of your land within an NVZ. You will need to have evidence to demonstrate that either it does not drain to a water body identified as nitrate-polluted, or that the water body is not polluted. Details of the appeals procedure are available on the [Defra website](#).
(05/12/2008)

B3 Q: I've heard mention of 'de-designation' – what does this mean?

A: There are some small areas which were previously designated that do not meet the criteria for designation in the most recent review. This may be due to better nitrate data or better catchment boundary information. If your land was previously designated as an NVZ, you should check whether this has changed. [Question B1](#) tells you how to do this.
(05/12/2008)

Section C: Implementation (scope, timing and enforcement) (see also [Leaflet 2](#))

C1 Q: What is the timetable for the introduction of the Regulations?

A: Table 1 in [Leaflet 2](#) provides a summary of the key implementation dates for farms within existing and/or new NVZs.
(05/12/2008)

C2 Q: My land has mixed use, with some glass (protected crops) including soil-grown lettuce and container-grown cress. The remainder is grassland which is not fertilised (just mowed to keep it tidy). How do the rules apply to me?

A: The rules apply to anything that is grown in soil, that is to say, grown in the ground. The only rules that could be relevant to crops grown under permanent cover are the requirements for fertiliser planning and closed periods. It is always good practice to have an appropriate fertiliser plan, and we would expect these to be developed and followed. However, we will not look for records regarding closed periods, since the climatic conditions under glass are artificially controlled. If the grass is unfertilised then no plans or records are needed.
(07/11/2008)

**Section D: Storage of organic manure (see also [Leaflet 4](#)).
(For closed periods, see Section H).**

D1 Q: I need to provide additional slurry storage. When does this need to be in place?

A: By 1 January 2012 in all cases. However, you must have completed your calculations of how much storage you need by 30 April 2009 if you are in existing NVZ, or by 30 April 2010 if you are within a newly designated NVZ.

(05/12/2008)

D2 Q: There is a requirement to calculate the average volume of rainfall that enters a slurry store each month. You suggest obtaining this from the Met Office – doesn't this cost money?

A: No, there is no cost for this. Average monthly rainfall for 1971 to 2000 from your nearest rainfall station is available free from the [Meteorological Office](#).

D3 Q: Typically I move farmyard manure from the farmyard or directly from livestock housing to field stacks, from which my contractor then spreads to fields. Am I allowed to continue doing this on fields that have land drains?

A: The rules do not allow temporary field heaps to be located within 10 metres of land drains. However, it is accepted that manure may need to be stacked as part of a spreading activity (ie to provide a supply of manure to fill spreaders in order to reduce travelling time and costs). The manure must not give rise to free drainage of liquid from within the stack, and any delay between making the field stack and spreading that manure to land should be kept to a bare minimum. It follows that you should plan the removal of farmyard manure to field stacks and the timing of field spreading activity as a joined-up operation. You should ensure that the amount in field stacks is matched to the capacity at which the contractor can spread it in a reasonable time. The Environment Agency may need to see evidence of an agreement with your contractor to carry out the field spreading. You will be liable to enforcement action if you cause water pollution.

You must not put any field stacks within 10 metres of surface waters, within 50 metres of a spring, well or borehole, on land likely to become waterlogged or on land likely to flood. You must comply with the field inspections, non-spreading conditions, and other restrictions for field application of organic manures (see [Leaflet 8](#)).

(05/12/2008)

D4 Q: If I only house cattle indoors for three months, do I have to store the slurry?

A: Yes, you must still provide storage to cover the storage period (five months for cattle). However, the volume of slurry produced will be reduced because of the shorter period over which the cattle are housed. [Leaflet 4](#) explains how these calculations are made.

(05/12/2008)

D5 Q: What should I do where the closed periods apply to non-agricultural wastes, eg septic tank sludges?

A: You must comply with the closed period, and so you may choose to spread wastes onto your land only outside the closed period, or you may provide / allow storage on your land. Such storage is **not** covered by the NVZ storage rules, but will need to comply with waste regulations. You should contact your local Environment Agency office for advice on the requirements.

(05/12/2008)

D6 Q: Do any other requirements apply to manure and slurry stores?

A: Storage must comply with the requirements of the Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations (SSAFO). To ensure you comply with the SSAFO Regulations, when you are considering options for improving storage facilities on your farm, you should seek advice from the Environment Agency. The Environment Agency have powers under these regulations to require changes to be made to facilities, if they pose a significant risk of causing pollution.

(05/12/2008)

D7 Q: I farm organically, and so I am allowed to apply slurry to certain crops during the closed period. Can I reduce my storage requirement by the amount of slurry that I use in this way?

A: No. The Regulations do not allow this to be done, because the amount of slurry that can be applied in each year will be variable, depending upon the cropping and the weather conditions that occur.

(14/11/2008)

D8 Q: When must I use standard figures in my calculations, and when can I use analysis of my own wastes?

A: You **must** use standard figures when calculating:

- **Livestock manure N farm limit** – use standard figures for total nitrogen livestock production figures (see [Leaflet 3](#), Tables 1 to 4). The only exception is for permanently housed pig and poultry, when you may use values calculated by ENCASH computer software. Or if your housing system only produces solid manure, you may use values determined by sampling and analysis.
- **Slurry storage calculation** – use standard figures for monthly volume of excreta produced (see [Leaflet 3](#), Tables 1 to 4).
- **N max limits** – use standard figures ([Leaflet 3](#), Table 8) for the percentage of total nitrogen from livestock manures, which is available for crop uptake after spreading.

In all other situations, you can use standard figures from the guidance leaflets, other recognised data sources or values determined from sampling and analysis. You must

carry out all sampling and analysis according to the standard sampling methodology (see [Leaflet 3](#)).
(05/12/2008)

D9 Q: What is the meaning of 'land that has a low runoff risk'?

A: Low runoff risk land is defined as land that:

- has an average slope of less than three degrees;
- does not have land drains (other than a sealed impermeable pipe);
- is at least 50 metres from a watercourse or conduit leading to a watercourse (see Section 2, [Leaflet 4](#)).

If such land exists on a holding, and slurry/poultry manure can always be safely spread on it every year between the end of the closed period and the end of the storage period, in accordance with the restrictions on spreading manures, then storage capacity can be reduced (see example below). The volume that can be spread can be subtracted from the farm's storage (capacity) need, but an extra one week's average manure production must be added back as a contingency (see Leaflets [4](#) and [8](#)).

For example, if a dairy farm's storage capacity requirement from the 1 October to 1 March (five months) is 5,000 cubic metres slurry but 1000 cubic metres can always be spread on the farm's low runoff risk land (after the closed period and before 1 March), then the storage capacity needed would be 4,250 cubic metres (i.e. 5,000 – 1000 + 250 (one week's average slurry production)). But remember, the storage capacity that needs to be built must include the necessary minimum freeboard requirement (750mm for earth-banked compounds and 300mm in all other cases).

[Leaflet 4](#), Annex 1, provides a step-by-step guide for calculating a farm's slurry storage requirement.

The total area of low runoff risk land in England is small, and so the reduction in the storage requirement is unlikely to be large for individual farms.
(05/12/2008)

Section E: Livestock manure N farm limit (see also [Leaflet 5](#))

E1 Q: When I am working out how to meet the Livestock Manure N Farm Limit, what land can I include?

A: **Include** all land unless it is excluded by the rules. Examples of land that should be included are buffer strips, rough grazing, moorland, heathland, common land and land under management agreements. It is expected that land included within a holding is capable of being farmed as part of that holding (for example, it is not geographically remote).

Exclude water, hardstanding, buildings, roads and un-grazed woodland.
(07/11/2008)

E2 Q: If my farm is overstocked in relation to the Livestock Manure N Farm Limit of 170kg/ha what can I do to comply?

A: There are four things you can do:

- Export manure, in which case you should keep records of all exports (and imports) of livestock manure.
- Bring additional eligible land into the holding (see [question E1](#)). This land should be close enough to the main holding so that it can be farmed jointly.
- Reduce the number of stock.
- If the application for a derogation from the 170kg/ha limit is successful and your land is eligible, you may be able to spread more livestock manure each year (see questions [E3](#) and [E4](#)).

(05/12/2008)

E3 Q: I have heard that there may be a derogation from the Livestock Manure N Farm Limit. What happens if the derogation is not allowed?

A: A derogation for grazing cattle farms with 80% grass has been applied for, and if successful, a limit of 250kg N/ha will apply. The derogation will be optional for those farms that are eligible. It is likely that an annual registration will be needed, and that extra conditions will apply, as follows:

- Livestock manures with a high readily available N content (eg slurry and poultry manure) may not be spread on grassland that is to be cultivated in the autumn.
- Temporary grassland on sandy soils that is to be re-sown to grassland must be cultivated in the spring.
- Ploughed grass on all soil types shall be followed immediately by a crop with a high nitrogen requirement.
- The crop rotation shall not include plants fixing atmospheric nitrogen, except clover in grassland with less than 50 per cent clover, or other legumes that are under-sown with grass.
- The results of soil sampling and analysis for phosphorus must be available for each field. Sampling and analysis must be carried out every four years.
- A phosphorus fertilisation plan must be prepared for each field. The plan must be kept up-to-date and certain appropriate field records kept.

We will not know until spring 2009 at the earliest if the application has been successful. The application applies to England, Wales and Scotland; a derogation is already in place in Northern Ireland.

If the derogation is not allowed, then the Livestock Manure N Farm Limit of 170kg N/ha must be complied with for the year, starting 1 January 2009. Defra will issue additional guidance to affected farmers in this circumstance.

(07/11/2008)

E4 Q: If my land is eligible for the grassland derogation, how should I plan for the year, without knowing whether the derogation will be available?

A: You may plan for the year to comply with the 250kg N/ha limit if you are eligible and you think you will be able to meet the additional controls (eligibility and controls are described in [question E3](#). Defra will advise on what to do if the application for derogation is unsuccessful. (07/11/2008)

E5 Q: Is any consideration being given for those areas that have tuberculosis (TB)? I will be over the stocking limit, but as I am in a TB area I cannot export slurry and find it a very difficult and slow process to sell my animals. Will there be any exemptions for these areas?

A: If your land is eligible for the grassland derogation, then this issue may be resolved through that provision. However, in principle *force majeure* would apply, and so penalties would be unlikely. Nevertheless, we would expect you to make every effort to comply with the rules. Such situations would be resolved on a case by case basis, and you should speak your usual Environment Agency contact or call 08708 506 506. (31/10/2008)

E6 Q: I keep Dexter cattle on unimproved pasture. Dexters are a very small breed. Will there be reference figures for nitrogen and manure production for these special cases which cannot really be compared with normal dairy or beef cattle?

A: No. You should select the most appropriate set of N production and manure production figures, based on milk yield for the cattle. Given that the pasture is unimproved, and these cattle are unlikely to be farmed intensively, we would not expect any enforcement issues. However, such 'special cases' will be dealt with on a case by case basis by the Environment Agency. (28/11/2008)

E7 Q: When must I use standard figures in my calculations, and when can I use analysis of my own wastes?

A: You **must** use standard figures when calculating:

- **Livestock manure N farm limit** – use standard figures for total nitrogen livestock production figures (see [Leaflet 3](#), Tables 1 to 4). The only exception is for permanently housed pig and poultry, when you may use values calculated by ENCASH computer software. Or if your housing system only produces solid manure, you may use values determined by sampling and analysis.
- **Slurry storage calculation** – use standard figures for monthly volume of excreta produced (see [Leaflet 3](#), Tables 1 to 4).
- **N max limits** – use standard figures ([Leaflet 3](#), Table 8) for the percentage of total nitrogen from livestock manures, which is available for crop uptake after spreading.

In all other situations, you can use standard figures from the guidance leaflets, other recognised data sources or values determined from sampling and analysis. You must carry out all sampling and analysis according to the standard sampling methodology (see [Leaflet 3](#)).
(05/12/2008)

Section F: Planning nitrogen use

No questions have been raised to date. Please see [Leaflet 6](#) for information.

Section G: The N max limit (see also [Leaflet 7](#))

G1 Q: When I am calculating compliance with the N max Limit, do I include the droppings from my livestock while they are grazing?

A: No. To calculate compliance with N max, you use only nitrogen coming from manufactured nitrogen fertiliser and crop-available nitrogen from livestock manure that is spread onto the land.

It does not include:

- manure directly deposited by grazing animals;
- applications of organic manure that is not from livestock, eg sewage sludge or compost;
- other types of nitrogen containing materials, such as dredgings.

[Leaflet 7](#) explains when you need to calculate compliance with N max, and how to do it.
(05/12/2008)

G2 Q: What is an acceptable measure of yield for a crop? Does the need to record crop yield (within one week of measuring it) only apply to crops with an N max limit?

A: The minimum requirement is a record of the crop average yield across the farm. For fertiliser planning purposes, field estimates can be used, but these should be reconciled against farm records. If you want to adjust the N max limit for a crop on the basis that you expect a higher than standard yield, you should have written evidence from at least two previous crops (see [Leaflet 7](#)).
(31/10/2008)

G3 Q: When must I use standard figures in my calculations, and when can I use analysis of my own wastes?

A: You **must** use standard figures when calculating:

- **Livestock manure N farm limit** – use standard figures for total nitrogen livestock production figures (see [Leaflet 3](#), Tables 1 to 4). The only exception is for permanently housed pig and poultry, when you may use values calculated by ENCASH computer software. Or if your housing system only produces solid manure, you may use values determined by sampling and analysis.

- **Slurry storage calculation** – use standard figures for monthly volume of excreta produced (see [Leaflet 3](#), Tables 1 to 4).
- **N max limits** – use standard figures ([Leaflet 3](#), Table 8) for the percentage of total nitrogen from livestock manures, which is available for crop uptake after spreading.

In all other situations, you can use standard figures from the guidance leaflets, other recognised data sources or values determined from sampling and analysis. You must carry out all sampling and analysis according to the standard sampling methodology (see [Leaflet 3](#)).

(05/12/2008)

Section H: Field application of organic manures, including closed periods (see also [Leaflet 8](#))

H1 Q: Can straw manure, also known as FYM, be applied through the closed period?

A: There is no closed period restriction on the application of FYM, which contains low levels of readily available nitrogen (less than 30 per cent). However, there may be times and places that you are not able to spread FYM. You may also be restricted by the need to incorporate FYM into bare soil/stubble within 24 hours in certain situations. Sections 4, 5, 6 and 8 of [Leaflet 8](#) give advice on suitable land and conditions for spreading.

(05/12/2008)

H2 Q: Do farmers need to update the maps they currently use to assess pollution risk?

A: Yes, risk maps need to follow the current guidance to comply with the new regulations. [Leaflet 8](#) explains what you need to include.

(05/12/2008)

H3 Q: I am a registered organic producer. What conditions do I have to comply with when spreading slurry or poultry manure in the closed period? (In reference to footnotes to Table 6 in [Leaflet 3](#)).

A: Organic manure applications with a high readily available N content (e.g. slurry and poultry manure) are permitted at any time to the following crops: winter oil seed rape, asparagus, brassicae, grass, over-wintered salads onions, parsley and bulb onions (as listed in Table 6, [Leaflet 3](#)). The footnotes to Table 6 apply only to manufactured fertiliser. You can apply such manures to other crops in the closed period provided you have written advice to that effect from a FACTs qualified advisor. In all cases, you must not spread more than 150kg total N/ha between the start of the closed period and the end of February.

(28/11/2008)

Section I: Field application of manufactured nitrogen fertilisers, including closed periods

No questions have been raised to date. See [Leaflet 9](#) for information.

Section J – Record keeping

No questions have been raised to date. See [Leaflets 4 – 9](#) and the [NVZ record keeping checklist](#).